

CLIMATE FRIENDLY AGRICULTURE

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the frame, creating a modern, layered effect. The rest of the background is plain white.

AGENDA

- ▶ Background – CFA why CFA
- ▶ Selected examples of CFA technologies and how they relate to nutrition.
- ▶ Trends and use of Technology
- ▶ Challenges in rolling out CFA

CLIMATE FRIENDLY AGRICULTURE (CFA)

► **Climate change has an impact on;**

1. Water and life below water.
2. Soil
3. Diseases
4. Health and wellbeing

► **And through this climate impact on**

1. Type of crop produced
2. Quality of food
3. Yield/ Productivity
4. Food prices

NB: To practice climate friendly agriculture, you become conscious of your immediate climatic condition of your environment.

hence your goal is towards achieving a Climate Smart Agriculture (CSA)



Agriculture that is considered climate friendly and smart needs to respond to these changes

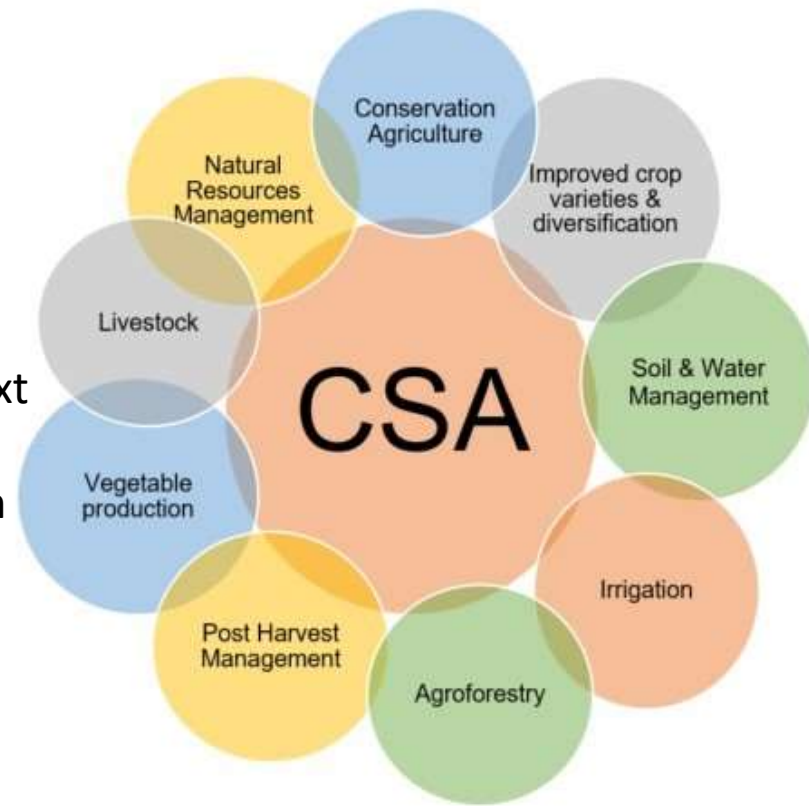
WHAT IS CLIMATE SMART AGRICULTURE?

1. Objective:
Sustainably increase
agriculture
productivity

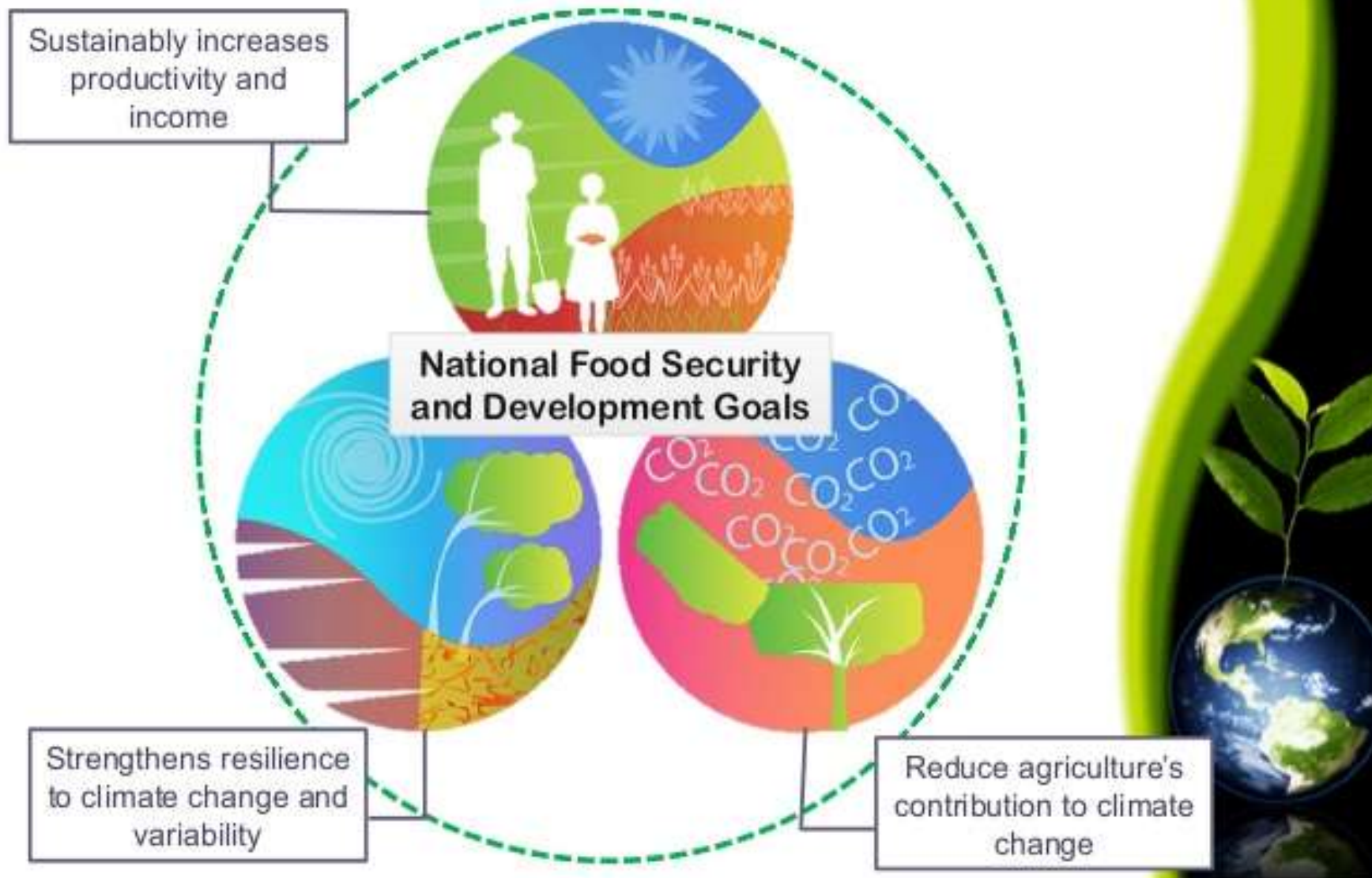
2. Objective:
Adapting and Building
resilience to climate
change

3. Objective:
Reducing / removing
greenhouse gas
emission where
possible

- >30 of agricultural practices – old and new
- Grouped under several headings
- Only a sub-set appropriate in a given context
- Need to further adapt to suit each situation



What is CSA?



CSA IN CONCERN

- ▶ 2020 - CSA in 19 countries reaching 211,000 farmers (61% females)

- ▶ Some of the most promoted CSA technologies in concern are:
 1. Conservation Agriculture

 2. Improved crop varieties and diversity

 3. Irrigation

 4. Post harvest management

 5. High relevance to nutrition



e.g., composting, manure application, maize stover, mulching, and incorporation of other forms of organic matter.

Residue addition or application

Mixed measures

Non-woody plants

e.g., cereal-legume inter-cropping.

Farm-level CSA

Assisted regeneration practices

Woody plants

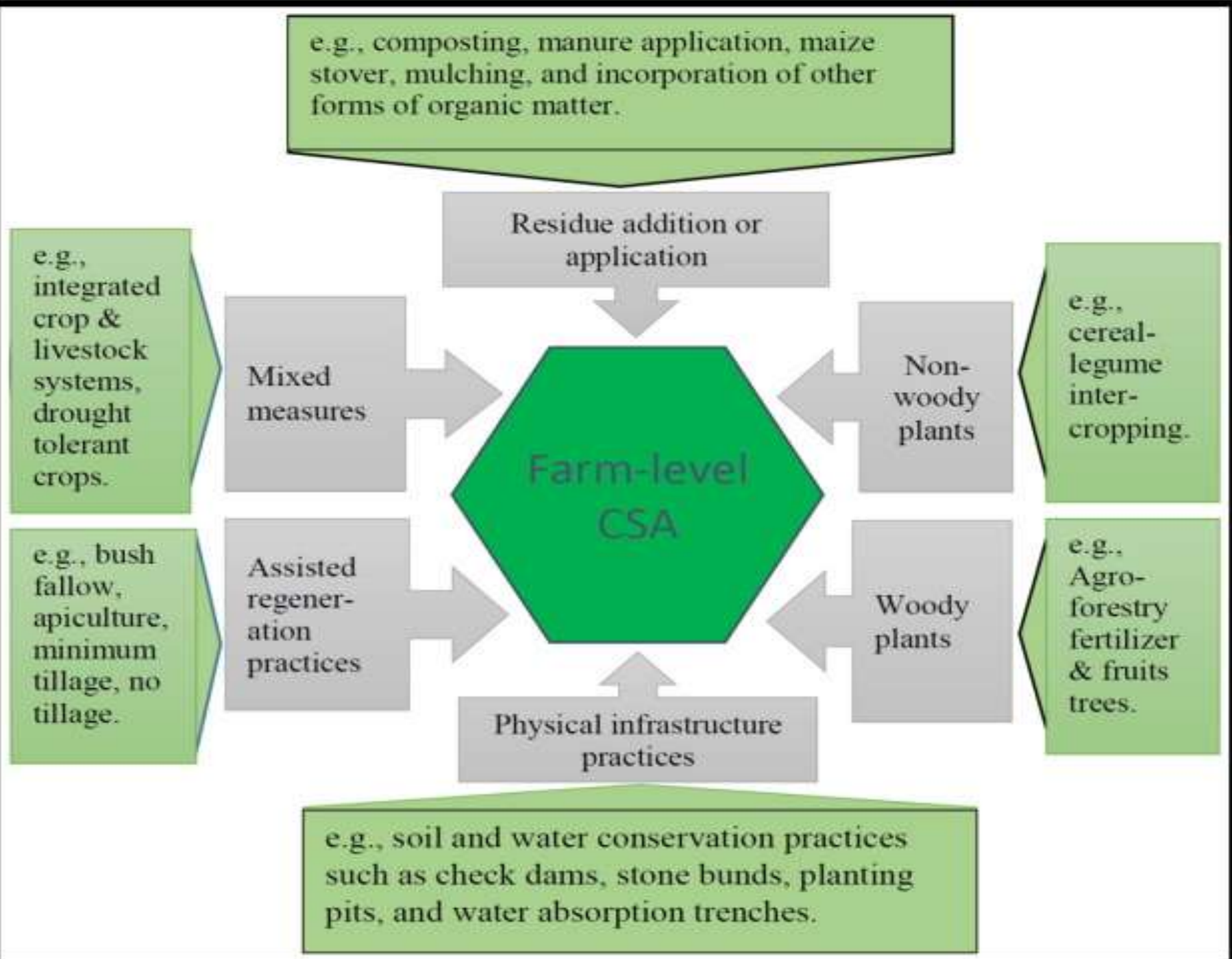
e.g., Agro-forestry fertilizer & fruits trees.

Physical infrastructure practices

e.g., integrated crop & livestock systems, drought tolerant crops.

e.g., bush fallow, apiculture, minimum tillage, no tillage.

e.g., soil and water conservation practices such as check dams, stone bunds, planting pits, and water absorption trenches.





Climate Smart Agriculture Techniques

- **Mulching,**
- **Intercropping,**
- **Conservation agriculture,**
- **Crop rotation,**
- **Agroforestry,**
- **Improved grazing,**
- **Integrated crop-livestock management,**
- **improved water management.**

Innovative practices include:

- **Better weather forecasting,**
- **Early warning** systems and
- **Risk insurance**



CSA TECHNIQUES - CONSERVATION AGRICULTURE

1. Crop rotation and intercropping



Intercropping maize-groundnut- Zambia

2. Mulching/Zero tillage



Soil Preparation - Niger

2. Permanent soil cover



Soil mulching with crop residue- Malawi

CSA TECHNIQUES -IMPROVED CROP VARIETY AND DIVERSIFICATION



Seed bank association sorting sorghum seeds of improved variety (left) - packaging of 'Butana' improved sorghum seed variety (right)- sudan



Crop rotation plots
maize/groundnut/cowpea- malawi



Fruit trees (papaya) as part of crop diversification strategy - Somaliland

CSA TECHNIQUE- POST HARVEST MANAGEMENT



Hermetic storage containers - Pakistan

FAO estimates that roughly one-third of the physical mass of all food is lost around the world:

- 45% globally for fruits, vegetables, roots and tubers.
- 35% for fish and seafoods
- 30% for cereals
- 20% for meat and dairy products



Solar dryer for food preservation - Zambia

CHALLENGES WHEN ROLLING OUT CSA

► **CSA technologies are not 'sexy'**

1. Mix of old and new practices
2. Not a magic bullet
3. No chemical fertilisers, tractors, etc.

► **Adoption rate is low**

1. Farmers are somewhat 'risk averse'
2. Farmers have limited resources (time, money, land, knowledge,...)
3. Takes time before seeing impact
4. Behaviour change requires sustained engagement with farmers
5. Extension approach not participatory enough

CONCERN
worldwide

**ENDING
EXTREME POVERTY
WHATEVER
IT TAKES**

"Earth provides enough to satisfy every man's needs,
but not every man's greed."

Mahatma Gandhi



InShot