

Coordinated Horticulture Assessment & Management using geoiNformatics (CHAMAN-Phase-II)



**Work Plan (2018-2020)
for
Collaboration between
Mahalanobis National Crop Forecast Centre, DAC&FW
&
Karnataka State Remote Sensing Applications Centre (KSRSAC), Bangalore**

1. Summary of the Proposed Project

CHAMAN project, under the Mission for Integrated Development of Horticulture (MIDH), in the first phase (Sept 2014- May, 2018) has made significant progress in the applications of satellite remote sensing and GIS in horticulture sector, which include the i) development & standardization of methodology for area and production estimation of major horticulture crops (Potato, Onion, Chili, Tomato, Mango, Citrus, Banana) at National/State/districts level, ii) geospatial applications for horticulture development (site suitability, infrastructure development, crop intensification, orchard rejuvenation, GIS database creation & Aqua-horticulture), & iii) research and development studies for signature generation, precision farming, yield modeling, stress detection etc. The CHAMAN Phase-I (Remote Sensing component of the project) was implemented by Mahalanobis National Crop Forecast Centre (MNCFC) in collaboration with ISRO Centres (SAC, NRSC & NESAC) and 12 state horticulture departments, 7 North Eastern Region –State remote sensing centres and horticulture departments, NHRDF, IMD, ICAR-NRCG, and State Remote Sensing Centres.

2. CHAMAN Phase -II:

Based on the success of the CHAMAN-Phase-I, DAC&FW approved the Phase-II of CHAMAN project for the period 2018-19 & 2019-2020. The major objective of the CHAMAN Phase-II is operationalisation of the technologies developed during the Phase-I, taking up new crops and research & development studies, especially the crop yield modelling.

3. Organizations

3.1 National Level Agency (NLA):

Mahalanobis National Crop Forecast Centre (MNCFC), DAC&FW, Ministry of Agriculture & Farmers, Welfare, Govt. of India, New Delhi.

3.2 Partner Organizations:

A large number of organizations i.e. ISRO/DOS (SAC, NRSC & NESAC), ICAR-Crop Centers, IMD, IEG, CDB, State Remote Sensing Centre's & State Horticulture Departments are partners in this programme.

This work plan is for the collaboration between Mahalanobis National Crop Forecast Centre, DAC&FW and Karnataka State Remote Sensing Applications Centre (KSRSAC), Bangalore.

4. Objective:

- Inventory of horticultural crops (as under CHAMAN project), selected districts (Annexure I)
- Geospatial applications studies for horticultural development in the State of Karnataka.

5. Role & Responsibilities

5.1. Mahalanobis National Crop Forecast Centre (MNCFC)

- Overall coordination of the project
- Funding Support under the CHAMAN project fund
- Final Production estimation of the crop by combining remote sensing (RS)-based area estimate and model-based yield estimate
- Project Progress Review
- Report finalization and submission to DAC&FW

5.2. Karnataka State Remote Sensing Application Centre

- Horticulture development-geospatial studies (1-2 districts) in consultation of MIDH team of the state.
- Horticulture crop mapping of selected districts (2 districts) at 1:50 K scale and geospatial database creation
- Support to Ground truth, field validation and ancillary data collection of the crops mentioned in project
- Liaisoning with State Directorate/Department of Horticulture/Agriculture
- Involvement in analysis and quality checking of identified crops (Annexure I)
- Logistic support during field visits, field validation, quality checks.
- Submission of monthly progress reports in the first week of every month.
- Submission of utilization certificates (UCs)
- Submission of district wise technical report in a given format
- Submission of the final output as soft copy, in the prescribed format

6. Time Schedule (2018-19)

Training & Capacity building of State Hort Dept. Officials for GT collection	Nov. 2018
Completion Geospatial Study (2 districts)	Jan, 2019
Completion of Horticulture Mapping (2	Feb, 2019

districts)	
Participation in Satellite Data Analysis at MNCFC	Dec-Feb & May 2019
Submission of Report and Database	Mar,2019

7.1. Total Duration : Two year (2018-19 and 2019-20)

7.2 Tentative Budget (subject to approval) : Rs. 9.0 lac (2018-19)

Budget Components (Subject to approval)

SN	Item	Amount (Rs. in Lakh) 2018-19
1	Services	4.50
2	Travel/GT/TA/DA	2.70
3	Contingency	1.08
4	Institutional Charge	0.72
5	Total	9.00

Annexure I Crop wise districts and time of forecast (Karnataka State)

Crops	Name of District	Satellite Data Analysis Period
Banana	Chamrajanagar, Mysore, Ramnagar, Bengaluru and Bagalkot	April-May
Citrus	Bijapur	April-May
Mango	Kolar, Tumkur, Bengaluru, Ramnagar, Chikballapur and Dharwad	April-May
Onion	Dharwad, Chitradurg, Bijapur and Gadag	Oct-Feb
Tomato	Belgaum, Davengere, Haveri, Chikballapur, Kolar, Mandya, Chamrajnagar & Mysore	Oct-Feb
Chilli	Gadag, Dharwad, Bellary, Haveri and Belgaum	Oct-Dec