



QUARTERLY PROGRESS REPORT

GREEN INNOVATION CENTRE FOR THE AGRICULTURE AND FOOD SECTOR – INDIA

April - June 2022

Tabular Summary

Title	Global Programme Green Innovation Centres for the Agriculture and FoodSector - India
Implementation period	01.11.2014 - 31.03.2023
Value chains	Potato, Tomato, Apple
Target group	<ul style="list-style-type: none"> • Smallholder farms, especially young people and women • Farmer organisations • Managers and employees in the upstream and downstream companies of the value chains (VC), especially young people and women
Success Indicators	<ul style="list-style-type: none"> • Income and productivity increase: in smallholder farms by an average of 30%. • Employment growth in enterprises working along the value chains • Education and training: for smallholder farmers • Improving services along supported value chains

1 Brief Description of the project

The aim of the Green Innovation Centre is to promote the dissemination of innovations that contribute to improving the income of smallholder farms, employment in the agricultural and food sector and the regional supply of food in selected Indian states.

The country package focuses on the micro and meso levels. At the micro level, the focus is on training and extension, the availability of inputs and services, and strengthening business relationships along the value chains. Private agricultural extension workers are at the centre of this approach. The competencies of farmers and farmers' organisations with regard to a sustainable increase in productivity are strengthened in particular through the application of *Good Agricultural Practices* (GAP). This is done on the one hand through training, field days and demonstration fields, and on the other hand through formalised further education and training courses. Producer groups and enterprises in the upstream and downstream sectors are supported in increasing their business capacity and in identifying and exploiting their market potential. At the meso level, the project strengthens the capacities of people in the service sector as well as in advisory, education and training institutions to disseminate innovations. The networking of actors in the states (macro level) and the political dialogue with the Ministry of Agriculture at state and central level are intended to contribute to improving the framework conditions for a modern agricultural and food economy.

The focus in the Potato value chain is on professionalising the upstream areas (e.g. improved seeds), production (e.g. mechanisation) and marketing of table potatoes (e.g. networking with supermarket chains, direct marketing). The central starting point for the development of the agriculture value chain

Tomato is the upstream area of production of high-quality seedlings, e.g. through model seedling farms, and the marketing of seedlings. In the Apple value chain, the focus is on a transformation towards modern apple orchards as well as on production (e.g. nutrient and disease management, pruning of apple trees).

With the introduction of the new partnership category "Global Partners" under the BMZ 2030 reform concept, India will in future be counted among the global partners and will accordingly play a strategic role in solving global future issues and protecting global assets. The country package will therefore be increasingly integrated in the framework of a new module: Strengthening Global Partnerships, the country package will therefore increasingly work in the thematic areas of agroecology and South-South cooperation. For the Potato and Tomato value chain, the 2021 project progress analysis must examine whether and how a conclusion of the measures can be planned for the end of 2022. A corresponding concept for the realignment of the country package has been submitted to the BMZ and is part of the 2021 amendment offer.

2 Major achievements and activities (as per states)

2.1 Karnataka

2.1.1 Potato

- State Level Technical Committee (SLTC) meeting for Karnataka was conducted on 19th April 2022. Agreed to work on
 - Rooted Apical Cutting (RAC) technology upscaling
 - Joint publishing with DoH and University of Horticultural Sciences Bagalkot on Good Agriculture Practices in Potato, Tomato and Potato seed production through RAC technology
 - Mechanisation empanelment: Rohit Krishi has applied for empanelment of Semi-automatic potato planters with the DoH Karnataka.
 - Agreement for support to FPO Cell: Government of Karnataka is planning to create a FPO cell with a focus on strengthening output marketing and processing of agricultural products through strategic alignment in coordination with different schemes of various departments. In assessing the needs and designing this organizational structure and roles and responsibilities, GIZ will provide two consultants support for six months.
- An exposure visit to DoH officials and University/KVK scientists on RAC technology was conducted on 28-29th April at Hassan.



Workshop on RAC technology

- Following the exposure visit workshop was organised to scale up the RAC technology in 6 districts of Karnataka viz., Hassan, Chikmangalur, Dharwad, Belagavi, Chikkaballarpur and Kolar.
- Conducted orientation on RAC to DoH officers in all six districts and given tissue culture plantlets to three biocentres of DoH for multiplication.
- UHSB has released the RAC technology in their Research Council meeting held in June month.

2.1.2 Tomato

- 1200 farmers have been reached through trainings (GAP Tomato) and demonstration (boom sprayers and better quality nozzle tips)
- Rs 38.50 lakhs loan amount from banks has been linked to 6 Farmer Study Groups (FSG) and same has been used for FPC business.
- Another fertiliser sale point of FPC has been inaugurated in Nidaghatta village; immediate impact is that farmers are savings Rs 50/bag and other traders have reduced the price

2.2 Maharashtra

2.2.1 Potato

- Organized Pre – season workshop – meeting with the stakeholders mainly companies working with FPCs Board of Directors (BoD) & shareholders as part of preparation for the upcoming season. Seed and input demand estimation, order placing for the same and timeline for supply were the main topics of discussion in the stakeholder meeting. 15 companies' representatives actively participated in the meeting.
- Planning meeting with BODs & FSG representatives to discuss the inputs purchase & indent to the FPC of the required of fertilizers & other inputs conducted.

- Seed potato purchase: Around 125 mt of seed potatoes at Rs. 25/kg (industrial potato in kharif) purchased for the Kharif season as of now by the FPC. The seed potatoes are stored at Pargaon and Suppa cold storage.
- Bhama Bhima FPC promoted under Green innovation center project received order to supply carrot & Broccoli seeds from Project Director, ATMA Pune worth Rs. 2.19 lakh. Bhama bhima FPC gained profit of around Rs. 21000/-. The supply is delivered to FPC at Junnar & Khed under SMART project.

2.2.2 Tomato

- *Assam Project On Agri-Business And Rural Transformation (APART)* Assam team visited the GIC project at Narayangaon for the exposure visit. Major focus of the visit was on nursery operations and tomato value chain activities and FPC development.
- Farmers are facing issue of whitefly, aphids and Cucumber Mosaic Virus(CMV) resulted in reduction of tomato area in Pune and Ahmednagar district and in project area as well.
- Farmer study group visits, meetings and training of the farmers conducted on the field as Tomato season was going on. Support to farmers on cultivation practices, disease and pest management etc were provided to the farmers in these trainings.



FPC Farmers with Potato seed



FSG training and meeting at Tomato field villages

Other Updates

- GIC Project State Level Steering Committee meeting for Maharashtra was organised at Pune under chairmanship of hon. Agriculture commissioner- Maharashtra on 25 April 2022.
- Meeting with Director Research, Mahatma Phule Krishi Vidyapeeth (MPKV) Rahuri was done on 13th May 2022 to discuss collaboration in mechanisation, RAC and Disease testing laboratory for CMV in tomato.
- The GIC India and Project SMART (State of Maharashtra's Agribusiness and Rural Transformation Society of The Maharashtra State Department of Agriculture) has signed MoU on 28 June 2022. Focus is on post-harvest management and institutional capacity building, in the tomato and potato value chain activities.

As part of this cooperation, a team of experts on post-harvest management (PHM) from Germany visited Maharashtra, to assess and understand the current state of post-harvest technologies and capacities. This is to be followed by a visit of senior SMART officials to

Germany to understand and study the advancement on post-harvest technology. , They would also study how German farmer cooperatives are managing their operations including PHM technologies, learn about DEULA (German institution for modern education in agriculture and agricultural engineering) and interact with German Private sector companies specialising in post-harvest management technologies.



State level Technical Committee meeting at Pune



APART team visited Versatile Agrofirst FPC promoted under Green Innovation Centre Project

2.3 Andhra Pradesh: Tomato

- Farmers Field School (FFS) by APMAS: In 6 mandals FFS activities are going on cover about 200 farmers.

2.4 Himachal Pradesh: Apple

- Training programme on Nutrition, Integrated pest and disease management and weather-based disease forecasting in Kullu and Shimla district held from 22 April 2022 onwards and the total number of participants in Kullu are 792 and in Shimla the number is 2000. For irrigation management total number of farmers trained are 200 in Kullu district.
- Planning meeting with Directorate of Horticulture, Shimla and Dr. Y S Parmar University of Horticulture and Forestry, Nauni, Solan was successfully done in April 2022 for all the implementation activities to be conducted in collaboration with DoH and University in Kullu and Shimla districts.
- Under Food Processing Enterprise development initiative 9 product development training sessions were held at Shimla district where more than 100 participants (79 women + 23 men) from 24 villages took part in processed product development trainings on apple & stone fruits.

Five new groups were identified in Dist. Shimla which showed interest in setting up micro/nano scale food processing enterprises. At Kullu district 3 product development sessions were held where 24 women participants from 3 SHGs from Village Bajaura, Chong, and Jagatsukh were trained. Also, in this quarter total 7 enterprises (4 in Shimla and 3 in Kullu district) supported under this initiative have registered under FSSAI.



Processed product development training sessions at Shimla district



Processed product development training sessions at Kullu district

Chanshal Fruits Producer Company, which is the only FPC out of 30 created in HP by DoH, working on Food Processing held its inauguration of processing unit & Annual General Meeting at Badiyara, Chuwara Valley on 22.06.2022. Notably, GIZ consultants are supporting this FPC in processed product development training and have conducted 2 such sessions with 6 members of this FPC.



Inauguration of Chanshal Fruits Producer Company processing unit

3 Update on cross-cutting topics

Renewable Energy

1. Installation of 3 **solar powered cold rooms** in Maharashtra state completed with a capacity of 2 units of 16MT and one unit 32 MT.
2. Corporate foundation support was leveraged to un-locking philanthropic resources to fund part or full costs of solar powered food processing equipment.
3. Additional support for post-harvest loss management through renewable energy-based solutions received to strengthen the solar powered cold storage and drying solution interventions.
4. Comparative studies for 5 renewable energy technologies efficiency was completed on (1) Soil Testing unit, (2) Solar powered pumps, (3) Solar powered sprayers- Centralized (4) solar powered knapsack sprayers, (5) Tomato graders, (6) Solar dryers.
5. Two day's fair organized on 5th and 6th April 2022 at Madanapalle, Andhra Pradesh on Sustainable Energy driven replicable solutions to improve farmers income and strengthen the value chain in the partnership with SELCO Foundation.

Key Highlights:

- 43 Technology Innovators, Manufacturers and Entrepreneurs exhibited Live Demonstration of over 20 Technologies.
- Participated by 2000 farmers, individual entrepreneurs, students were mobilize
- Published two documents on report catalogues the context and need for solutions, the technology specifications and the potential impact of such solutions
- Insights captured are largely based on experiences of testing and demonstrating solutions within tomato and dairy value chain in Chittoor (Andhra Pradesh).



Two day fair on Sustainable Energy in Madanapalle, Andhra Pradesh

Gender

Women Entrepreneurship Programme in Maharashtra & Andhra Pradesh (Chitrika)

In this quarter, a new batch of 189 participants is onboarded. The participants were selected through the rigorous selection process of four steps; Written test, group discussion, business challenge, and personal interview. The 6-day of travel workshop was conducted from 5th June 2022 to 10th June 2022. All the participants visited Hyderabad for 6-day residential training. In these 6-day training sessions, they visited 10 small, medium, and large-scale enterprises across Hyderabad and attended sharing circles, community leadership engagement, and facilitation sessions. To welcome these participants an inaugural ceremony was held on 8th June 2022.



Almost, 20 days of facilitation workshops in addition to practicum tasks are conducted for the month of June'22. The facilitation workshops are closed in almost all the clusters for batch-1. For the first batch, the incubation period has begun.



Women from Srikakulam - World tribal festival day, Sandarbanga, 1st batch women banana chips stall



Material and Energy Consciousness - Facilitation Workshop in Maval, Pune



Life Structuring for Excellence Course - Facilitation workshop in Tirupati

South-South Cooperation on mechanisation

- Under the ongoing public private partnership between Indian machinery manufacturer Rohit Krishi in Maharashtra and GIC Benin machinery (multi-seeders) from Rohit Krishi has arrived in Benin. In the forthcoming planting season, these machines will be tested in different regions of Benin and in collaboration with a Benin based agri-mech engineering firm, adapted it to suit the local requirements and conditions.



Triangular Cooperation

India and Germany formed a partnership in May 2022 to promote triangular cooperation between India and other countries, supported by Germany. A number of partner ministries and institutions from different African nations have been engaged and relevant programmes have been collaboratively designed and developed with them in Ghana, Malawi and Benin. The Triangular Cooperation Fund would support in establishing the proof-of-concept for (a) Rooted Apical Cutting (RAC) - potato seed multiplication technology in Cameroon (b) Agri- incubator in Malawi that shall support emerging start-ups, especially those of small and marginal women producers/ farmers (c) Agri-mechanisation hub in Benin to foster collaboration between India and Benin leading to technology transfer, appropriate adaptation, capacity building and enterprise development in the field of agricultural mechanisation.

4 Project Progress Details

	PROJECT LOCATIONS					
State	Karnataka		Maharashtra		Andhra Pradesh	Himachal Pradesh
Districts	Chikmangalur district	Hassan District	Pune and Ahmednagar District	Aurangabad, District	Chittoor District	Kullu and Shimla District
Crop	Tomato	Potato	Tomato	Potato	Tomato	Apple
Number of project villages	49	86	65	42	307	190
Approx. area covered under the project	567ha	1,003ha	2,000ha	2,053ha	5,806ha	8,400ha
No of farmer groups and farmers reached	52 Men groups: 36 Women groups: 19 Mixed group: 3	71 Men groups: 49 Women groups: 15 Mixed groups: 7	83 Men groups: 69; Women groups: 14	74 Men groups: 34 Women groups: 12 Mixed groups: 7	441	170 Men groups: 152; Women groups: 18
Outreach to farmers not organized in farmer groups	1812	937	6,014	5,541	2,400	3,000
Total number of farmers	2310	8975	6300	3519	7420	11138
No. of Farmer Producer Companies (FPCs)	2 FPC registered	2 FPC registered	4 FPCs formed	2 FPCs formed	12 FPCs (Mandal Level), 26 cooperatives (Panchayat level), 1 district level federation company registered	Support of 2 Farmer Associations in Kullu and Chuhara Valley