

**Modified agriculture – Climate smart agriculture**

Climate Smart Agriculture (CSA) - agricultural practices that sustainably increase productivity and system resilience while reducing greenhouse gas emissions.

- It is related to actions both on-farm and beyond the farm, and incorporates technologies, policies, institutions and investment.
- sustainable increase in agricultural productivity and increases in farm incomes, food security and development
- Management of farms, crops, livestock, and other resources better, produce more while increasing resilience at multiple levels
- Support farmers to enable them to implement the necessary change

#### FAO actions Programme

- Mitigation of Climate Change in Agriculture (MICCA) -
- EX-ACT – incorporating climate impact in agriculture investment projects
- UN-REDD Programme

#### Requirements

- Filling up of data and knowledge gaps
- Knowledge driven agriculture, food security and climate change policies

## **Convert every Water drop to food**

- Spatial, temporal data collection at multi-level information
- Rectification, Geo-reference, storage and Integration of information
- Analysis and dissemination of information
- Corrective measures @ individual level
- Enhance agriculture production
- Food security

As Traditional knowledge is transmitted orally. Outreach is limited

### **Information support**

- Collate information & reduce Knowledge gap, measurement and monitoring
- Information on community level property
- Resource management, yield increasing and resource conservation.

### **Technologies**

- Macro and micro level synergies between agriculture production & sustainability
- Grass root level resource map and development data base
- Creation of legacy data base by Digitization of legacy database
- Generation and integration of databases
- Crop and water information system

- Collate existing information & bridge gaps
- Geo-reference and integrate information for decision making
- Use available information decision making – sustainable agriculture

What is geographic information system?