



# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

## GLOBAL LEARNING AND EVIDENCE EXCHANGE

# CLIMATE-SMART AGRICULTURE

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DECEMBER 5–9, 2016 // SIEM REAP, CAMBODIA

### Operationalizing CSA: Applications and CSA Metrics

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## LEARNING OBJECTIVES

Participants will :

- Gain a deeper understanding of key **entry points** and **necessary processes** for CSA in the project cycle
- Be able to identify the **resources** needed to address climate resilience in food security programming
- Be able to identify relevant indicators to measure changes in specific outcomes
- Ground this knowledge and the lessons learned throughout the GLEE in a **Climate Smart Agriculture Integration Framework** thereafter



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## REFERENCE SHEET

**Productivity**

**Adaptation**

**Mitigation**

Challenge and Context

Solution

(Telling the Story)



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## VISION FOR CSA: SMART AGRICULTURE INFORMED BY CLIMATE SCIENCE

### CSA Pillars

1. Productivity and incomes increased
2. Adaptation and resilience enhanced
3. Mitigation achieved where appropriate

### CSA Aspirational principles:

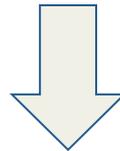
- Systems approach
- Intentionality
- Multiple benefits
- Context specific
- Long-term perspective





## REGULATIONS AND AGENCY POLICIES

- USAID - ADS (Operational Policy)
- Whole of government
  - President's Policy Directive on Global Development
  - Quadrennial Diplomacy and Development Review (QDDR)
- Environmental compliance Reg. 216
- Executive Order 13677: Climate-Resilient International Development



Implementing each of these in coordination will enhance climate resilience

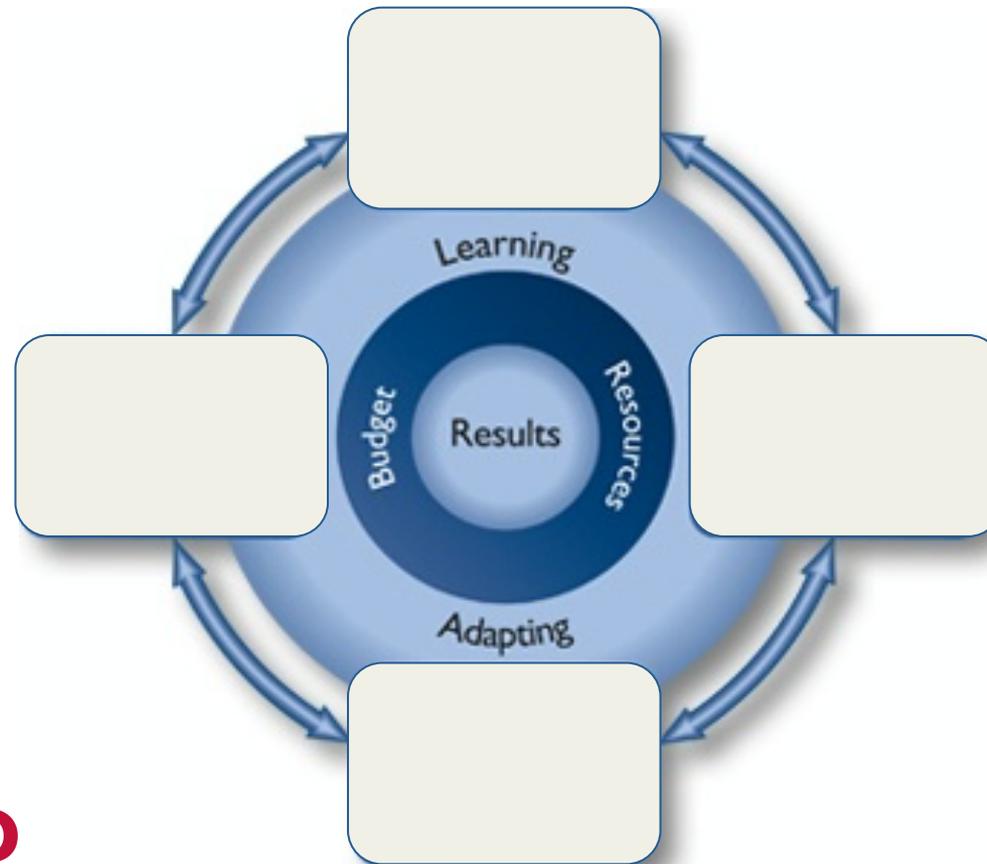




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## PROGRAM CYCLE: ENTRY POINTS FOR CSA



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## PROGRAM CYCLE: ENTRY POINTS FOR CSA

In the Program Cycle:

- Agency strategies and policies
- CDCS/RDCS (country/regional-level)
- Project design/PAD
- Solicitations
- Environmental compliance
- Indirect budget attribution
- Monitoring and evaluation





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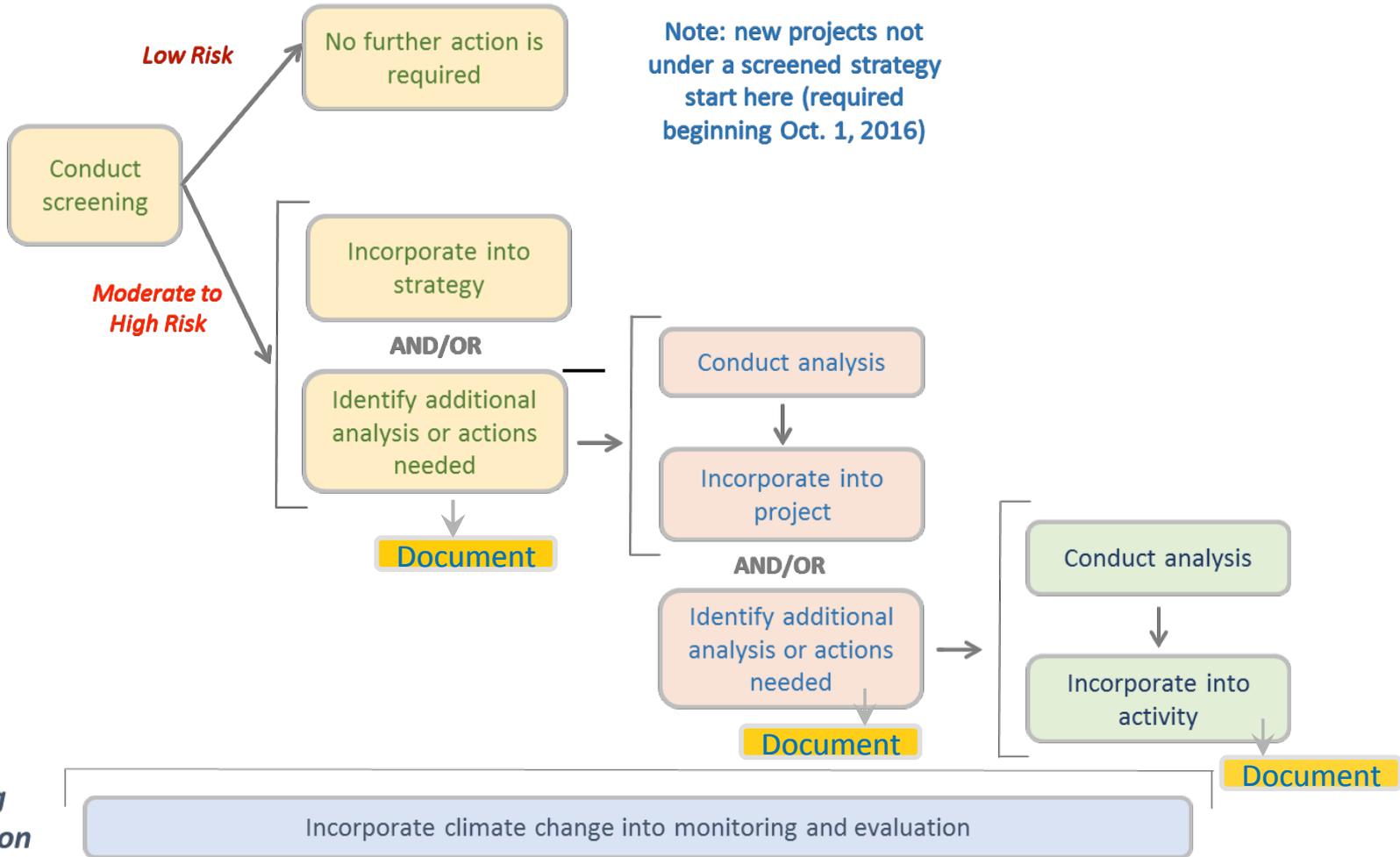
## Agency Policies

## Strategies

## Project

## Activity

Policies consider and address climate change, as appropriate



Monitoring and Evaluation



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## CLIMATE RISK MANAGEMENT: R/CDCS

### Review climate info factsheet & other info



### Conduct screening

Development Objective	Vulnerability of supporting sectors	Integration into CDCS/ CDCS	Next steps	Accepted risks
...	...	...	...	...
...	...	...	...	...
...	...	...	...	...



### Incorporate into R/CDCS



### Document in R/CDCS annex

Development Objective	Vulnerability of supporting sectors	Integration into CDCS/ CDCS	Next steps	Accepted risks
DOC: Food Security in Target Areas Increased	<p>Agriculture and food security</p> <ul style="list-style-type: none"> <li>Potential impact of recent climate trends is moderate</li> <li>Potential impact of future climate change is high</li> <li>The forecast timeframe is 0-10 years</li> <li>Adaptive capacity is low</li> </ul>	<p>Yes, on page 11. Guidance to CDCS teams acknowledges the potential impacts to agriculture from climate change and notes that 2012.2 (Productivity of household and small- and medium-scale enterprises is increased), in particular, can accommodate climate change by incorporating updated training for farmers and agriculturalists to manage for increases in temperature and shifts in precipitation patterns. The training will focus on semi-arid zones, which will be disproportionately affected by these climate stresses.</p>	<p>The Mission's plans to train farmers and agriculturalists will incorporate the latest information about shifting climate regimes. Mission-supported training and technical assistance aimed at smallholders and value chains can moderate climate impacts at regional and national scales.</p> <p>The Mission will continue to monitor this risk and work to manage impacts to the extent possible.</p>	<p>Minor to particularly sensitive to climate change impacts yet in the preferred single crop for most of the country, maize-based systems are most vulnerable with yield losses projected in excess of 30% by 2050.</p>

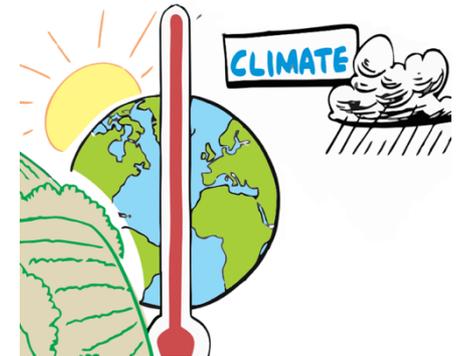




## CLIMATE RISK MANAGEMENT: PAD/ ACTIVITY

Addressing climate risk and implementing CSA:

- 1) The PAD/activity design team understands the climate risks & opportunities undertaking the activity
- 2) CSA principles are incorporated thoroughly in solicitation documents (sections C to J) — Statement of Work (Section C), Deliverables (Section F), Instructions to Offerors/Applicants (Section L), Evaluation Criteria (Section M) — that also include relevant CSA attachments, assessments or reports by other organizations in the annexes (Section J)





## BEING CLIMATE SMART IN AGRICULTURE

- **Specific** - identify your context, vulnerabilities that threaten productivity, adaptive capacity, mitigation
- **Measurable** - understand metrics & indicators to track productivity, adaptation and mitigation
- **Achievable** - enabling environment, resources (human/financial), Policy
- **Relevant** - what is the link to CDCS, other priorities: nutrition, income, governance
- **Timed** - Set time stamps to goals & results, align with agency/mission





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## RESOURCES: GUIDANCE & EXAMPLES

**Agrilinks** Achieving agriculture-led food security through knowledge sharing

**climate links**

A Global Knowledge Portal for Climate Change & Development Practitioners

**FSN**network



<https://pages.usaid.gov/E3/GCC/climate-risk-management>

**Climate-Smart Agriculture in Rwanda**

**Climate-smart agriculture (CSA) considerations**

- CSA practices bring important adaptation and productivity benefits to agriculture in Rwanda. Investing in land husbandry, water harvesting, and hillside irrigation can increase resilience to climate change, reduce water erosion and soil loss, halt land degradation, and increase land productivity.
- Opening new swamps/marshland for rice production can help increase crop's resilience to dry spells occurring during the cropping season.
- For crops that require higher nitrogen fertilizer levels (such as rice, maize, potatoes), deep placement of large, coated granules (pellets) can increase fertilizer use efficiency and thus contribute to reductions in agricultural greenhouse gas (GHG) emissions.
- There is also a high potential for emissions mitigation through zero grazing and the use of droppings for household biogas production in intensive livestock systems. While these practices promote pasture and resource use efficiency, reducing GHG emissions and increasing productivity, they also reduce the risk of deforestation and thus increase chances to sequester carbon.
- Terracing, the establishment and maintenance of agro-forestry nurseries, and post-harvest activities can increase resource availability and use, while also building smallholder farmers' resilience through the creation of new job opportunities.
- Agricultural research and extension institutions in Rwanda have been working together towards promoting climate-resilient crop varieties and good management practices. However, mainstreaming CSA into policies and programmes and increasing adoption of site-specific CSA practices and technologies requires stronger cooperation and integration between these actors and climate change-related stakeholders.
- Crops and livestock farmers in Rwanda can access agricultural loans made available through The Development Bank of Rwanda (BRD), which offers small- and medium-size enterprises (SMEs) on- and off-farm credit guarantees, lines of credit, matching grants, as well as advisory services. If complemented with more flexible initiatives that are more accessible to small-scale farmers (such as weather indexed insurances and micro-finance opportunities), such schemes can enhance coverage against risks throughout the country and increase farmers' potential to cope with increasing weather and climate events.
- Adoption of CSA practices largely depends on farmers' opportunity to invest in adequate agricultural infrastructure. Government-led subsidy programmes for irrigation equipment and hillside water harvesting structures are examples of existing mechanisms that can enable CSA adoption. Such initiatives need to be strengthened and scaled-out, in order to make sure they reach out to a larger number of farmers in vulnerable regions of the country.

**Adaptation    Mitigation    Productivity    Institutions    Finance**

The climate-smart agriculture (CSA) concept reflects an ambition to improve the integration of agriculture development and climate responsiveness. It aims to achieve food security and broader development goals under a changing climate and increasing food demand. CSA initiatives sustainably increase productivity, enhance resilience, and reduce/avoid greenhouse gases (GHGs), and require planning to address tradeoffs and synergies between these three pillars: productivity, adaptation, and mitigation [1]. The priorities of different countries and stakeholders are reflected to achieve more efficient, effective, and equitable food systems that address challenges in environmental, social, and economic dimensions across productive landscapes. While the concept is new, and still evolving, many of the practices that make up CSA already exist worldwide and are used by farmers to cope with various production risks [2]. Mainstreaming CSA requires critical stocktaking of ongoing and promising practices for the future, and of institutional and financial enablers for CSA adoption. This country profile provides a snapshot of a developing baseline created to initiate discussions, both within countries and globally, about entry points for investing in CSA at scale.



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## RESOURCES: PERSONNEL

**Bureau for Food Security**

**Bureau for Economic Growth, Education, and Environment**

**Bureau for Democracy, Conflict, and Humanitarian Assistance**

**Bureau for Africa**





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## TAKE AWAY MESSAGES

- Regardless of where you are in the program cycle, you have opportunities to enhance climate resilient outcomes in your programs
- There are multiple sources of support to address climate resilience in food security programming
- You now have a reference sheet to enable beginning or continuing action on climate-smart agriculture that is relevant and practical for your context



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**Goal: Sustainably reduce global hunger, malnutrition, and poverty**

**Objective 1: Inclusive and sustainable agricultural-led economic growth**

**Objective 2: Strengthened resilience among people and systems**

**Objective 3: A well-nourished population, especially women and children**

**IR 1**  
Strengthened inclusive agriculture systems that are productive and profitable

**IR 2**  
Strengthened and expanded access to markets and trade

**IR 3** Increased employment and entrepreneurship

**IR 4** Increased sustainable productivity particularly through climate-smart approaches

**IR 5** Improved proactive risk reduction, mitigation, and management

**IR 6** Improved adaptation to and recovery from shocks and stresses

**IR 7** Increased consumption of nutritious and safe diets

**IR 8** Increased use of direct nutrition interventions and services

**IR 9** More hygienic household and community environments

### Cross-cutting Intermediate Results:

CC IR 1 Strengthened global commitment to investing in food security

CC IR 2 Improved climate risk, land, marine, and other natural resource management

CC IR 3 Increased gender equality and female empowerment

CC IR 4 Increased youth empowerment and livelihoods

CC IR 5 More effective governance, policy, and institutions

CC IR 6 Improved human, organizational, and system performance

Effective response to emergency food security needs

**Complementary results** – Long-term food security efforts benefit from and contribute to complementary work streams that promote:

Economic growth in complementary sectors

Healthy ecosystems and biodiversity

Stable, democratic societies that respect human rights and the rule of law

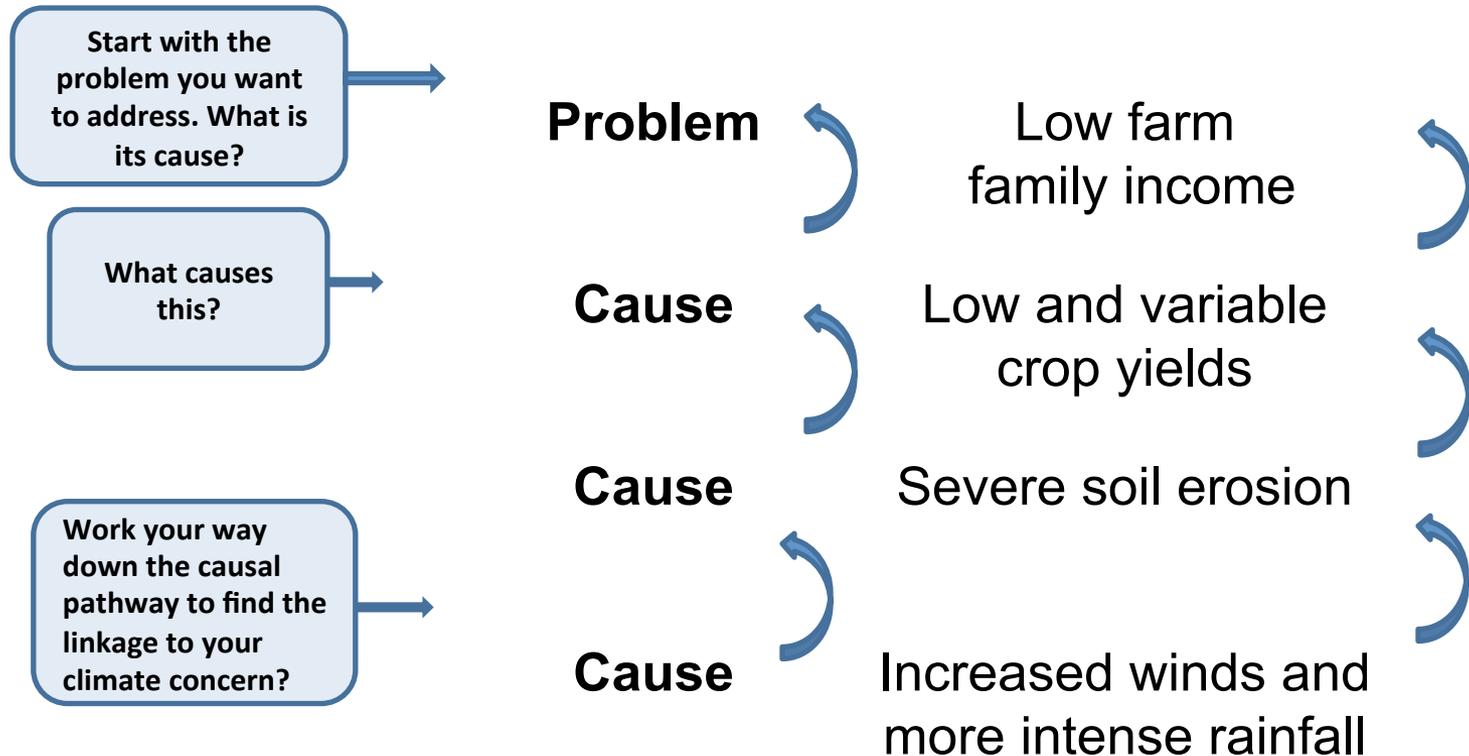
A reduced burden of disease

Well-educated populations



## DEFINE YOUR OUTCOME

Start with your Causal Stream....





## DEFINE YOUR OUTCOME

...end with your theory

Start with the problem caused by your climate challenge: what intervention points need to be addressed?

How to increase farmer use?

How to increase access?

Increased farm family income

Increased productivity

Reduced soil erosion on farmer fields

Increased use of erosion control management practices

Increased access to extension services or information

Increased training and materials development for extension agents



THEN

IF





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## BREAKOUT 2

- 15 minutes
- **Individually, define your near term (5-7 years) outcome for the 3 pillars.**
  - Be as clear and specific as you can
  - Be aware of co-benefits and overlapping outcomes among the pillars
  - Link your outcome to your interventions using “If..., then...” statement
  - What information about your ZOI do you need to know to plan the intervention and measure progress?



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## CSA PROGRAMMING AND INDICATOR TOOL

**Guides the user through a thoughtful and transparent process to:**

- Examine through the **three-dimensional lenses** (productivity/income, adaptation and mitigation) to what extent current interventions address each CSA pillar
- Compare the scope and **CSA intentionality** among different activity designs
- Support the identification and selection of an appropriate set of **indicators** to measure and track CSA outcomes.



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## 1

### Step 1: Questions to be addressed & intentionality of desired outcomes

- **Directly:** if the interventions' main goal is to specifically address the related question/outcome.
- **InDirectly:** if, despite not having been designed for that purpose, the intervention results may cause an unintentional but positive collateral effect or co-benefit on the related question/outcome.

## STEP 1: Definition of scope and intentionality of desired outcomes

### Productivity

*To what extent do your project/intervention aim to:*

- increase food availability and access by rural and urban poor?
- increase yield and productivity?
- improve access to inputs that increase productivity?
- apply management schemes geared at raising the profitability of smallholders agricultural production?
- improve livelihood security and/or decrease poverty?
- support policy and legal framework to improve food security?
- improve institutional capacities and services to promote agricultural production and marketing?
- develop financial mechanisms to promote adoption of practices or technologies that increase productivity and livelihoods ?



Directly
Directly
Directly
Indirectly
Directly
Directly
Not at all
Directly





## 2

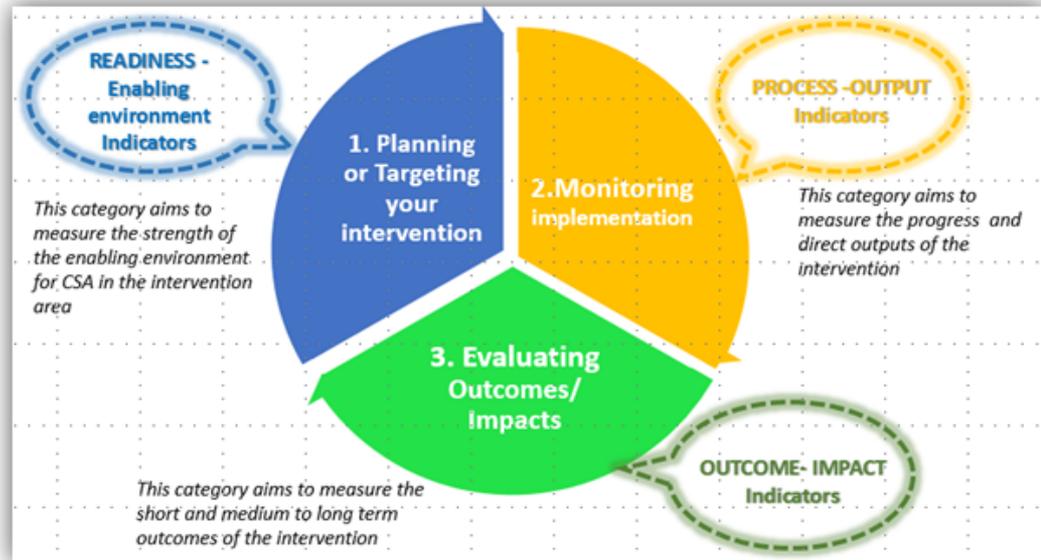
## Step 2: Indicator's type

Please select an option

Based on the current stage of your intervention, please select the desired type of Indicators:

Outcome

## STEP 2: Selection of intended scale of action and indicator's type



## Step 2: Intended scale of changes to be measured

Please select an option

Scale at which do you intend to measure changes:

Subnational

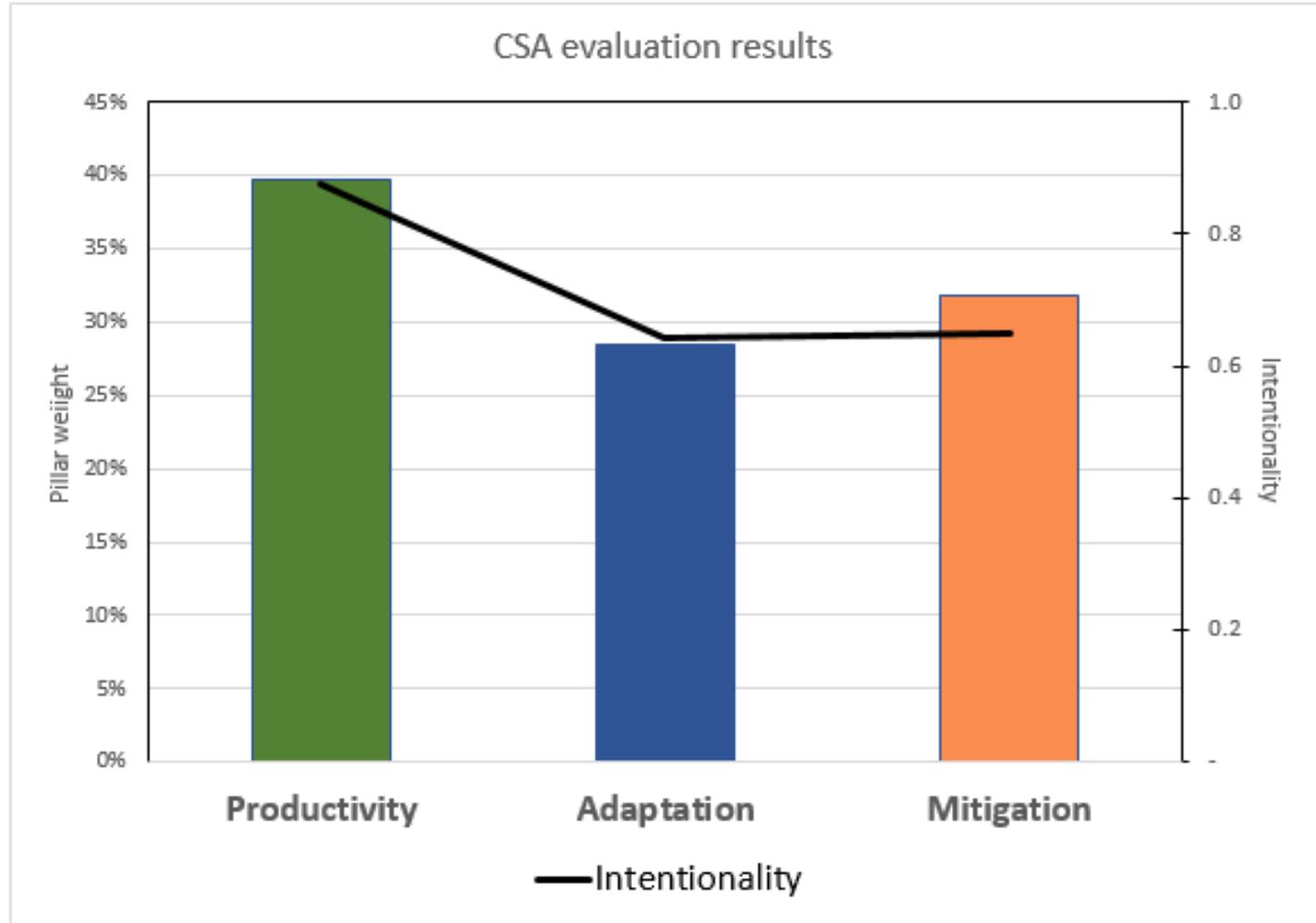




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## STEP 3: Results Summary and Visualization



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## BREAKOUT 3

- 15 minutes
- **In country teams, identify CSA annual indicators that fit your intervention using the CCAFS Indicator Identification Tool for one pillar**
  - Given your identified outcome and information needs, what annual indicators do you need to track?
  - Do you need to collect all indicators you have identified?
  - What disaggregates do you need?
- **What information do you still need? Do you need to collect it through a survey?**





## BREAKOUT

### As you work, think about the following questions:

- Are there indicators you are already using or information you are already collecting that meet the need?
- Are there existing FTF indicators that would meet the need?
- What information needs to be disaggregated by sex?
- Are these outcomes reasonable within a short term time frame (5-7 years) and with the amount of resources available?
- What have outcomes/impacts of similar activities been? Is there sufficient information on similar activities to answer this question?





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## RESOURCES

- <https://www.feedthefuture.gov/progress>
  - Feed the Future Indicator Definition Handbook
- <http://agrilinks.org/>
  - Sampling Guide for Beneficiary-Based Surveys for Select Feed the Future Agricultural Annual Monitoring Indicators
  - Feed the Future Agricultural Indicators Guide
- <http://www.state.gov/f/indicators/>
  - Standard Foreign Assistance Master Indicator List (MIL)
- [https://ccafs.cgiar.org/csa-programming-and-indicator-tool#.WBozS\\_krLZ4](https://ccafs.cgiar.org/csa-programming-and-indicator-tool#.WBozS_krLZ4)
  - CCAFS CSA Programming and Indicator Tool



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