

कृषि, सहकारिता एवं किसान कल्याण विभाग
महलानोबिस राष्ट्रीय फसल पूर्वानुमान केंद्र
नई दिल्ली



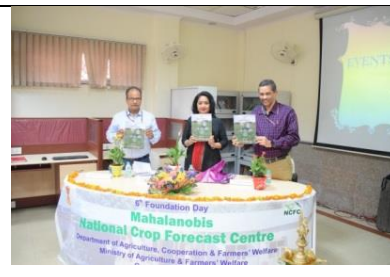
Department of Agriculture, Cooperation & Farmers' Welfare
MAHALANOBIS NATIONAL CROP FORECAST CENTRE
New Delhi

मासिक प्रगति रिपोर्ट: अप्रैल, 2018

Monthly Progress Report: April, 2018

मुख्य विशेषताएं/Highlights

- National Workshop on CHAMAN Project Review, on 11th April and Release of Site Suitability Reports by the Secretary, Agriculture, on 12th April, at Guwahati
- Rabi Pulses National/state level forecast (F1) released
- Crop Cutting Experiment training to officials and analysts of MNCFC in Muradnagar, Ghaziabad
- MNCFC Foundation Day observed on 23rd April, 2018, with release of Wall Magazine (*Purvika*), Newsletter (*Krishika*) and Intranet portal (*Insight*)
- Revision of Drought Manual based on 1 day brainstorming meeting of experts at MNCFC
- गुवाहाटी में 11 अप्रैल को चमन परियोजना समीक्षा पर राष्ट्रीय कार्यशाला, और 12 अप्रैल को सचिव, कृषि द्वारा स्थान उपयुक्तता रिपोर्ट जारी
- राष्ट्रीय / राज्य स्तरीय रबी दालें पूर्वानुमान (एफ 1) जारी
- मुरादनगर, गाजियाबाद में एमएनसीएफसी के अधिकारियों और विश्लेषकों को फसल कटाई प्रयोग पर प्रशिक्षण
- 23 अप्रैल, 2018 को दीवार पत्रिका (पूर्विका), समाचार पत्रिका (कृषिका) और इंटरनेट पोर्टल (इन्साईट) के उन्मोचन के साथ एमएनसीएफसी स्थापना दिवस मनाया गया
- एमएनसीएफसी में विशेषज्ञों की 1 दिन की मंथन बैठक के आधार पर सूखे मैनुअल का संशोधन



Forecasting Agricultural output using Space, Agro-meteorology and Land based observations (FASAL)

- ❖ National/State level Rabi Pulses F1 crop production forecasts (6 States) were generated. This was done first time at MNCFC, after the technology was transferred from Space Applications Centre, ISRO.
- ❖ Detailed report for Wheat F3 crop production forecast (9 States) was prepared.
- ❖ Detailed report for Rabi Rice crop production forecast (6 states) is under process.
- ❖ District level Pulse acreage analysis was done for states of Andhra Pradesh, Karnataka, Maharashtra, Madhya Pradesh, Rajasthan and Uttar Pradesh using Resourcesat 2/2A LISS III, Sentinel-2 MSI, Landsat 8 OLI data. Unsupervised/Supervised classification techniques were used for Pulse area estimation. Mustard and Wheat crop masks were used for better accuracy.
- ❖ District wise yield analysis for Rabi pulses is being carried out using different Vegetation indices, such as NDVI, NDWI and VCI (Vegetation Condition Index).
- ❖ Crop maps were prepared for Wheat (9 states) and Rabi rice (5 states) using LISS-III, Sentinel-1, Sentinel-2A and Landsat-8 OLI data, detailed ground truth, competing crop maps (mustard, potato, etc) and LULC map.
- ❖ Locations for proposed Crop Cutting Experiments (CCE) for Wheat and Rabi Rice (4 points per districts) for all the study states were generated using high resolution satellite data (Sentinel 1) based vegetation indices (Normalized Difference Vegetation Index and Normalized Difference Wetness Index) and given to State Agriculture Departments for conducting CCE.
- ❖ Daily Insolation data from MOSDAC and reflectance and fAPAR from MODIS was processed and prepared the estimation for NPP from October 2017 to April 7, 2018.
- ❖ One day field training was carried out of CCE process for the MNCFC officials/Analysts for wheat crop in village of Muradnagar (Ghaziabad), with the support of Uttar Pradesh State Agriculture Department on April 17, 2018.
- ❖ At the request of Odisha government, a revised district level kharif rice yield forecast was given by combining the forecasts based on weather data, simulation model, ScatSat Model, CCE data and VCI based model.
- ❖ Various agricultural database (such as sowing date, district level area, growth period) were analysed to understand the scope of increasing the number of crops under FASAL project.

National Agricultural Drought Assessment and Monitoring System (NADAMS)

- ❖ FASAL CropWatch Bulletin for March 2017 was prepared by analysing crop and weather situation, form satellite data and other information (weather, sowing position, reservoir storage, etc.).
- ❖ Resourcesat 2A AWiFS NDVI product and weekly IMD Rainfall data were processed for April 2018 to generate inputs for FASAL CropWatch Bulletin and GEOGLAM AMIS Crop Monitor.
- ❖ After procuring old AWiFS NDVI products form NRSC, availability of cloud-free AWiFS NDVI products at MNCFC was reviewed and data suitability sheet was prepared, in order to explore the use of AWiFS NDVI product for drought assessment during Kharif, 2018.

- ❖ Meeting for Revisions in Drought Manual was convened at MNCFC and subsequently the revisions discussed were incorporated in the manual and submitted to the Drought Management Division.
- ❖ Inputs for Crisis Management Plan for the Year 2018 were provided to the Drought Management Division.
- ❖ MNCFC regularly participated in the Crop Weather Watch Group(CWWG) weekly meetings and provided inputs.

Co-ordinated Horticulture Assessment and Management using geo-iNformatics (CHAMAN)

- ❖ Two days National Workshop on CHAMAN project for Final Review Meeting and Release of Report by Secretary, DAC&FW, Ministry of Agriculture & Farmers Welfare, Govt. of India was organized in collaboration with North Eastern Space Applications Centre (NESAC) in Assam Administrative Staff College, Guwahati on 11th-12th April, 2018.
- ❖ In the CHAMAN Review meeting, held on 11th April, 2018, under the Chairmanship of Smt Sudha P. Rao (Principal Adviser), presentations were made by MNCFC and other partner organization i.e. SAC, NRSC, NESAC, IMD, IEG and NHRDF.
- ❖ Dr. S. K. Pattanayak, Secretary, DAC&FW was the Chief Guest for the workshop on 12th April, in which other honourable guests, on the Dais, were Smt. Sudha P. Rao, Principal Adviser, Shri Dinesh Kumar, Joint Secretary (MIDH), the Commissioner and the Secretary, Agriculture, Assam and Adviser (Agriculture), NEC. Senior officials/Scientists from NE States, North East Hill Council, Indian Space Research Organization (ISRO), IMD, NHRDF, IEG, State Horticulture Departments, DAC&FW, NESAC and MNCFC participated in the workshop. The reports on Site Suitability of growing horticultural crops in the Jhum lands and other waste lands of NE states (1 district and 1 crop in each state) were released by the Secretary Dr Pattanayak. All total 9 reports (8 reports for 8 states and 1 summary report) were released.
- ❖ Rabi onion GT survey planning carried out with the collaboration of NHRDF in 5 districts of Bihar State.
- ❖ Tomato analysis for Kolar District (Karnataka), Sabarkantha district (Gujarat) and tomato and Chilli analysis major blocks of Nadia, Purulia, Murshidabad, South Pargana and West Midnapur districts of West Bengal carried out using high resolution satellite data.
- ❖ Detailed Statistical analysis of data was carried out under precision farming studies.

Crop Insurance (KISAN)

- ❖ Quality checking, statistical data analysis and Remote Sensing based (AWiFS 56 m NDVI and MODIS 250 m NDWI) analysis were carried out for the quality checking of Kharif Rice 2017 CCE data received under PMFBY, for Odisha State.
- ❖ Inputs were prepared for defining the Standard Operating Procedures for Area Discrepancy, Yield Dispute, Multi-picking crops and Use of Innovative Technology for the modified guidelines of PMFBY scheme.

Crop Intensification: Rice fallow

- ❖ District wise fine tuning of *kharif* rice map (2016-17) of Jharkhand state was done.
- ❖ Verification of West Bengal *rabi* cropped area with state statistics was carried out.
- ❖ Assam *kharif* rice layer (2016-17) is being processed by complete enumeration method.
- ❖ Annual Action Plan for the year 2018-19 was prepared and submitted to NFSM (DAC&FW) cell.

SCATSAT-1 Utilization Program

- ❖ Yield model was developed for Odisha state using SCATSAT 1 and CCE data. Yield map for Odisha state was generated and compared with remote sensing & weather based estimated yields for different districts.
- ❖ District level yield estimates for Rice were provided to SAC for model validation.

Other Activities

- ❖ Web Development Activities: MNCFC Intranet portal, version 1.0, was developed and named as **Insight**. The portal contained, database for library books and employee details, Library management system, Employee login, along with Employee Database (personal details, leave record, memberships etc.). The intranet Portal was launched during the foundation day on 23rd April 2018.
- ❖ Inputs were prepared for the GEOGLAM AMIS crop monitor and also updated on Crop Monitor portal.
- ❖ Foundation Day Celebration: MNCFC celebrated its 6th foundation day on April 23, 2018. Smt. Upma Srivastava Addl. Secretary, DAC&FW, graced the occasion as the Chief Guest and Sh. K.S. Srinivas, Joint Secretary, DAC&FW was Guest of Honour. Scientists from IMD, IARI, IEG and MNCFC participated in the programme. During this programme, a new wall magazine of MNCFC, named **Purvika**, the special issue of the Newsletter, **Krishika** and MNCFC Intranet portal, **Insight** were launched.
- ❖ Shri M. Selvendran, Secretary, Revenue and Commissioner of Land Records, Madhya Pradesh visited MNCFC, along with a team, to discuss about the technical feasibility of land parcel level crop area estimation.

Foreign Visit

- ❖ Dr. Shalini Saxena, Assistant Director participated and made a presentation in the GEOGLAM-CEOS Workshop on "Data and Systems Requirements for Operational Agricultural Monitoring", held at Joint Research Centr, European Commission, Ispra, Italy during 16-19 April 2018.

The Scientists of MNCFC participated in the following Meetings/Workshops/ Conferences.

Date & Venue	Meeting/Conference	Participated by	Participation
16 th Apr 2018	Meeting of Expert Committee meeting for revisions in Drought Manual 2016	Dr S S Ray Smt. Preeti Tahlani	Discussion & Participation

19 th April, NHB, Gurgaon	Meeting to discuss issues of Market Information System	Dr M.M. Kimothi	Discussion
25 th April, New Delhi	Inter-organizational Expert Committee meeting, to deliberate and to consolidate the requirements for future Earth Observation sensor systems, organized by ISRO	Dr S. S. Ray, Ms. S. Mamatha	Presentation & Discussion

Publications

- ❖ Project Report “Site Suitability Analysis for Area Expansion of Cardamom Crop in West District- Sikkim State under CHAMAN project”, (January, 2018), 36p..
- ❖ Project Report “Site Suitability Analysis for Area Expansion of Pine Apple Crop in Dimapur District of Nagaland State under CHAMAN project”, (June, 2017), 35p.
- ❖ Site Suitability Analysis for Banana in West District Tripura under CHAMAN project” (April, 2018), 34p.
- ❖ Project Report “Site Suitability Analysis for Area Expansion of Orange Crop in Papumpare District Arunachal Pradesh under CHAMAN project” (April, 2018), 35p.
- ❖ Project Report “Site Suitability Analysis for Area Expansion of Grape Crop in Champhai District Mizoram under CHAMAN project” (June, 2017), 43p.
- ❖ Project Report “Site Suitability Analysis for Area Expansion of Pine Apple Cultivation in Senapati District, Manipur under CHAMAN project”, (March-2018), 24p.
- ❖ Project Report “Site Suitability Analysis for Area Expansion of Turmeric in Jaintia Hills, Meghalaya under CHAMAN project” (March-2018), 45p.
- ❖ Project Report “Site Suitability Analysis for Area Expansion of Banana Crop in Golpara, District, Assam under CHAMAN project (March, 2018), 42p.
- ❖ Site Suitability Analysis for Horticultural Crop Area Expansion in Selected Districts of North Eastern States (Under CHAMAN Project of DAC & FW) (April, 2018), 57p.
- ❖ A Technical Paper on Inventory and assessment of Coriander crop in the State of Rajasthan, using multi-temporal remote sensing data has been submitted for the national workshop being conducted by ISRS, Shillong Chapter in May, 2018

Events@ MNCFC



Secretary, DAC&FW Dr. S. K. Pattanayak released the Site Suitability reports at Guwahati on 12th April



Inauguration of Wall Magazine-Purvika by the Additional Secretary, Smt Upma Srivastava



Lighting of Lamps by the Guests



Release of Newsletter-Krishika



Launching of Intranet Portal 'Insight'



Dr Shalini Saxena, AD participated in GEOGLAM-CEOS Workshop at JRC, Ispra, Italy



Crop Cutting Experiment Training at Muradnagar, Ghaziabad

Contact:

**Director, MNCFC, Department of Agriculture, Cooperation & Farmers' Welfare,
Pusa Campus, New Delhi,**

Ph. 011-25843224, Fax. 011-25843225,

Web: www.ncfc.gov.in, Email: ncfc@gov.in