



# Promoting climate-smart agriculture across ASEAN and India

EU GCCA+ Regional Workshops on Climate Change

22 April 2021

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- GIZ's approach to CSA
- Supporting CSA in ASEAN – regional policy level
- Supporting CSA in India – national implementation level
- Conclusions: Promoting CSA – what is important?

# GIZ's Approach for CSA



# GIZ's perspective on CSA

- CSA embedded in the concept of sustainable agriculture; part of GIZ's sustainable development concept → CSA methods and instruments integrated into TA for food security, agriculture & rural development, climate change etc.
- CSA important strategy for achieving NDCs; regionally differentiated implementation
- Agrobiodiversity is key for adaptation in agriculture
- Need for climate-friendly and resilient agriculture value chains

## Selected key approaches and tools relevant for CSA:

climate change mainstreaming  
access to climate finance  
improved animal husbandry

land use planning

participatory approaches

NAPs

climate–risk analysis

vulnerability assessment

agrometeorology

early–warning systems

# Supporting CSA in ASEAN



# GIZ support for CSA in ASEAN

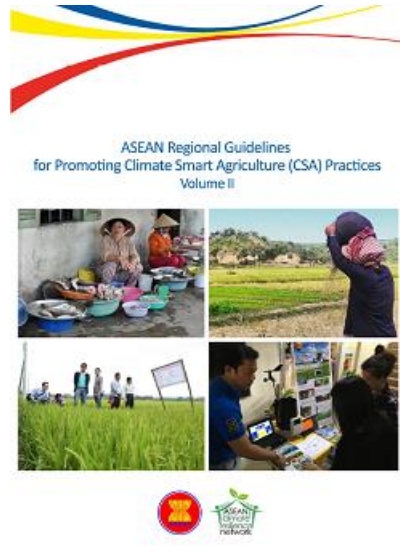
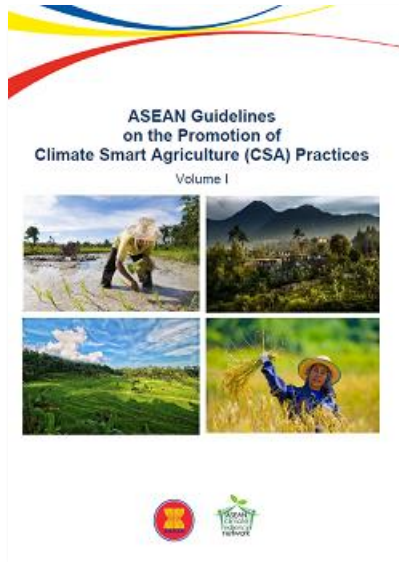
- Regional policy support for CSA since more than 10 years; currently through the project *Climate Smart Land Use in ASEAN*  
<https://www.giz.de/en/worldwide/78271.html>
- CSA approaches and technologies integrated into different projects promoting implementation in individual countries, such as:
  - Strengthening the resilience of poor population groups under climate change (Cambodia, Vietnam)
  - Mekong Delta Climate Resilience Programme
  - Thai-German Climate Programme
  - Sustainable Agricultural Supply Chains in Indonesia
  - ... and many more

# ASEAN policy framework

Comprehensive policy-framework for promoting climate-smart agriculture/land use:

- Vision and Strategic Plan (SP) for ASEAN Cooperation in Food, Agriculture and Forestry (FAF) (2016-2025)
  - Implemented through Plans of Actions of FAF working groups
  - ASEAN guidelines/recommendations, i.a. ASEAN Regional Guidelines for Promoting CSA Practices
- ASEAN Multi-sectoral Framework on Climate Change: Agriculture and Forestry Towards Food Security (AFCC)
- ASEAN Comprehensive Recovery Framework (ACRF)

# ASEAN CSA Guidelines



## Contents:

- Stress tolerant maize varieties
- Stress tolerant rice varieties
- Agro insurance using weather indices
- Alternate wetting & drying
- Cropping calendar for rice and maize
- Agricultural insurance
- Integrated farming systems
- Climate information services
- Rice shrimp farming

[Relevant ASEAN Guidelines on Land Use - ASEAN-CRN \(asean-crn.org\)](http://asean-crn.org)



# Observations

## Challenges:

- ASEAN policies often not binding
- Lack of clear implementation mechanism for ASEAN policies
- No systematic monitoring and evaluation of progress and impacts

## Opportunities:

- Strengthen ASEAN as an agenda-setter and multiplier on different levels
- Connect national implementation with regional policy processes
- Use ASEAN fora for matching support needs with support sources and forging cooperations

# Example of successful ASEAN support: ASEAN-CRN

- Platform for regional exchange and cooperation related to CSA; facilitates the translation of science into policies and finds resources to support needs of the sector
- Objective: ASEAN member states are in a better position to adapt their land use sectors to climate change and optimize the mitigation potential
- Selected outputs:
  - Several ASEAN FAF guidelines
  - Project proposals to access climate funds for the scaling up of CSA in the region
  - Formation of the ASEAN Negotiating Group on Agriculture



<https://asean-crn.org>

# Example of successful ASEAN support: ANGA

- ASEAN Negotiating Group on Agriculture (ANGA) formed by ASEAN-CRN
- Objective: ensure the representation of the ASEAN agriculture sector in all the relevant negotiating fronts of the UNFCCC negotiations, for the advancement of ASEAN common positions in agriculture
- Currently focusses on the Koronivia Joint Work on Agriculture (KJWA)
- Selected outputs:
  - 3 joint submissions on different topics
  - Active representation of ASEAN during negotiation meetings





# Supporting Climate-Smart Agriculture in India: the GIZ Experience



Implemented by



# Projects contributing to CSA in India [India \(giz.de\)](https://www.giz.de)

## Bilateral/Global Projects

Water Security & Climate Adaptation in Rural Areas (WASCA); 2019-22, 5.0 Mio. € with Ministry of Rural Development and Ministry of Water Resources and 4 states

Supporting Agroecological Transformations in India (SuATI); 2021-2025, 8.0 Mio. € with Ministry of Agriculture & Farmer Welfare and 3 states

Capacity enhancement for Sustainable Agriculture and Aquaculture (C SASA); 2020-2022, 1.5 Mio. € with National Bank for Agriculture & Rural Development (NABARD) and 2 states

Soil Protection and Management (ProSoil); 2015-23, 23.5 Mio. €; with NABARD and 2 states

Green Innovation Centers (GIC); 2015-23, 25 Mio. €; with Ministry of Agriculture & Farmer Welfare and 3 states

Food and Nutrition Security, Enhanced Resilience II 2021-2025, 8.0 Mio. €, Ministry of Women and Child Welfare

Food security through integrated aquaculture, 2021-2024, 6.0 Mio. € with Ministry of Fishery and 2 states

Enhancing Rural Resilience Through Appropriate Development Actions (ERADA); 2021-2024, 3.0 Mio. € with Ministry of Rural Development and 4 states

Global AgriChains – Cotton, Tea and Spices, 2019 – 2024, 6 Mio. €, Ministry of Textiles and 6 states

FAIR Forward: Artificial Intelligence for All, 2020-2022

## Public private partnerships:

Sustainable Farming Communities in Mint Sector (MARS & Symrise), 2020-23, 4.55 Mio. €

Sustainable Peanut farming with Smallholders, (MARS), 2019-22, 2 Mio. €

## Climate-Smart Agriculture



Sustainable management of **soil, water and energy** interface for **climate change**



Innovative **business and financing** models for CSA



**Circular economy** for sustainable soil health and CSA



**Knowledge exchange and advisories** for farmers

# 1. Sustainable management of soil, water and energy interface for climate change (I)

## Challenges/Needs

- Enhance **soil + water + energy** interface and reduction in higher **carbon** and **water** footprints
- Capacities of public institutions to plan and implement **ecosystem-based approaches** instead of asset based
- **Agroecology** as an **integrative framework** for ecosystem restoration, sustainable agriculture, safe and healthy foods

## Innovations and Solutions

- Participatory **water budgeting** and water-use planning
- **Holistic planning** and **management** of resources using **digital solutions**
- Decreasing the dependence on **ground water** by better managing surface water resources
- Promoting **gravity / renewable energy-based** irrigation alternatives
- Capacity development **modules** for GIS based planning for mainstreaming
- Leveraging national level programmes and ministerial mandates: MGNREGA (wage-work), Prime Minister's Catch the Rain initiative, Agroecological transformations

# 1. Sustainable management of soil, water and energy interface for climate change (II)

## Results

- GIS-based planning and management of resources:
  - **Accepted and scaled** by Ministry of Rural Development (MoRD) across all local councils (265,000 gram panchayats)
  - **Adaptation interventions** at large scale using existing public funds
  - **Global innovation hubs** for support to other countries (Peru and Malawi)
- **Mainstream** capacity building across country through Ministry for enabling frontline cadre of various rural development programme (65,000 technical functionaries trained)
- Scale4impact: **ecosystem-based** approaches for provincial/state levels

## Key Partners



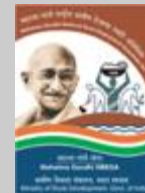
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Ministry of Agriculture and Farmers Welfare  
Government of India



सत्यमेव जयते  
Ministry of Rural Development  
Government of India



सत्यमेव जयते  
Ministry of Jal Shakti  
Government of India





## 2. Enhancing Businesses and Financing for CSA



KFW



### Challenges/Needs

- **Making sustainable practices** in agriculture accepted and adopted
- **Low investments** in climate smart agriculture and natural resource management (mostly grants)
- Weak **capacities** of farmers, farmer organizations and public financing institutions for **scaling up**

### Innovations

- **Credit plus approach** for financing for sustainable agriculture/NRM based 343 projects
- **Public private partnership** for mainstreaming into business processes worth 5.4 million USD
- **Capacity building tools** for farmers and FPOs
- Establishing **Green Colleges** for disseminating best practices

### Results

- **23 Business models** for CSA mainstreaming - NABARD, government, banks
- **Institutional models for financing:** Bank to NGO, Corporate & FPOs
- **FPO capacity development** tool-kit by NABARD-GIZ-Bankers Institute of Rural Development ([birdlucknow.in](http://birdlucknow.in)) to reach 4000 FPOs

### 3. Circular Economy Approaches to Sustainable Soil Health and CSA

#### Challenges/Needs

- **Soils degrading** due to exploitative uses and overuse of fertilisers and pesticides
- **Healthy soils** also better **adapted to climate change**
- **Carbon sequestration** in soils (second biggest sink) tradeoff **GHGs**
- Dwindling availability of **locally available** organic resources
- Managing waste in urban areas - **especially organic wastes**

#### Innovations

- **Urban Rural Nutrient and Carbon Cycle (URNCC)** - Circularity approach to recycle urban and rural organic waste to improve soil health
- **HARIT Ticker** (a digital platform for FPOs-ULB business links) anchored with Urban Development Department
- **Business models** for FPOs and Urban Local Bodies to promote **compost** and **terra preta**
- **Alignment** to resources and mandates of **Clean India Mission, LDN targets, soil health** and **Sustainable agriculture**

#### Results

- **A Tripartite cooperation model** between UDD, NABARD and GIZ to implement URNCC
- Support digital approach to **enhance and monitor** the compost value chain across full state- **HARIT Ticker**
- **Quality Assurance** processes for urban compost through Agricultural Universities
- 12-15 % average **increase** in yield compared with other organic inputs



## 4. Knowledge and information advisories to Farmers

### Challenges/ Needs

- **Localisation** of climate information and package of practices
- Managing **climate induced** contingencies for local contexts and needs
- Capacity-enhancement of **extension services**
- **Effective** communication and adoption of advisories by farmers

### Innovations

- Block level **contingency planning**
- Crop-based **need-specific apps** (e.g. Potato App; Irrigation App) and **AI**
- Institutionalising the use of **digital advisory services** for scaling up CSA measures (e.g. niceSSM)
- Community managed automated **weather stations**

### Results

- Capacitated agricultural extension institutions provide **validated, localised advisories**
- Private and public sector partners are using **digital advisory processes**
- Over **250,000 farmers** receiving advisories



# Conclusions

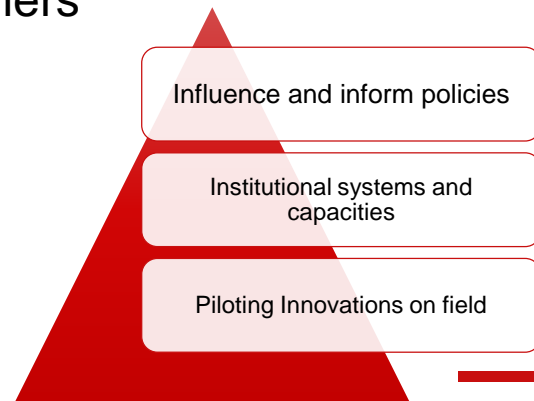


# Promoting CSA – what is important?

- Strengthening cross-sectoral cooperation and transboundary actions and knowledge exchange - consolidation of fragmented approaches (often in silos)
- Consider CSA as part of a larger integrative frameworks: value chains, landscapes, food systems - Agroecology
- Design pilot projects with scaling up in mind - product and partners orientation (public and private sector)
- CSA sourced products must give more income to farmers and safer and healthier food to consumers
- Digitalization for integration, traceability, scale

## Role of technical cooperation partners

- Honest knowledge broker, technical / innovations in real conditions, collaborative ecosystem, scalable tools and solutions
- Respond to and mainstream with public institutions / political partners



# Thank you!

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