

PREAMBLE BY THE CHAIRMAN

Dr. P.R. Ojasvi, Acting Director, ICAR-IISWC and Chairman of Institute Research Committee (IRC) welcomed the Heads of Divisions and Research Centres and scientists of the Institute to the IRC Meeting of 2019. He expressed his view that the IRC meeting is a good opportunity for chalking out the future activities. Highlighting the importance of the meeting, he expressed that the interaction is essential for fulfilling expectations of the nation from us through participatory problem solving. Clarity about role of each scientist, deliverance for justifying the huge amount of public money being spent by the Institute and maintaining high prestige of the Institute are the aspects that need to be preserved with by all. He emphasized on scientists to keep themselves updated with latest developments in respective fields of research in soil and water conservation.

The good tradition of winning awards/ recognitions by the Institute scientists continued this year also. The Chairman and the House congratulated the awardees for their excellent achievements. The Chairman also welcomed new scientists who joined the Institute to concentrate on innovative research programmes and focus upon the need of society while planning research projects. He appraised the house for successful completion of QRT Team visits to the Headquarters and Research Centres.

The Chairman informed the scientists regarding budget constraints in ICAR and asked for preparing good research projects for external funding. He emphasized regarding presence of scientists in the farmers' field for transfer of technologies developed by the Institute. Our Institute was rated excellent for adopting ERP system which was appreciated at the ICAR Director's Conference. However, he also showed concern regarding our reporting pattern which is not up to the mark and should be changed into a systematic manner. He further stressed that the training information of scientists should be uploaded on PIMS portal. He urged upon the EFC documents which should be prepared on top priority by July 15, 2019 positively. Also, EFC requirements should be framed with activities envisaged for next five years. Each scientist should put up a futuristic thought process to achieve this objective. We should take advantage of national level data on soil and water conservation as our presence is at nine locations across the country. We should try to align our output on conservation technologies to share the beneficial impacts to the farmers and end users. This is achievable through our demonstration studies at the farmers' fields.

Concluding his address, the Chairman urged upon all the scientists to work hard as per the target fixed for the next one year. He asked the scientists to participate in the IRC with high standard of deliberations and healthy discussions. All scientists should work hard in harmony and conduct quality research, strive to win awards and recognitions and bring out research papers in esteemed research journals.

AGENDA & PROGRAMME OF IRC MEETING, 2019

DATE (Day)	TIME	AGENDA & PROGRAMME
27.05.2019 (Monday)	2:30 pm	Welcome and Opening Remarks - Dr. P.R. Ojasvi, Actg. Director & Chairman, IRC
	3:00 pm	Recommendations of RAC-2019 & Status of New Proposals Agreed - Dr. Gopal Kumar, Member Secretary, RAC
	3:15 pm	Discussion on QRT Recommendations - Dr. Harsh Mehta, Member Secretary, QRT
	3:30 pm	Action Taken Report on the Actions Assigned in the IRC Meeting, 2018 - Dr. Harsh Mehta, Member Secretary, IRC
	4:30 pm	Tea Break
	4:45 pm	Presentation of Core Projects by the Leaders of Core Groups 30 minutes will be given to each core project (20 minutes for presentation and 10 minutes for discussion and comments) - Sl.No. 9 (Erosion productivity) (P-1) : Dr. D. Mandal - Sl.No. 59 (Field evaluation of trenches) (P-4) : Dr. P.R. Bhatnagar - Sl.No. 65 (Valuation of ecosystem) (P-5) : Dr. V.C. Pande - Sl.No. 68 (Assessing farmers knowledge) (P-6) : Dr. Bankey Bihari
28.05.2019 (Tuesday)	10:00 am	Presentation of Externally Funded Projects by the Project Leaders 20 minutes will be given to each project (15 minutes for presentation and 05 minutes for discussion and comments) - Sl. No. 5 (P-1) - Dr. N.K. Sharma - Sl. No. 6 (P-1) - Dr. D.R. Sena - Sl. No. 8 (P-1) - Dr. P. Raja - Sl. No. 11 (P-1) - Dr. D. Mandal
	11:15 am	Tea Break
	11:30 am	Presentation of Externally Funded Projects by the Project Leaders - Sl. No. 33 (P-2.2) - Dr. A.C. Rathore - Sl. No. 34 (P-2.2) - Dr. J.M.S. Tomar - Sl. No. 35 (P-2.2) - Dr. Rajesh Kaushal - Sl. No. 46 (P-3) - Dr. P.R. Ojasvi
	1:00 pm	Lunch Break
	2:00 pm	Presentation of Externally Funded Projects by the Project Leaders - Sl. No. 49 (P-3) - Dr. Ambrish Kumar - Sl. No. 58 (P-4) - Dr. R.K. Singh - Sl. No. 63 (P-5) - Dr. S.L. Patil - Sl.No. 70 (P-6) - Dr. Bankey Bihari
	3:30 pm	Tea Break
	3:45 pm	Presentation of Externally Funded Projects by the Project Leaders - DST Network Project - Dr. P.R. Ojasvi - DBT Funded Project - Dr. K. Kannan - DST Funded Project - Dr. K. Rajan - AICRP Collaborative Project - Dr. S.L. Patil

	5:15pm	<p>Presentation of Projects To be Concluded in 2018-19 by the Project Leaders 20 minutes will be given to each project (15 minutes for presentation and 05 minutes for discussion and comments)</p> <ul style="list-style-type: none"> - Sl.No. 1 (P-1) - Dr. P.R. Ojasvi - Sl.No. 3 (P-1) - Dr. Rajeev Ranjan - Sl.No. 13 (P-1) - Dr. P. Jakhar
29.05.2019 (Wednesday)	10.00am	<p>Presentaion of Projects To be Concluded in 2018-19 by the Project Leaders</p> <ul style="list-style-type: none"> - Sl.No. 19 (P-2.1) - Dr. M. Prabhavathi - Sl.No. 21 (P-2.1) - Dr. Dev Narayan - Sl.No. 27 (P-2.1) - Dr. K. Kannan - Sl.No. 29 (P-2.2) - Dr. Harsh Mehta
	11:15 am	Tea Break
	11:30 am	<p>Presentation of Projects To be Concluded in 2018-19 by the Project Leaders</p> <ul style="list-style-type: none"> - Sl.No. 32 (P-2.2) - Dr. Vibha Singhal - Sl.No. 44 (P-3) - Dr. Ch. J. Dash - Sl.No. 53 (P-3) - Dr. G.L. Meena - Sl.No. 61 (P-5) - Dr. M. Muruganandam
	1:00 pm	Lunch Break
	2:00 pm	<p>Presentation of Projects To be Concluded in 2018-19 by the Project Leaders</p> <ul style="list-style-type: none"> - Sl.No. 66 (P-6) - Er. S.S. Shrimali - Sl.No. 69 (P-6) - Dr. Indu Rawat - Sl.No. 72 (P-6) - Dr. Charan Singh - Sl.No. 73 (P-6) - Dr. P. Sundarambal
	3:30 pm	Tea Break
	3:45 pm	<p>Presentation of projects Approved in IRC Meeting, 2018 by the concerned Head of Divisions/ Research Centres 10 minutes will be given to each project (05 minutes for presentation and 05 minutes for discussion and comments)</p> <ul style="list-style-type: none"> - Sl.No. 2 (P-1) - Head, SS&A Division - Sl.No. 7 (P-1) - Head, H&E Division - Sl.No. 56 (P-3) & 67 (P-6) - Head, HRD&SS Division - Sl.No. 37 (P-2.2) - Head, Research Centre, Agra - Sl.No. 64 (P-5) - Head, Research Centre, Bellary - Sl.No. 20 (P-2.1) - Head, Research Centre, Chandigarh - Sl.No. 4 (P-1) & 24 (P-2.1) - Head, Research Centre, Koraput
30.05.2019 (Thursday)	10:00 am	<p>Presentation of Observational Trials listed on Page No. 45 of IRC Proceedings, 2018 20 minutes will be given to each project (15 minutes for presentation and 05 minutes for discussion and comments)</p> <ul style="list-style-type: none"> - Sl.No. 1 (Soil erosion-----materials) - Dr. Lekh Chand - Sl.No. 2 (Evaluation of-----Rajasthan) - Dr. H.R. Meena - Sl.No. 3 (Carbon-----of India) - Dr. Gopal Kumar
	11:00 am	<p>Presentation of New Project Proposals Agreed by RAC 2019 by the Project Leaders 30 minutes will be given to each project (20 minutes for presentation and 10 minutes for discussion and comments)</p> <ul style="list-style-type: none"> - Sl.No. 1 (Productivity -----India) - Sl.No. 2 (Productivity-----Shiwaliiks) - Sl.No. 3 (Diagnostic-----plateau) - Sl.No. 4 (Remunerative-----lands) <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-left: 20px;"> ⇒ Dr. Rajesh Kaushal for Core Project </div>

	11:30 am	Tea Break
	11:45 am	Presentation of New Project Proposals Agreed by RAC-2019 - Sl.No. 5 (Development-----watershed) - Dr. Sadikul Islam - Sl.No. 6 (Development -----equation) - Dr. Sadikul Islam - Sl.No. 7 (Integrated -----foothills) - Dr. J.M.S. Tomar
	1:15 pm	Lunch Break
	2:15 pm	Presentation of New Project Proposals Agreed by RAC-2019 - Sl.No. 8 (Olive -----Shiwaliks) - Dr. Ram Prasad - Sl.No. 9 (Performance -----Rajasthan) - Dr. Kuldeep Kumar
	3:15 pm	Tea Break
	3:30pm	Presentation of To be Continued Projects by the Project Leaders 15 minutes will be given to each project (10 minutes for presentation and 05 minutes for discussion and comments) - Sl.No. 10 (P-1) - Dr. M. Sankar - Sl.No. 12 (P-1) - Dr. Trisha Roy - Sl.No. 14 (P-1) - Dr. Gaurav Singh - Sl.No. 15 (P-2.1) - Dr. N.K. Sharma - Sl.No. 16 (P-2.1) - Dr. Ramanjeet Singh - Sl.No. 17 (P-2.1) - Dr. Lekh Chand - Sl.No. 18 (P-2.1) - Dr. Trisha Roy - Sl.No. 22 (P-2.1) - Dr. D.C. Sahoo - Sl.No. 23 (P-2.1) - Dr. Karma Beer - Sl.No. 25 (P-2.1) - Dr. Kuldeep Kumar - Sl.No. 26 (P-2.1) - Dr. I. Rashmi - Sl.No. 28 (P-2.2) - Dr. D.V. Singh
31.05.2019 (Friday)	10:00 am	Presentation of To be Continued Projects by the Project Leaders - Sl.No. 30 (P-2.2) - Dr. Harsh Mehta - Sl.No. 31 (P-2.2) - Dr. J. Jayaprakash - Sl.No. 36 (P-2.2) - Dr. A.C. Rathore - Sl.No. 38 (P-2.2) - Mr. A.S. Morade - Sl.No. 39 (P-2.2) - Mr. A.S. Morade - Sl.No. 40 (P-2.2) - Dr. Rajeev Ranjan
	11:30 am	Tea Break
	11:45 am	Presentation of To be Continued Projects by the Project Leaders - Sl.No. 41 (P-2.2) - Dr. M. Madhu - Sl.No. 42 (P-2.2) - Dr. I. Rashmi - Sl.No. 43 (P-2.2) - Dr. V. Kakade - Sl.No. 45 (P-3) - Dr. U.K. Maurya - Sl.No. 47 (P-3) - Dr. Uday Mandal
	1:00 pm	Lunch Break
	2:00 pm	Presentation of To be Continued Projects by the Project Leaders - Sl.No. 48 (P-3) - Dr. A.C.Rathore - Sl.No. 50 (P-3) - Mr. A.K. Gupta - Sl.No. 51 (P-3) - Dr. Rama Pal - Sl.No. 52 (P-3) - Dr. B.S. Naik - Sl.No. 54 (P-3) - Dr. P.R. Bhatnagar - Sl.No. 55 (P-3) - Dr. Gaurav Singh

	3:30 pm	Tea Break
	3:45 pm	Presentation of To be Continued Projects by the Project Leaders - Sl.No. 57 (P-4) - Dr. B.L. Mina - Sl.No. 60 (P-4) - Dr. V. Kakade - Sl.No. 62 (P-5) - Dr. D.C. Meena - Sl.No. 71 (P-6) - Dr. Indu Rawat
	4:45 pm	Presentation & Discussion on TSP/ SCSP Running at Divisions & Research Centres - Dr. Charan Singh, Principal Scientist & Co-ordinator of TSP/SCSP
	5:15 pm	Presentation & Discussion on ToT Running at Divisions & Research Centres - Dr. Bankey Bihari, I/c Head, HRD & SS Division
	5:30 pm	Presentation & Discussion on Training, Capacity Building & Mera Gaon Mera Gaurav at Headquarters & Research Centres - Dr. Bankey Bihari, I/c Head, HRD & SS Division
	5:45 pm	Presentation & Discussion on Swachhhta Abhiyan at Headquarters & Research Centres - Dr. Indu Rawat, Scientist (Home Management/ FRM)
	6:00 pm	Presentation on Foreign Visits by those scientists who completed their foreign visits during the year 2018-19
	6:15 pm	Any other presentation with the permission of Chairman
	6:30 pm	Plenary Session, Concluding Remarks and Recommendations - Chairman, IRC
	7.00 pm	Vote of Thanks Member Secretary, IRC

(Note: Sl. No. of the projects is as per IRC meeting proceedings, 2018)

IMPORTANT GUIDELINES FOR PRESENTATION:

1. Projects concluded in the year (i.e. 2018-19) should be presented giving overall findings under the project till date and conclusions in terms of stated short term / long term objectives, clearly spelling out the findings and possibilities for upscaling, and defining domain area, mechanism and resources required. Precise write-up and recommendations (half page, one para) emerging out of the projects concluded in 2018-19 should be presented in the last slide by the project leader.
2. While presenting the progress of a project, the number of slides should be restricted to **10 only** including figures / photographs covering title, leader and associates, objectives, achievements and project expenditure (direct & indirect in one slide) during the year.
3. New project proposals must be based on extensive review, patent search and availability of resources in the Institute. It is mandatory for the PIs and Heads of the Research Centres & Divisions to ensure availability of all the resources required for new projects.
4. Any change in leader or associates should be presented before the House in a slide form at the end of presentation of the project for approval of the House.
5. **The IRC at the Research Centre/ Division level should be completed before coming to the IRC Meeting at the Headquarters and dates may be reported. The presentation of the projects must be well rehearsed, so that it may be completed smoothly within the stipulated time frame.** This may be brought to the notice of all scientists of the Research Centre/Division.
6. Programme Leader(s) will work as moderator(s) during presentation, discussion and preparing comments of the project, which is mandatory for each project. The mandatory comments for a project must be finalized with active participation and comments of Programme Leader and OIC (PME Cell) which will be approved by the Competent Authority during the IRC.

RECOMMENDATIONS OF RAC-2019

1. The data of watersheds developed by the Institute in the past (2 at each Research Centre and 3 to 4 at Headquarters) should be analyzed in terms of tangible benefits covering all types of interventions to meet the national objective of doubling the farmer's income as envisioned by the Hon'ble Prime Minister and documented for extrapolation in different agro-ecological regions.
(Action: Dr. Pradeep Dogra and one nodal scientist from each Research Centre)
2. The technologies or soil and water Conservation practices generated from the concluded projects should be enumerated with salient findings for the Headquarters and the Research Centres and the technologies or practices mainly based on production systems involving low investment need to be identified, documented and disseminated as a package under the Transfer of Technology project, at least in the villages adjoining the farm areas for their wider adoptability. (Production system: crop, horticulture, grasses, trees etc based).
(Action: Dr. Bankey Bihari, concerned scientists and Head of the Divisions/ Research Centres)
3. The Institute should assess and generate the database on carbon sequestration potential (CSP) of the restored/reclaimed degraded lands following integrated watershed approach and involving agro-forestry, crop intensification or other vegetative measures. A systematic and scientific procedure and methodology need to be evolved and uniformly adopted by selecting representative watersheds in different agro-ecological regions.
(Action: Dr. Gopal Kumar and project team of the carbon sequestration potential)
4. The Institute should identify, compile and document doable and implementable technologies for mitigating land degradation due to water erosion through prioritization of critical areas/states to ultimately achieve the land degradation neutral status for India by 2030 to which the country is already committed as a signatory to UNCCD.
(Inventory of region specific technologies along with administrative boundary and maps of critical areas in different states and persuasion with the higher officials of concerned departments and ministries as a matter of Policy published by NAAS, New Delhi)
(Action: Actg. Director and Er. Uday Mandal)

**ACTION TAKEN ON
“SALIENT RECOMMENDATIONS OF IRC MEETING – 2018”**

S.No.	Action Assigned	Action Taken Report
1.	Action is again assigned by the IRC-2018 to Dr. P.R. Ojasvi, Head, H&E Division for completing the printing process of the bulletin on runoff and erosion prediction models by December, 2018 positively. This is a long pending activity. (Action: Dr. P.R. Ojasvi)	The printing process of bulletin is in progress.
2.	Action is again assigned to Dr. P.R. Ojasvi, Head, H&E Division to develop the DSS which has also been stressed upon by the RAC. This is the most important output awaited from the project. (Action: Dr. P.R. Ojasvi)	The process of software development is under consideration.
3.	Action is again assigned by the IRC-2018 that a bulletin on the concluded project entitled “Design and development of site specific artificial groundwater recharge filters” may be published by Dr. Gopal Kumar, Sr. Scientist (Soils) by August 31, 2018 positively. (Action: Dr. Gopal Kumar)	Draft of the bulletin has been submitted.
4.	Action is again assigned by the IRC – 2018 that a technical bulletin may be published on the results obtained from the concluded project entitled “Enhancement in land productivity and livelihood security of small farmers of Nilgiris through multiple use of harvested water” by Dr. S. Manivannan, Pr. Scientist (Engg.) by August 31, 2018 positively. (Action: Dr. S. Manivannan)	Technical bulletin is yet to be submitted. It is again assigned by the IRC-2019 to Dr.S. Manivannan to publish the bulletin by July 31, 2019 positively.
5.	Action is again assigned by the IRC – 2018 that the document of 60 years research in Soil and Water Conservation may be published by the Head, Research Centres, Agra, Bellary, Kota, Udhagamandalam & H&E Division on or before August 31, 2018 positively. Similar document for 30 years of Research Centre, Datia may also be published by August 31, 2018 positively. This is a long pending activity. (Action: Head, Research Centres, Agra, Bellary, Datia, Kota, Udhagamandalam and Head of H&E Division)	This document is yet to be published by the related Research Centres. Action is again assigned by the IRC-2019 to publish it by July 31, 2019 positively by the concerned Research Centres.
6.	Action is again assigned by the IRC – 2018 that a policy paper on peach may be brought out from the project entitled “Peach based agri-horticulture landuse system for degraded Shiwaliks” by Dr. Ram Prasad, Pr. Scientist (Hort.) by October, 2018 positively. (Action: Dr. Ram Prasad)	Action is yet to be taken. It is again assigned by the IRC-2019 to publish policy brief by December, 2019 positively.
7.	Action is again assigned by the IRC – 2018 that a DSS for generating optimal IFS plan of a farmer may be worked out by Dr. Pradeep Dogra, Pr. Scientist (Ag. Eco.) and leader of concluded core project entitled “Multiple criteria decision for identifying suitable Integrated Farming Systems in different agro-ecological regions for optimizing resource conservation and productivity” by March, 2019 positively with the help of Computer Scientist of the Institute / Outsourcing. (Action: Dr. Pradeep Dogra)	For formulation of the DSS, listing of all the steps for generation of an optimal IFS plan was done. Further action required for formulation of the DSS, it is again assigned by the IRC-2019 to complete the assignment by December, 2019 for which the cost to be ascertained for outsourcing.

8.	<p>Action is again assigned by the IRC – 2018 that the preparation of Ravine Atlas of India including the scientific method for delineating the affected areas due to ravines may be completed for other remaining areas also by Dr. R.K. Singh, Head, Research Centre, Kota, Dr. G.L. Meena, Scientist (Soils) and Dr. Gopal Kumar, Sr. Scientist (Soils) by October, 2018 positively . (Action: Dr. R.K. Singh, Dr. G.L. Meena and Dr. Gopal Kumar)</p>	<p>The remaining ravine regions (in addition to already mapped ravine areas in Rajasthan, MP, UP and Gujarat states) of India have been identified which are spread 160 districts in different states of the country including Bihar, Jharkhand, Chhattisgarh, Andhra Pradesh, Himachal Pradesh, Jammu and Kashmir, Karnataka, Maharashtra, Orissa, Punjab, Tamil Nadu and West Bengal states of India. It is assigned by the IRC-2019 to prepare a project by the same team for external funding for completing the task.</p>
9.	<p>Action is again assigned by the IRC – 2018 that the statistical analysis about trend in borewell depth related to the concluded project entitled “Socio-economic implication and vulnerability of farmers to ground water exploitation in hard rock region of the Deccan” may be done by Mr. Suresh Kumar, Scientist (Ag. Econ.) and Dr. S.L. Patil, Head, Research Centre, Bellary by October, 2018 positively. A policy paper from the above project including techno-economical analysis may also be prepared. (Action: Mr. Suresh Kumar and Dr. S.L. Patil)</p>	<p>Action is yet to be taken. It is again assigned by the IRC-2019 to complete the assignment by December, 2019 positively.</p>
10.	<p>A policy paper including economic analysis may be brought out from the concluded project entitled “Ensuing sustainable agricultural development and livelihood security in lower Shiwalik range of Uttarakhand” by Dr. Ramanjeet Singh, Scientist (Agro.) by December, 2018 positively. (Action: Dr. Ramanjeet Singh)</p>	<p>A policy brief has been prepared and submitted.</p>
11.	<p>The economic analysis related to the concluded core project entitled “Evaluation of hydrological behaviour and production potential of recommended landuse system / practices under different agro-ecological regions of India” may be done by Dr. J.M.S. Tomar, Pr. Scientist (Forestry) and leaders at other Research Centres and should be included in the final report of the project. Final report (RPP III) of the project may be submitted objective-wise by June, 2018 positively. (Action: Dr. J.M.S. Tomar and leaders of other Research Centres)</p>	<p>Action is yet to be taken. Action is again assigned by the IRC-2019 to complete the assignment by September, 2019 by developing a proforma for economic analysis.</p>
12.	<p>An extension bulletin including package of practices and economic analysis may be prepared from the concluded project entitled “Evaluating the effect of organic amendments on resource conservation and productivity of rainfed semi-arid vertisols” by Ms. M. Prabhavathi, Scientist (Soils) by December, 2018 positively. The technologies developed from the above project may be transferred to the farmers under ToT. RPP IV on the above project may also be submitted. (Action: Ms. M. Prabhavathi)</p>	<p>The extension bulletin is yet to be prepared. It is again assigned by the IRC-2019 to complete the assignment by July 31, 2019 positively.</p>

13.	<p>The economic analysis related to the concluded project entitled “Evaluation of moisture conservation techniques for sustainable production of Tree Borne Oil Seeds (TBOS) in Bundelkhand” may be done by Er. Monalisha Pramanik, Scientist (Engg.) and Mr. M.K. Meena, scientist (Ag. Econ.) and reported accordingly in the final report (RPP III) of the project. The intangible benefits may also be taken in to the account. Growth parameter data may also be taken. Minimum data collection related to the above project may be continued.</p> <p>(Action: Er. Monalisha Pramanik and Mr. M.K. Meena)</p>	<p>Economic analysis has been done and reported in the RPP III. The required minimum data set is being recorded.</p>
14.	<p>Soil health data should be checked before submission of final report (RPP III) of the concluded project entitled “Effect of shade trees on productivity and soil health in rejuvenated tea plantations in Nilgiris” and reported accordingly by Dr. R. Ragupathy, Scientist (SS) (Forestry), Dr. K. Rajan, Pr. Scientist (Soils) and Head of Udhagamandalam Centre by July, 2018 positively.</p> <p>(Action: Dr. R. Ragupathy, Dr. K. Rajan and Head of Udhagamandalam Centre)</p>	<p>Soil health data has been checked and reported accordingly in the final report (RPP III) of the concluded project.</p>
15.	<p>Final report (RPP III) of the concluded project entitled “Assessment of impact of extraction of RBM (River bed material) on physiography of stream flow courses of Himalayan foot hill streams” may be submitted by December, 2018 by Er. S.S. Shrimali, Sr. Scientist (CAA), as some more data to be collected from the monitoring agencies or to be estimated. Comparison of process done by Mining Department and this Institute may be reported in RPP III.</p> <p>(Action: Er. S.S. Shrimali)</p>	<p>Data collection was delayed due to MoU received late from UKFDC. RPP III of this project is yet to be submitted. Action is again assigned by the IRC-2019.</p>
16.	<p>The project entitled “Role of soil and water conservation technologies for climate resilient agriculture in Himalayan ecosystem - An action research” is concluded in 2017-18. Any further work related to this project will be done through TSP (Tribal Sub Plan) by Dr. D.V. Singh, Pr. Scientist (Soils).</p> <p>(Action: Dr. D.V. Singh)</p>	<p>RPP III of this project has been submitted. Further works related to this project are being done under TSP.</p>
17.	<p>Commercialization of plants should be tried to explore with the National Horticulture Boards located at Research Centres and Headquarters, Dehradun by Horticulture/ Forestry Scientists working at Research Centres and Plant Science Division, Dehradun for revenue/ resource generation of the Institute. Dr. A.C. Rathore, Pr. Scientist (Horticulture) will coordinate this assignment at Headquarters and all Research Centres.</p> <p>(Action: Dr. A.C. Rathore and Horticulture/ Forestry Scientists at Research Centres)</p>	<p>Projects have been submitted by the scientists to the National Horticultural Boards (NHB) located at different states for nursery establishment and commercialization of plants. Approval is awaited for funding from NHB at state offices. Action is again assigned by the IRC-2019.</p>
18.	<p>A video film of 5-10 minutes related to each Research Centre may be prepared by the Head of concerned Research Centre by March, 2019 positively. Dr. Bankey Bihari, I/c Head, HRD&SS Division will coordinate this assignment. Further, video film of 2-3 minutes related to specific technology of the Research Centre may also be prepared for the benefit of trainees.</p> <p>(Action: Dr. Bankey Bihari, Heads of all Research Centres and Dr. Pradeep Dogra)</p>	<p>Action is yet to be taken. It is again assigned by the IRC-2019.</p>

19.	<p>Policy briefs/ Policy papers on related areas may be prepared by the Head of concerned Research Centre by December, 2018 positively for sending to the Director General, ICAR, Politicians, Policy makers etc. for its ultimate use.</p> <p style="text-align: center;">(Action: Heads of all Research Centres)</p>	<p>This assignment is yet to be completed by Research Centres Agra, Ballari & Datia. Action is again assigned by the IRC-2019 to these Centres.</p>
20.	<p>On-site monitoring and evaluation of running projects of remaining Research Centres and Divisions may be co-ordinated and completed by the PME Cell of Headquarters visiting the project sites at Research Centres and Divisions after finalizing the dates with the Heads of Research Centres and Divisions.</p> <p style="text-align: center;">(Action: OIC, PME Cell and Heads of Research Centres/ Divisions)</p>	<p>On site monitoring and evaluation of running projects were not conducted this year by the evaluation team due to budget constraints.</p>
21.	<p>All RPPs of research projects should be filled-up, submitted and maintained as per ICAR guidelines on RPPs and the presentation made by Mr. S.K. Sinha, Assistant Chief Technical Officer, PME Cell on “Proper Filling and Maintaining RPP I, II, III & IV of Research Projects” in the IRC meeting, 2018.</p> <p style="text-align: center;">(Action: Mr. S.K. Sinha and all Heads/ Scientists of Research Centres/ Divisions)</p>	<p>Several RPPs are still awaited from some Research Centres and Divisions. Action is again assigned by the IRC-2019 to submit all pending RPPs urgently.</p>
22.	<p>The maximum total percent time spent by a scientist in approved running research projects should not be exceeded 80% and minimum 20% of his / her time should be kept spare for other scientific assignments of the Institute. Further, minimum 20% time as PI and 10% time as Co-PI should be devoted by a scientist in a research project.</p> <p style="text-align: center;">(Action: All Scientists/ Heads of Research Centres/ Divisions)</p>	<p>The action has been noted by the scientists. Action is again assigned by the IRC-2019 with revised percent of time to be spent by scientists in research projects.</p>
23.	<p>New project proposals should essentially be submitted by those scientists whose projects are going to be concluded. It must be ensured by each scientist that how he/ she will be engaged in the coming years on research.</p> <p style="text-align: center;">(Action: All Scientists of Research Centres/ Divisions)</p>	<p>The action has been noted by all scientists for compliance.</p>
24.	<p>It is the responsibility of Co-PIs of concerned discipline to collect and report the relevant data of his/ her discipline to the PI of the project.</p> <p style="text-align: center;">(Action: All Scientists)</p>	<p>It is being taken care by the concerned scientists.</p>
25.	<p>A monthly meeting should be organized by all leaders of running projects at Division / Research Centre level with all associated scientists to discuss the progress of projects and what actions have to be taken.</p> <p style="text-align: center;">(Action: Leaders of all running projects)</p>	<p>As reported by the Head of Research Centres and Divisions, the monthly meeting is being organized regularly to discuss the progress of projects.</p>

SALIENT RECOMMENDATIONS OF IRC MEETING – 2019

1. Action is again assigned by the IRC – 2019 that a technical bulletin may be published on the results obtained from the concluded project entitled “Enhancement in land productivity and livelihood security of small farmers of Nilgiris through multiple use of harvested water” by Dr. S. Manivannan, Pr. Scientist (Engg.) by July 31, 2019 positively.
(Action: Dr. S. Manivannan)
2. Action is again assigned by the IRC – 2019 that a policy brief on peach may be brought out from the concluded project entitled “Peach based agri-horticulture landuse system for degraded Shiwaliks” by Dr. Ram Prasad, Pr. Scientist (Hort.) by December, 2019 positively.
(Action: Dr. Ram Prasad)
3. Action is again assigned by the IRC – 2019 that a DSS for generating optimal IFS plan of a farmer may be worked out by Dr. Pradeep Dogra, Pr. Scientist (Ag. Eco.) and leader of concluded core project entitled “Multiple criteria decision for identifying suitable Integrated Farming Systems in different agro-ecological regions for optimizing resource conservation and productivity” by December, 2019 positively for which the cost to be ascertained for outsourcing.
(Action: Dr. Pradeep Dogra)
4. Action is again assigned by the IRC – 2019 that the preparation of Ravine Atlas of India including the scientific method for delineating the affected areas due to ravines may be completed for other remaining areas also by Dr. R.K. Singh, Head, Research Centre, Kota, Dr. G.L. Meena, Scientist (Soils) and Dr. Gopal Kumar, Sr. Scientist (Soils) for which a project for external funding may be prepared.
(Action: Dr. R.K. Singh, Dr. G.L. Meena and Dr. Gopal Kumar)
5. Action is again assigned by the IRC – 2019 that the statistical analysis about trend in borewell depth related to the concluded project entitled “Socio-economic implication and vulnerability of farmers to ground water exploitation in hard rock region of the Deccan” may be done by Mr. Suresh Kumar, Scientist (Ag. Econ.) and Dr. S.L. Patil, Head, Research Centre, Bellary by December, 2019 positively. A policy paper from the above project including techno-economical analysis may also be prepared.
(Action: Mr. Suresh Kumar and Dr. S.L. Patil)
6. Action is again assigned by the IRC – 2019 that the economic analysis related to the concluded core project entitled “Evaluation of hydrological behaviour and production potential of recommended landuse system / practices under different agro-ecological regions of India” may be done by Dr. J.M.S. Tomar, Pr. Scientist (Forestry) and leaders at other Research Centres by developing a proforma for economic analysis and should be included in the final report of the project. Final report (RPP III) of the project may be submitted objective-wise by September, 2019 positively.
(Action: Dr. J.M.S. Tomar and leaders of other Research Centres)
7. Action is again assigned by the IRC – 2019 that an extension bulletin including package of practices and economic analysis may be prepared from the concluded project entitled “Evaluating the effect of organic amendments on resource conservation and productivity of rainfed semi-arid vertisols” by Ms. M. Prabhavathi, Scientist (Soils) by July 31, 2019 positively. The technologies developed from the above project may be transferred to the farmers under TSP/SCSP by the next year. RPP IV on the above project may also be submitted.
(Action: Ms. M. Prabhavathi)
8. Action is again assigned by the IRC – 2019 that the document of 60 years research in Soil and Water Conservation may be published by the Head, Research Centres, Agra, Bellary, Kota and Udhagamandalam on or before July 31, 2019 positively. Similar document for 30 years of Research Centre, Datia may also be published by July 31, 2019 positively. This is a long pending activity.
(Action: Head, Research Centres, Agra, Bellary, Datia, Kota and Udhagamandalam)

9. Action is again assigned by the IRC – 2019 that the Final report (RPP III) of the concluded project entitled “Assessment of impact of extraction of RBM (River bed material) on physiography of stream flow courses of Himalayan foot hill streams” may be submitted by July 31, 2019 positively by Er. S.S. Shrimali, Sr. Scientist (CAA), as some more data to be collected from the monitoring agencies or to be estimated. Comparison of process done by Mining Department and this Institute may be reported in RPP III. **(Action: Er. S.S. Shrimali)**
10. Action is again assigned by the IRC – 2019 that the commercialization of plants should be tried to explore with the National Horticulture Boards located at Research Centres and Headquarters, Dehradun by Horticulture/ Forestry Scientists working at Research Centres and Plant Science Division, Dehradun for revenue/ resource generation of the Institute. Dr. A.C. Rathore, Pr. Scientist (Horticulture) will coordinate this assignment for Headquarters and all Research Centres. Proposals with budget, infrastructure and manpower may be submitted for this purpose by all Research Centres by December, 2019 positively. **(Action: Dr. A.C. Rathore and Horticulture/ Forestry Scientists at Research Centres)**
11. Action is again assigned by the IRC – 2019 that a video film of 5-10 minutes related to each Research Centre may be prepared by the Head of concerned Research Centre. Dr. Bankey Bihari, I/c Head, HRD&SS Division will coordinate this assignment. Further, video film of 2-3 minutes related to specific technology of the Research Centre may also be prepared for the benefit of trainees. These activities are to be taken up from possible funding by DKMA. **(Action: Dr. Bankey Bihari and Heads of all Research Centres)**
12. Action is again assigned by the IRC – 2019 that the Policy briefs/ Policy papers on related areas may be prepared by the Head of Research Centres Agra, Ballari and Datia by December, 2019 positively for sending to the Director General, ICAR, Politicians, Policy makers etc. for its ultimate use. **(Action: Heads of Research Centres Agra, Ballari and Datia)**
13. The recommendations of the concluded project entitled “Effect of varying water regimes on Zn and N dynamics and rice productivity in saline vertisols” may be taken into the farmer’s field under ToT. RPP IV of this project may also be submitted. **(Action: Ms. M. Prabhavathi)**
14. Economic analysis related to the concluded project entitled “ *In situ* moisture conservation practices under aonla based agro-forestry system for sustainable production in red soils of Bundelkhand” may be done with and without fruiting effect in Aonla by Dr. Dev Narayan, Pr. Scientist (Agro.). Recommendations of the project may be taken into the farmer’s field under ToT. RPP IV of the project may also be submitted. **(Action: Dr. Dev Narayan and Head of Datia Centre)**
15. A brochure for estimation of nutrient addition in soil may be brought out from the concluded project entitled “Soil fertility restoration and carbon sequestration potential of multipurpose trees for agro-forestry system in Himalayan foothills” by Dr. (Ms.) Vibha Singhal, Sr. Scientist (Agro-forestry) by December, 2019 positively **(Action: Dr. (Ms.) Vibha Singhal)**
16. A new project may be developed by Dr. (Ms.) P. Sundarambal , Pr. Scientist (Ag. Extn.) after selecting ITKs which are unique and holds the promise for testing and developing as MTK and submitted for approval. **(Action: Dr. (Ms.) P. Sundarambal)**

17. Full result, analysis, DSS and recommendations for the concluded core project entitled “Field evaluation of design of trenches under different agro-climatic regions” may be presented by Dr. P.R. Bhatnagar, core leader and Head, Research Centre, Vasad in the next IRC meeting. Vegetation index, moisture conservation and land degradation data may also be calculated. Valuable raw data from all Research Centres with proper description of the data should be deposited in the Library in soft as well as hard copy forms. Taking observations may be continued and discussed accordingly in the team of core project.

(Action: Dr. P.R. Bhatnagar and leaders at other Centres)

18. A policy brief including the study of climate change from farmers’s perception point of view may be brought out from the concluded core project entitled “Assessing farmer’s knowledge, vulnerability and adapting capacity of soil and water conservation technologies under changing climatic scenario” by Dr. Bankey Bihari, I/C Head, HRD & SS Division and leaders of this core project at Research Centres by December, 2019 positively.

(Action: Dr. Bankey Bihari and leaders at Research Centres)

19. A policy brief highlighting the factors of unsustainability may be prepared from the concluded project entitled “Assessment of sustainability factors for soil and water conservation projects” by Dr. Madan Singh, Scientist (Ag. Extn.) by December, 2019 positively for sending to different State Line Departments.

(Action: Dr. Madan Singh)

20. Adoption report of agro-forestry systems may be prepared from the concluded project entitled “Determination of heterogeneity in agro-forestry practices and acceptability alongwith altitude gradient in Western Himalayas” by Dr. Charan Singh, Pr. Scientist (Forestry) by September, 2019 positively linking with land holding size and elevation base aspects.

(Action: Dr. Charan Singh)

21. A DSS (Decision Support System) for watershed planning, execution and monitoring should be developed as per the recommendations of RAC. A core group for this purpose is formed as under: Co-ordinator – Dr. P.R. Ojasvi, Team Leader – Dr. D.R. Sena, Members- Dr. N.K. Sharma, Dr. Pradeep Dogra, Dr. D. Mandal, Dr. Rajesh Kaushal, Dr. Gopal Kumar, Dr. Ramanjeet Singh, Er. Uday Mandal and Dr. Sadikul Islam.

(Action: Dr. P.R. Ojasvi and Dr. D.R. Sena)

22. The maximum total percent time spent by a scientist in approved running research projects should not be exceeded 80% and minimum 20% of his / her time should be kept spare for other scientific assignments of the Institute. Minimum 40% of his/ her time should be devoted by a scientist in running research projects of the Institute. Further, maximum 30% time as PI or Co-PI should be spent by a scientist in one running research project of the Institute.

(Action: All Scientists/ Heads of Research Centres/ Divisions)

23. All pending RPPs of research projects should be filled up as per ICAR guidelines on RPPs and submitted urgently for updating the RPP record of the Institute.

(Action: All Heads/ Scientists of Research Centres/ Divisions)

RESEARCH PROGRAMMES AND SUB-PROGRAMMES

P-1 WATER EROSION APPRAISAL IN DIFFERENT AGRO-ECOLOGICAL REGIONS

(Leader - Dr. P.R. Ojasvi)

- 1.1 Inventory and database of erosion status using modern tools and procedures
- 1.2 Soil erosion process modeling and climate change studies
- 1.3 Soil carbon dynamics and erosion productivity studies

P-2 CONSERVATION MEASURES FOR SUSTAINABLE PRODUCTION SYSTEM

- 2.1 Resource conservation measures for arable lands

(Leader - Dr. N.K. Sharma)

- 2.2 Resource conservation measures for non-arable lands

(Leader - Dr. Harsh Mehta)

P-3 WATERSHED HYDROLOGY FOR CONSERVATION PLANNING

(Leader - Dr. D.R. Sena)

- 3.1 Hydrological behaviour of land uses and management practices
- 3.2 Water harvesting, groundwater recharge and management
- 3.3 Decision support systems (DSS)

P-4 REHABILITATION OF AREAS AFFECTED BY MASS EROSION

(Leader - Dr. Ambrish Kumar)

- 4.1 Development and refinement of technologies for rehabilitation of ravines, landslides, mine spoils, riverbed mining, stream banks, torrents etc.

P-5 INTEGRATED WATERSHED MANAGEMENT FOR SOCIO-ECONOMIC GROWTH AND POLICY ADVOCACY

(Leader - Dr. Pradeep Dogra)

- 5.1 Participatory watershed management and integrated farming system (IFS)
- 5.2 Common property resource management

P-6 HUMAN RESOURCE DEVELOPMENT AND TECHNOLOGY TRANSFER

(Leader - Dr. Bankey Bihari)

- 6.1 Capacity development approaches and information and communication technology (ICT)
- 6.2 Participatory technology dissemination and adoption

STATUS OF PROGRAMME WISE RUNNING PROJECTS AND IRC COMMENTS

P-1 WATER EROSION APPRAISAL IN DIFFERENT AGRO-ECOLOGICAL REGIONS

1.1 INVENTORY AND DATABASE OF EROSION STATUS USING MODERN TOOLS AND PROCEDURES

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
1.	NRMAIISWCCIL 201500200088	Assessment of soil erosion fluxes of Uttarakhand.	P.R. Ojasvi	Hydrology & Engineering, Dehradun	2015-16	2019-20	Headquarters	To be concluded
Comments: Progress is very good. Project is extended for one year till 2019-20 to fulfill the remaining objective.								(Action: Dr. P.R. Ojasvi)
2.	NRMAIISWCSIP 201800100149	An evaluation of the potential to use the Fallout Radionuclide (FRN) Caesium – 137 (¹³⁷ Cs) in national scale soil erosion assessment in India.	M. Sankar Rajeev Ranjan D. Dinesh P.P. Adhikary V.K. Thilagam	Soil Science & Agronomy, Dehradun	2018-19	2021-22	Agricultural fields of Dehradun and Research Centres	To be continued (International Collaborative Project with University of Exeter, United Kingdom)
Comments: Progress is very good. Name of Er. Deepak Singh is deleted.								(Action: Dr. M. Sankar)
3.	NRMAIISWCCIL 201500300089	Impact of land use land cover changes on soil erosion susceptibility in Bundelkhand region using Remote Sensing and GIS technique.	Rajeev Ranjan R.S. Yadav	Datia	2015-16	2019-20	Bundelkhand region	To be concluded
Comments: Progress is very good. Misclassification table based on ground truthing or google image may be prepared. Impact assessment of Bundelkhand package may be brought out. Project is extended for one year till 2019-20. Name of Er.(Ms.) M. Pramanik is deleted.								(Action: Dr. Rajeev Ranjan)
4.	NRMAIISWCCIL 201800200150	Regionalization of erosivity density and identification of hot-spot of erosion risk under different agro-ecological regions of India.	Ch. J. Dash S.S. Shrimali	Koraput	2018-19	2020-21	All the agro-ecological regions of India	To be continued
Comments: Progress is very good.								

1.2 SOIL EROSION PROCESS MODELING AND CLIMATE CHANGE STUDIES

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
5.	NRMAIISWCCOL 201500400090	National Mission on Sustaining Himalayan Eco-system (NMSHE) - Task force on Himalayan agriculture for lower and middle Himalayan region.	N.K. Sharma P.R. Ojasvi Ambrish Kumar Pradeep Dogra Charan Singh D.R. Sena S.S. Shrimali Bankey Bihari M. Muruganandam Rajesh Kaushal Lekh Chand U.K. Maurya V.C. Pande (Vasad) A.C. Rathore J.M.S. Tomar Ramanjeet Singh Uday Mandal A.K. Gupta Trisha Roy Gopal Kumar Madan Singh	Soil Science & Agronomy, Dehradun	2015-16	2020-21	Lower-middle Himalayas	To be continued (NMSHE Project)
			Pankaj Panwar V.K. Bhatt S.L. Arya Sharmistha Pal Ram Prasad	Chandigarh				
Comments: Progress is very good. Name of Dr.(Ms.) Pawan Sharma is deleted at Chandigarh								(Action: Dr. N.K. Sharma)

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
6.	NRMAIISWCCO L201800300151	Comprehensive assessment of climate change implication on watershed development component of PMKSY (WDC-PMKSY).	D.R. Sena Uday Mandal Gopal Kumar Ramanjeet Singh M. Sankar Pradeep Dogra	Hydrology & Engineering, Dehradun	2017-18	2019-20	Headquarters, Dehradun	To be concluded (NICRA Project)
Comments: Progress is very good.								
7.	NRMAIISWCCIL 201800400152	Assessment of potential soil erosion of India.	Uday Mandal P.R. Ojasvi D.R. Sena Gopal Kumar D. Mandal K.K. Sharma B.S. Naik H. Biswas O.P.S. Khola V.K. Bhatt Rajeev Ranjan Ch. J. Dash P.P. Adhikary Shakir Ali G.L. Meena S. Manivannan V.K. Thilagam Gaurav Singh D. Dinesh	Hydrology & Engineering, Dehradun Agra Ballari Chandigarh Datia Koraput Kota Udhagamandalam Vasad	2018-19 2019-20 2019-20 2019-20 2019-20 2019-20 2019-20 2019-20	2021-22	Headquarters, Dehradun Agra Ballari Chandigarh Datia Koraput Kota Udhagamandalam Vasad	To be continued (Core Project)
Comments: Progress is good. Project has been developed as a core project and may be conducted at the Headquarters and all Research Centres. Title of the project is modified. Name of Dr.P.R. Ojasvi and Dr. D. Mandal are added as associates at Dehradun. Centre-wise names of scientists have been identified for conducting the core project and included with the project. (Action: Er. Uday Mandal and leaders at all Research Centres)								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks	
8.	NRMAIISWCCIL 201900100160	Development of Artificial Intelligence (AI) models for watershed scale modelling using the data of Ramganga watershed.	Sadikul Islam Saswat K. Kar S.S. Shrimali P.R. Ojasvi	Hydrology & Engineering, Dehradun	2019-20	2022-23	Ramganga River Catchment	To be continued (New Project)	
9.	NRMAIISWCCIL 201900200161	Development of rainfall energy based erosivity factor to formulate a daily based generic erosion equation.	Sadikul Islam D.R. Sena Uday Mandal Gopal Kumar Shakir Ali D.C. Sahoo	Hydrology & Engineering, Dehradun	2019-20	2024-25	Dehradun, Koraput & Kota	To be continued (New Project)	
Comments: Drop size calibration may be done.							(Action: Dr. Sadikul Islam)		
10.	NRMAIISWCCOL 201700100131	Study of atmospheric and soil carbon dioxide fluxes in temperate mountainous ecosystem of western ghats with reference to climate change impact assessment.	P. Raja K. Rajan K. Kannan Hombe Gowda	Udhagamandalam	2017-18	2020-21	Research Farm and Nilgiri district	To be continued (NRSC-ISRO, Hyderabad Funded)	
Comments: Progress is very good. Dr. Hombe Gowda will replace Dr. O.P.S. Khola as third associate.							(Action: Dr. P. Raja)		

1.3 SOIL CARBON DYNAMICS AND EROSION PRODUCTIVITY STUDIES

11.	NRMACSWCRTI CIL200800100014	Erosion productivity relationships for evaluating vulnerability and resiliency of soils under different agro-climatic regions of India.	D. Mandal N.K. Sharma Pradeep Dogra Sadikul Islam	Soil Science & Agronomy, Dehradun	2008-09	2020-21	Research Farm of Headquarters and all Research Centres	To be continued (Core Project)
			S.K. Dubey K.K. Sharma R.K. Dubey	Agra	2009-10			
			H. Biswas, S.L. Patil	Ballari	2009-10			
			Sharmistha Pal V.K. Bhatt	Chandigarh	2009-10			
			Dev Narayan Dinesh Kumar	Datia	2009-10			

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
			P.P. Adhikary M. Madhu	Koraput	2009-10			
			R.K. Singh Kuldeep Kumar B.L. Mina	Kota	2009-10			
			K. Kannan P. Raja, V. Selvi	Udhagamandalam	2009-10			
<p>Comments: Progress is very good. Erosion component may be segregated using available techniques to come to a stable conclusion. Name of Dr. Sadikul Islam is added as third associate and name of Er. Deepak Singh is deleted at Dehradun. Dr. Dinesh Kumar will replace Dr. S.P. Tiwari as an associate at Datia. (Action: Dr. D. Mandal and leaders at all Research Centres)</p>								
12.	NRMACSWCRTI CIL201100400050	Assessment of soil organic carbon in transit under erosion processes: A source or sink for atmospheric CO ₂ .	M. Sankar Lekh Chand D.R. Sena	Soil Science & Agronomy, Dehradun	2011-12	2023-24	Research Farm	To be continued
			CCPI: Suresh Kumar, IIRS, Dehradun					
<p>Comments: Progress is very good.</p>								
13.	NRMAIISWCCOL 201500700093	Environmental tracer based study on erosion induced loss of soil organic carbon and its impact on agronomic productivity and environmental quality.	D. Mandal	National Fellow Programme	2015-16	2019-20	Research Farm, Selakui and Doon Valley region	To be concluded (ICAR-National Fellow Project)
<p>Comments: Progress is very good.</p>								
14.	NRMAIISWCCIL 201900300162	Carbon sequestration potential of prevailing and recommended land uses in reclaimed degraded ecosystems under different agro-ecological regions of India.	Gopal Kumar D. Mandal Rajesh Kaushal Ramanjeet Singh Trisha Roy D.R. Sena P.R. Ojasvi	Soil Science & Agronomy, Dehradun	2019-20	2023-24	Sainji Watershed	To be continued (Core Project) (New Project)

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
			A.K. Parandiyal D.C. Meena S.K. Dubey	Agra			Jalalpur Watershed	
			H. Biswas S.L. Patil A.S. Morade	Ballari			Netranahalli Watershed	
			Sharmistha Pal Pankaj Panwar V.K. Bhatt O.P.S. Khola P.L. Bhutia	Chandigarh			Sukhomajari Watershed	
			Rajeev Ranjan R.S. Yadav Dinesh Kumar	Datia			Jigna Watershed	
			P.P. Adhikary P. Jakhar Karma Beer	Koraput			Rajput Watershed	
			G.L. Meena R.K. Singh A.K. Singh H.R. Meena Shakir Ali Anita Kumawat	Kota			Badakheda Watershed	
			V.K. Thilagam S. Manivannan K. Kannan Hombe Gowda	Udhagamandalam			Ayalur Watershed	
			D. Dinesh V. Kakade Gaurav Singh Dinesh Jinger	Vasad			Antisar Watershed	
<p>Comments: Observations may be taken at least in one watershed. Land uses may be defined. Conservation measures may be highlighted. (Action: Dr. Gopal Kumar and leaders at all Research Centres)</p>								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
15.	NRMACSWCRTI CIL201400200082	Development and validation of a spatially explicit simulation framework to quantify runoff-erosion-carbon flux at watershed scale.	Saswat K. Kar A.C. Rathore Trisha Roy	Hydrology & Engineering, Dehradun	2014-15	2019-20	Research Farm	To be concluded
Comments: Progress is very good. Er. Saswat K. Kar will replace Er. Deepak Singh as leader of project.								(Action: Er. Saswat K. Kar)
16.	NRMAIISWCSIP 201700200132	Land use effect on soil carbon stock and soil quality in Mahi ravine ecosystem of semi-arid tropics.	D.Dinesh Gaurav Singh V. Kakade CCPI: P.C. Moharana Co-CCPI: Bagawati I. Tailor	Vasad	2017-18	2020-21	Mahi ravines in Gujarat	To be continued (Collaborative project with NBSSLUP)
Comments: Progress is very good. Name of Dr. R.S. Singh is deleted and Mr. P.C. Moharana will be the CCPI of project.								(Action: Dr. D. Dinesh)

P-2 CONSERVATION MEASURES FOR SUSTAINABLE PRODUCTION SYSTEM

2.1 RESOURCE CONSERVATION MEASURES FOR ARABLE LANDS

17.	NRMAIISWCCIL 201700300133	Development of conservation agriculture practices for rainfed production systems in North-Western Himalayan region.	N.K. Sharma Ramanjeet Singh Uday Mandal Trisha Roy A.K. Gupta	Soil Science & Agronomy, Dehradun	2017-18	2022-23	Research Farm	To be continued
Comments: Progress is very good.								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
18.	NRMAIISWCCIL 201700400134	Evaluation of conservation tillage based <i>Arundo donax</i> mats for resource conservation and enhancing cropping intensity on sloping crop lands.	Ramanjeet Singh N.K. Sharma Gopal Kumar	Soil Science & Agronomy, Dehradun	2017-18	2020-21	Research Farm	To be continued
Comments: Progress is very good.								
19.	NRMAIISWCCIL 201700500135	Determining resource conservation potential of bio-degradable waste and their on-farm utilization to increase crop productivity and profitability.	Lekh Chand N.K. Sharma U.K. Maurya	HRD&SS, Dehradun	2017-18	2021-22	Research Farm	To be continued
Comments: Progress is very good.								
20.	NRMAIISWCCIL 201700600136	Utilization of different industrially derived waste along with <i>Arbuscular Mycorrhizal Fungi</i> (AMF) for sustainable soil management.	Trisha Roy Uday Mandal Deviden Yadav	HRD&SS, Dehradun	2017-18	2020-21	Research Farm	To be continued
Comments: Progress is very good. Name of Dr. Deviden Yadav is added as second associate. (Action: Dr.(Ms.) Trisha Roy)								
21.	NRMAIISWCCIL 201900400163	Soil erosion and runoff studies in system crop intensification of different crops with mulching.	Lekh Chand D.V. Singh	HRD&SS, Dehradun	2019-20	2022-23	Research Farm	To be continued (New Project)
22.	NRMAIISWCSP 201900500164	Effect of integrated nutrient management on soil properties and productivity of chickpea under rainfed vertisols of South India.	S.L. Patil H. Biswas A.S. Morade Ravi K.N.	Ballari	2018-19	2022-23	Research Farm	To be continued (AICRPDA Collaborative Project with CRIDA, Hyderabad) (New Project)

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
23.	NRMAIISWCCIL 201800500153	Efficient utilization of fruit / vegetable waste (FVW) for improving soil health and productivity of organic agri-oleri system.	Sathiya K. Ram Prasad V.K. Bhatt S.L. Arya	Chandigarh	2018-19	2022-23	Research Farm	To be continued
Comments: Progress is very good.								
24.	NRMAIISWCCIL 201500800094	Restoration of shifting cultivated lands for resource conservation and sustainable production in Eastern Ghats.	D.C. Sahoo P.P. Adhikary P. Jakhar Karma Beer	Koraput	2015-16	2022-23	Shifting cultivated area in Koraput district	To be continued
Comments: Progress is very good.								
25.	NRMAIISWCCIL 201700700137	<i>Jhola kundi</i> based vegetable farming with soil moisture conservation practices for increasing profitability of tribal farmers of Eastern Ghats High Land region.	Karma Beer Ch. J. Dash P. Jakhar	Koraput	2017-18	2019-20	Research Farm	To be concluded
Comments: Progress is very good.								
26.	NRMAIISWCCIL 201500900095	Conservation tillage systems for enhancing productivity and resource use efficiency under rainfed area of South-Eastern Rajasthan.	Kuldeep Kumar B.L. Mina Shakir Ali Ashok Kumar Anita Kumawat	Kota	2015-16	2020-21	Research Farm	To be continued
Comments: Progress is very good. Name of Ms. Anita Kumawat is included as fourth associate. (Action: Dr. Kuldeep Kumar)								
27.	NRMAIISWCCIL 201600300117	Resource conservation and productivity enhancement through organic and inorganic amendments in soyabean-mustard cropping systems.	I. Rashmi B.L. Mina Kuldeep Kumar Shakir Ali Ashok Kumar	Kota	2016-17	2020-21	Research Farm	To be continued
Comments: Progress is very good.								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
28.	NRMACSWCRTI CIL201400300083	Cover crops and reduced tillage for enhancing productivity and soil health in rainfed farming system in the hilly areas.	K. Kannan V.K. Thilagam P. Raja	Udhagamandalam	2014-15	2019-20	Research Farm	To be concluded
Comments: Progress is very good. Project is extended for one year till 2019-20 for assessing the crop productivity under reduced tillage. Name of Dr. O.P.S. Khola is deleted. (Action: Dr. K. Kannan)								
29.	NRMAIISWCCOL 201900600165	Biochar for acid soil improvement and climate change mitigation in temperate ecosystem.	K. Rajan P. Raja K. Kannan	Udhagamandalam	2019-20	2021-22	Research Farm	To be continued (DST Funded) (New Project)

2.2 RESOURCE CONSERVATION MEASURES FOR NON-ARABLE LANDS

30.	NRMAIISWCCIL 201600400118	Improvisation of soil working techniques for enhancing tree establishment under rainfed conditions of North-Western Himalayas.	D.V. Singh J. Jayaprakash Vibha Singhal A.C. Rathore	Soil Science & Agronomy, Dehradun	2016-17	2019-20	Pasauli, Dhanpau and Lakhwar villages, Dehradun district	To be concluded
Comments: Progress is very good. As per RAC comments, field experiment may be conducted on other horticultural species at Dhoolkot, Selakui Farm. Dr. J. Jayaprakash will replace Mr. D.M. Kadam as first associate. Name of Dr. A.C. Rathore is included as third associate. (Action: Dr. D.V. Singh)								
31.	NRMACSWCRTI CIL200900500034	Evaluation of traditional minor millet based agro-forestry systems under recommended agri-silvi-cultural practices of North-Western Himalayas.	Harsh Mehta J.M.S. Tomar D. Mandal Pawan Kumar	Plant Science, Dehradun	2009-10	2020-21	Research Farm	To be continued
Comments: Progress is very good. Density of plants may be manipulated linking with extent of cover of intercrop and with canopy of trees. System-wise economics may be calculated. Project is extended for two years till 2020-21. Names of Dr. D. Mandal and Dr. Pawan Kumar are included as associates. (Action: Dr. Harsh Mehta)								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
32.	NRMACSWCRTI CIL201200200071	Development and characterization of quality planting material of important MPT's for degraded lands of North-West Himalayas.	Harsh Mehta Rajesh Kaushal A.K. Gupta Pawan Kumar	Plant Science, Dehradun	2012-13	2019-20	Research Farm	To be concluded
Comments: Progress is very good. Name of Dr. Pawan Kumar is included as third associate.								(Action: Dr. Harsh Mehta)
33.	NRMAIISWCCIL 201501100097	Evaluation of <i>Bael</i> and Olive based agro-forestry system with soil amendments in Doon Valley.	J. Jayaprakash A.C. Rathore D.V. Singh Harsh Mehta	Plant Science, Dehradun	2015-16	2024-25	Research Farm	To be continued
Comments: Progress is good. Name of Dr. J. Jayaprakash is included as leader of project.								(Action: Dr. J. Jayaprakash)
34.	NRMAIISWCCIL 201700800138	Evaluation of rooting media and rootstocks of major subtropical fruits spp. for raising quality planting materials on degraded lands.	A.C. Rathore Harsh Mehta J. Jayaprakash M. Sankar Saswat K. Kar	Plant Science, Dehradun	2015-16	2019-20	Research Farm	To be concluded (Budget from HM, NEH)
Comments: Progress is very good. Names of Mr. D.M. Kadam and Er. Deepak Singh are deleted. Names of Dr. J. Jayaprakash and Er. Saswat K. Kar are added as second and fourth associate, respectively.								(Action: Dr. A.C. Rathore)
35.	NRMAIISWCCOL 201701000140	Upscaling research assessment of productivity, hydrological behaviour, resource conservation and intangible benefits of selected commercial bamboo species in Uttarakhand.	Rajesh Kaushal Ambrish Kumar D. Mandal Pradeep Dogra J.M.S. Tomar D.V. Singh Harsh Mehta A.K. Gupta	Plant Science, Dehradun	2016-17	2019-20	Mednipur and Dhoolkot, Dehradun	To be concluded (INBAR China Project)
Comments: Progress is very good. Project is extended for one year till 2019-20 as the project has been extended by the funding agency.								(Action: Dr. Rajesh Kaushal)

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
36.	NRMAIISWCCIL 201701100141	Assessment and improvement of nutritional quality of horticultural crops on sloping lands in North-West Himalayas.	A.C. Rathore M. Sankar D.V. Singh	Plant Science, Dehradun	2017-18	2022-23	Research Farm and Pasauli village, Vikasnagar	To be continued
Comments: Progress is very good. Dr. A.C. Rathore will replace Mr. D.M. Kadam as leader of project.							(Action: Dr. A.C. Rathore)	
37.	NRMAIISWCCIL 201900700166	Microsite modification and soil and water conservation techniques for improving productivity of <i>Melia dubia</i> on degraded lands.	Rajesh Kaushal Gopal Kumar D.V. Singh J.M.S. Tomar A.K. Gupta Harsh Mehta Pawan Kumar Sadikul Islam Devideen Yadav	Plant Science, Dehradun	2019-20	2026-27	Research Farm	To be continued (Core Project) (New Project)
			Pankaj Panwar V.K. Bhatt Sharmistha Pal P.L. Bhutia O.P.S. Khola	Chandigarh			Research Farm	
			Hombe Gowda K. Kannan S. Manivannan	Udhagamandalam			Farmers' Field	
			Dinesh Jinger V. Kakade D. Dinesh P.R. Bhatnagar V.C. Pande	Vasad			Research Farm	

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
38.	NRMAIISWCCIL 201800700155	Improving out-planting success of various multipurpose tree species in Yamuna ravines using improved planting stock and bio-fertilizers.	A.K. Parandiyal S.K. Dubey	Agra	2018-19	2020-21	Research Farm	To be continued
Comments: Progress is very good. Dr. S.K. Dubey will replace Mr. R.B. Meena as an associate. (Action: Dr. A.K. Parandiyal)								
39.	NRMAIISWCCIL 201501200098	Phyto-rehabilitation of saline - sodic vertisols through <i>Prosopis juliflora</i> based silvipastoral system.	H. Biswas A.S. Morade	Ballari	2015-16	2019-20	Research Farm	To be concluded
Comments: Progress is very good.								
40.	NRMAIISWCCIL 201701200142	Regulated deficit irrigation and canopy architecture management for fig (<i>Ficus carica L.</i>) in semi-arid vertisols.	A.S. Morade M. Prabhavathi	Ballari	2017-18	2022-23	Research Farm	To be continued
Comments: Progress is very good.								
41.	NRMAIISWCCIL 201501300099	Evaluation of promising fruit species with different moisture conservation practices in red soils of Bundelkhand region.	Rajeev Ranjan Dinesh Kumar	Datia	2015-16	2020-21	Research Farm	To be continued
Comments: Progress is very good. Quantity of irrigation water applied may be reported. Economics may be done. Names of Dr. J. Jayaprakash, Er. (Ms.) M. Pramanik and Dr. S.P. Tiwari are deleted. Name of Dr. Dinesh Kumar is included as an associate. (Action: Dr. Rajeev Ranjan)								
42.	NRMAIISWCCIL 201501400100	Evaluation of cover crops under cashew and mango plantation for improving soil health and productivity in Eastern Ghats High Land Region of Odisha.	M. Madhu D.C. Sahoo P.P. Adhikary Karma Beer	Koraput	2015-16	2020-21	Watershed in Semiliguda block, Koraput	To be continued
Comments: Progress is very good. Dr. Karma Beer will replace Dr. Hombe Gowda as third associate. (Action: Dr. M. Madhu)								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
43.	NRMAIISWCCIL 201600600120	Evaluation, characterization and development of elite genotypes of <i>Cassia auriculata</i> for cultivation in semi- arid regions.	S. Kala H.R. Meena I. Rashmi A.K. Singh	Kota	2016-17	2021-22	Research Farm	To be continued
Comments: Progress is very good.								
44.	NRMAIISWCCIL 201900800167	Evaluation of agri-horticulture land use systems for degraded eco-system of South-Eastern Rajasthan.	H.R. Meena G.L. Meena Shakir Ali Ashok Kumar Kuldeep Kumar I. Rashmi	Kota	2019-20	2025-26	Research Farm	To be continued (New Project)
Comments: Treatments may be modified as suggested in the IRC meeting. (Action: Dr. H.R. Meena)								
45.	NRMAIISWCCOL 201900900168	Establishment and promotion of suitable grasses for soil conservation and fodder production in Nilgiris.	K. Kannan P. Sundarambal K. Rajan P. Raja	Udhagamandalam	2019-20	2020-21	Research Farm	To be continued (DBT Funded) (New Project)
46.	NRMAIISWCCIL 201600700121	Resource utilization and productivity of Dragon fruit based horti-silviculture system under rainfed agro eco-systems of Central Gujarat.	V. Kakade P.R. Bhatnagar D. Dinesh	Vasad	2016-17	2022-23	Research Farm	To be continued
Comments: Progress is very good. Productivity for the system as a whole may be calculated. (Action: Dr. V. Kakade)								

P-3 WATERSHED HYDROLOGY FOR CONSERVATION PLANNING

3.1 HYDROLOGICAL BEHAVIOUR OF LANDUSES AND MANAGEMENT PRACTICES

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
47.	NRMAIISWC SOP 201901000169	Enhancing food and water security in arid region through improved understanding of quantity, quality and management of blue, green and grey water.	P.R. Ojsavi Shakir Ali S.S. Shrimali Saswat K. Kar	Hydrology & Engineering, Dehradun	2018-19	2022-23	Rajasthan	To be continued (DST Funded Network Project) (New Project)
48.	NRMAIISWCCIL 201501500101	Hydrologic systems analysis across multiple spatial scales and its implications on hydrologic processes in sub-humid catchment of Eastern Ghat High Land Region of Odisha.	Ch. J. Dash P.P. Adhikary	Koraput	2015-16	2021-22	Watershed in Semiliguda block, Koraput	To be continued
Comments: Progress is very good. Project is extended for three years till 2021-22 to fulfil the remaining objectives. Extreme event analysis may be done separately. (Action: Dr.(Ms.) Ch. J.P. Dash)								
49.	NRMAIISWCCIL 201800600154	Evaluation of catchment-storage-command area relationship for improving rainwater productivity under integrated production systems.	P. Jakhar D.C. Sahoo P.P. Adhikary Karma Beer	Koraput	2018-19	2022-23	Research Farm	To be continued
Comments: Progress is very good. Project is shifted from Reserach Programme P 2.1. (Action: Dr. P. Jakhar)								

3.2 WATER HARVESTING, GROUNDWATER RECHARGE AND MANAGEMENT

S. No	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
50.	NRMAIISWCSI P201501700103	Development and rejuvenation of natural springs through soil and water conservation measures.	U.K. Maurya Ambrish Kumar Charan Singh CCPI: S.K. Rai Co-CCPI: Vineet Kumar	Soil Science & Agronomy, Dehradun	2015-16	2020-21	Mid Himalayas in Garhwal region	To be continued (Collaborative project with Wadia Institute of Himalayan Geology(WIHG), Dehradun)
Comments: Progress is very good. Dr. Vineet Kumar will replace Dr. S.K. Bartarya as Co-CCPI from WIHG, Dehradun. Name of Dr. Charan Singh is included as second associate from IISWC. (Action: Dr. U.K. Maurya)								
51.	NRMAIISWCSOL 201501900105	Consortia Research Platform-Water Theme 1 Water Resources Augmentation/ Conservation.	P.R. Ojasvi S.S. Shrimali K.K. Sharma S.K. Dubey B.S. Naik H. Biswas S.L. Patil V.K. Bhatt Sharmistha Pal Pankaj Panwar Rajeev Ranjan D.C. Sahoo Ch. J. Dash P. Jakhar G.L. Meena R.K.Singh S. Manivannan V.K. Thilagam	Hydrology & Engineering, Dehradun Agra Ballari Chandigarh Datia Koraput Kota Udhagamandalam	2015-16	2019-20	Headquarters and Research Centres	To be concluded (Water Platform Project)
Comments: Progress is very good. Names of Er. Deepak Singh and Dr. O.P.S. Khola are deleted at Dehradun and Udhagamandalam, respectively. Dr. S.K. Dubey will replace Mr. R.B. Meena as associate at Agra. Name of Er. (Ms.) M. Pramanik is deleted and Dr. Rajeev Ranjan will be the leader at Datia. (Action: Dr. P.R. Ojasvi and leaders at Research Centres)								

S. No	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
52.	NRMAIISWCSIP 201701300143	Quantitative and qualitative assessment and management strategy for the sustainable development of the groundwater resources in Haridwar district.	Uday Mandal D.R. Sena CCPI: Anurag Khanna Co-CCPI: R. Bussa	Hydrology & Engineering, Dehradun	2017-18	2019-20	Haridwar district	To be concluded (Collaborative project with Central Ground Water Board (CGWB), Uttarakhand region)
Comments: Progress is good. MoU regarding data availability and sharing of data may be signed with Central Ground Water Board. Average depth of different layers may be presented. (Action: Er. Uday Mandal)								
53.	NRMAIISWCCIL 201701400144	Employing system approach on zero energy drip irrigation system in bench terrace farming for hill region.	Saswat K. Kar P.R. Ojasvi A.C. Rathore	Hydrology & Engineering, Dehradun	2017-18	2020-21	Research Farm & Udpalta village, Uttarakhand	To be continued
Comments: Progress is very good. Er. Saswat K. Kar will replace Er. Deepak Singh as leader of project. (Action: Er. Saswat K. Kar)								
54.	NRMAIISWCCIL 201501800104	Water quality assessment and its impact on adjacent soil and vegetation in riparian areas of Hindon and Kali rivers.	A.K. Gupta Ambrish Kumar U.K. Maurya	Plant Science, Dehradun	2015-16	2019-20	Hindon & Kali rivers' basins in Saharanpur, Muzaffarnagar, Meerut etc. distts.	To be concluded
Comments: Progress is very good. Comments of RAC-2019 on the project may be complied. (Action: Mr. A.K. Gupta)								
55.	NRMAIISWCCIL 201800800156	Design and evaluation of HDPE sheet embedded gabion check dams for water harvesting in North West Himalayas.	Ambrish Kumar Rajesh Kaushal Gopal Kumar	HRD&SS, Dehradun	2018-19	2022-23	Dehradun and Tehri Garhwal	To be continued
Comments: Progress is very good. Location of the project is changed to Dehradun and Tehri Garhwal. MGMG and SCSP programmes may be conducted in the villages of this project. (Action: Dr. Ambrish Kumar)								
56.	NRMAIISWCCIL 201502100107	Study on pollution status of Yamuna river and its impact on soil and crop health in Western U.P.	Rama Pal S.K. Dubey R.K. Dubey K.K. Sharma	Agra	2015-16	2019-20	Yamuna river belt	To be concluded
Comments: Progress is very good. Yield and quality parameters may be correlated as per the comments of RAC-2019. Name of Dr. K.K. Sharma is included as third associate. (Action: Dr. (Ms.) Rama Pal)								

S. No	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
57.	NRMAISWCCIL 201701500145	Evaluation of direct recharge filter for revival of defunct and low yielding borewell vis-a-vis augmentation of ground water table in semi-arid region of Karnataka.	B.S. Naik S.L. Patil Ravi Dupdal	Ballari	2017-18	2020-21	Molakalmur, Chitradurga district, Karnataka	To be continued
Comments: Progress is very good. Name of Dr. Ravi Dupdal is included as second associate. (Action: Dr. B.S. Naik)								
58.	NRMACSWCRTI CIL201001000046	Estimation of water budget components for predominant land uses of South-Eastern Rajasthan for conservation planning.	G.L. Meena R.K. Singh H.R. Meena Shakir Ali	Kota	2010-11	2019-20	Research Farm	To be concluded
Comments: Progress is good. Dual K_C and K_p coefficients for the systems may be used considering water stress condition. Project is extended for one year till 2019-20. Name of Dr. Shakir Ali is added as third associate. (Action: Dr. G.L. Meena)								
59.	NRMAISWCCIL 201502200108	Strategies for rainwater harvesting and its multiple uses in rainfed agriculture in Central Gujarat	P.R. Bhatnagar D. Dinesh V.C. Pande V. Kakade	Vasad	2015-16	2019-20	Research Farm and farmers fields in adopted watersheds	To be concluded
Comments: Progress is very good.								
60.	NRMAISWCCIL 201701600146	Field evaluation of ground water recharge filters developed by ICAR-IISWC, Vasad.	Gaurav Singh V.C. Pande	Vasad	2017-18	2019-20	Different watersheds adopted by Vasad Centre	To be concluded
Comments: Progress is very good. Comparative critical assessment of various recharge filters with our fabricated filters may be done. (Action: Dr. Gaurav Singh)								

P-4 REHABILITATION OF AREAS AFFECTED BY MASS EROSION**4.1 DEVELOPMENT AND REFINEMENT OF TECHNOLOGIES FOR REHABILITATION OF RAVINES, LANDSLIDES, MINE SPOILS, RIVERBED MINING, STREAM BANKS, TORRENTS ETC.**

S. No	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
61.	NRMAIISWCCIL 201502300109	Ecological restoration of stone mine spoil area in South-Eastern Rajasthan.	B.L. Mina S. Kala, H.R. Meena Shakir Ali Ashok Kumar	Kota	2015-16	2024-25	Mine spoil sites in Kota district	To be continued
Comments: Progress is very good. Statistical analysis may be done between treatments within a single species.								(Action: Dr. B.L. Mina)
62.	NRMACSWCRTI CIL200801000023	Enhancing productivity of ravine lands by plantation of <i>A. sapota</i> with intercropping systems.	V. Kakade Gaurav Singh V.C. Pande D. Dinesh Dinesh Jinger	Vasad	2008-09	2022-23	Research Farm	To be continued
Comments: Progress is very good. System productivity may be calculated before and after fruiting. Name of Dr. Dinesh Jinger is included as fourth associate.								(Action: Dr. V. Kakade)

P-5 INTEGRATED WATERSHED MANAGEMENT FOR SOCIO-ECONOMIC GROWTH AND POLICY ADVOCACY**5.1 PARTICIPATORY WATERSHED MANAGEMENT AND INTEGRATED FARMING SYSTEM (IFS)**

63.	NRMAIISWCCIL 201502400110	Evaluation of criteria and techniques for classification of fisheries - sensitive watersheds for conservation and production management.	M. Muruganandam A.K. Gupta Saswat K. Kar	Hydrology & Engineering, Dehradun	2015-16	2019-20	Garhwal Himalayas	To be concluded
Comments: Progress is very good. Project is extended for one more year till 2019-20 for collecting more data for analysis. Name of Er. Saswat Kumar Kar is added as second associate.								(Action: Dr. M. Muruganandam)

S. No	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
64.	NRMAIISWCCIL 201901100170	Resource conservation practices for Doubling Farmers Income in North West Himalayas: An adaptive approach.	J.M.S. Tomar Saswat K. Kar Madan Singh Rajesh Kaushal M. Muruganandam Gopal Kumar Ramanjeet Singh Pawan Kumar Indu Rawat P.R. Ojasvi	Plant Science, Dehradun	2019-20	2023-24	Navi-Sahiya, Udpalta	To be continued (New Project)
65.	NRMAIISWCCIL 201601000124	Socio-economic analysis of farming/livelihood systems of farmers across different land categories in Yamuna ravine area.	D.C. Meena A.K. Parandiyal	Agra	2016-17	2019-20	Ravine areas in U.P.	To be concluded
Comments: Progress is good. Recommendations of the project should be linked with Doubling the Farmers Income. (Action: Dr. D.C. Meena)								
66.	NRMAIISWCCOL 201601100125	Refining methodologies for data validation, planning, monitoring and evaluation of watersheds.	S.L. Patil H. Biswas B.S. Naik A.S. Morade M. Prabhavathi Ravi Dupdal Ravi K.N. P.R. Ojasvi Pradeep Dogra S.S. Shrimali	Ballari	2016-17	2019-20	Research Centre, Ballari, Karnataka	To be concluded (Sujala – III Project)
Comments: Progress is very good. Project is extended for one year till 2019-20. Name of Dr. Ravi K.N. is included as associate. (Action: Dr. S.L. Patil)								

S. No	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
67.	NRMAIISWCCIL 201800900157	Economic impact assessment of water harvesting structure-Farm Pond in the semi-arid regions of Karnataka.	Ravi Dupdal S.L. Patil B.S. Naik A.S. Morade	Ballari	2018-19	2022-23	Northern dry zone of Karnataka – Ballari and Vijayapur districts	To be continued
Comments: Progress is very good.								
68.	NRMAIISWCCIL 201801000158	Valuation of ecosystem services from natural resource conservation and management interventions in different agro-ecological regions in India.	V. C. Pande P.R. Bhatnagar Gaurav Singh V. Kakade Dinesh Jinger D.C. Meena S.K. Dubey K.K. Sharma A.K. Parandiyal R.K. Dubey Rama Pal Ravi Dupdal B.S. Naik A.S. Morade M. Prabhavathi S.L. Arya V.K. Bhatt Pankaj Panwar Sharmistha Pal Sathiya K. P.L. Bhutia M.K. Meena R.S. Yadav Rajeev Ranjan	Vasad Agra Ballari Chandigarh Datia	2018-19	2020-21	Developed watersheds / NRM intervention sites at Headquarters and Research Centres	To be continued (Core Project)

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
			Pradeep Dogra D. Mandal D.R. Sena Rajesh Kaushal Ramanjeet Singh	PME Cell, Dehradun				
			M. Madhu P. Jakhar P.P. Adhikary	Koraput				
			Ashok Kumar R.K. Singh A.K. Singh Kuldeep Kumar S. Kala G.L. Meena	Kota				
			S. Manivannan V.K. Thilagam P. Sundarambal Hombe Gowda	Udhagamandalam				

Comments: Progress is very good. Names of Mr. R.B. Meena, Dr. Ram Prasad, Er. (Ms.) M. Pramanik and Dr. Hombe Gowda are deleted at Agra, Chandigarh, Datia and Koraput, respectively. Names of Dr. Dinesh Jinger and Dr. (Ms.) P.L. Bhutia are included as associates at Vasad and Chandigarh, respectively. Names of Dr. P. Jakhar and Dr. P.P. Adhikary are added at Koraput. Name of Dr. O.P.S. Khola is deleted and Dr. S. Manivannan will be the leader at Udhagamandalam. Names of Dr. (Ms.) P. Sundarambal and Dr. Hombe Gowda are added at Udhagamandalam. Dr. O.P.S. Khola will be the leader at Chandigarh after the retirement of Dr. (Ms.) S.L. Arya in February, 2020.

(Action: Dr. V.C. Pande and leaders at Research Centres)

P-6 HUMAN RESOURCE DEVELOPMENT AND TECHNOLOGY TRANSFER**6.1 CAPACITY DEVELOPMENT APPROACHES AND INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)**

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
69.	NRMAIISWCCIL 201502600112	Developing ICT based e-learning tools for conservation measures and watershed management.	S.S. Shrimali Rajesh Kaushal Bankey Bihari	Hydrology & Engineering, Dehradun	2015-16	2019-20	Different agro-ecological regions of India	To be concluded
Comments: Progress is very good. Professional software expert may be hired for developing the code of the portal and video content. Project is extended for one year till 2019-20. (Action: Er. S.S. Shrimali)								
70.	NRMAIISWCCIL 201801100159	Exploring the potential of mKRISHI to disseminate the knowledge about soil and water conservation technologies to the stakeholders: An innovative approach to reach the unreached.	Madan Singh Bankey Bihari D.C. Meena Ravi K.N. Sharmistha Pal M.K. Meena Karma Beer Kuldeep Kumar V.K. Thilagam D. Dinesh	HRD&SS, Dehradun	2018-19	2022-23	Dehradun and eight Research Centres	To be continued
Comments: Progress is very good. Database of messages may be prepared related to soil and water conservation to be sent to the farmers through the mKRISHI app. Name of Dr. Bankey Bihari is included as first associate. Dr. Ravi K.N. will replace Mr. A.S. Morade as associate. Dr. Karma Beer will replace Dr. (Ms.) Ch. J. Dash as associate. (Action: Dr. Madan Singh)								

6.2 PARTICIPATORY TECHNOLOGY DISSEMINATION AND ADOPTION

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
71.	NRMAIISWCCOL 201701700147	Farmer participatory technology application for sustainable resource management and livelihood security in North-West Himalayas.	Bankey Bihari S.S. Shrimali Lekh Chand M. Muruganandam U.K. Maurya Madan Singh Trisha Roy	HRD&SS, Dehradun	2016-17	2019-20	Raipur Block, Dehradun	To be concluded (KVK Scheme of ICAR)
Comments: Progress is very good. Name of Mr. D.M. Kadam is deleted.								(Action: Dr. Bankey Bihari)
72.	NRMAIISWCCIL 201701800148	Role of women in conservation and management of natural water resources for domestic and irrigation uses.	Indu Rawat Madan Singh Vibha Singhal	HRD&SS, Dehradun	2017-18	2019-20	Mid-Himalayas of Uttarakhand	To be concluded
Comments: Progress is very good. Name of Dr.(Ms.) Trisha Roy is deleted.								(Action: Dr.(Ms.) Indu Rawat)

PROJECTS CONCLUDED DURING THE YEAR 2018-19

S. No.	Prog. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre / Division	Year of Start	Location of Project
1.	1.3	NRMAIISWCCIL 201600100115	Assessing the vegetation and SOC recovery potentials of abandoned / fallowed shifting cultivated sites in Central Eastern Ghats.	Hombe Gowda P. Jakhar Karma Beer	Koraput	2016-17	Central Eastern Ghats (Malkangiri, Koraput, Raygada and Vishakhapatnam districts)
Comments: Progress is very good.							
2.	2.1	NRMAIISWCCIL 201600200116	Effect of varying water regimes on Zn and N dynamics and rice productivity in saline vertisols.	M. Prabhavathi H. Biswas	Ballari	2016-17	Research Farm
Comments: Progress is very good.							
3.	2.1	NRMACSWCRTI CIL201000400040	<i>In situ</i> moisture conservation practices under aonla based agro-forestry system for sustainable production in red soils of Bundelkhand.	Dev Narayan R.S. Yadav	Datia	2010-11	Research Farm
Comments: Progress is very good.							
4.	2.2	NRMAIISWCCIL2 01600500119	Soil fertility restoration and carbon sequestration potential of multipurpose trees for agro-forestry system in Himalayan foothills.	Vibha Singhal Charan Singh Trisha Roy	Plant Science, Dehradun	2016-17	Dehradun district
Comments: Progress is very good.							
5.	2.2	NRMAIISWCCOL 201700900139	Promotion and expansion of Lemon grass (<i>Cymbopogon flexuosus</i>) cultivation as an alternative crop for livelihood security in SC and ST communities in Dehradun district. (DST Project)	J.M.S. Tomar Rajesh Kaushal A.K. Gupta Harsh Mehta	Plant Science, Dehradun	2016-17	Jaunsar Hill Area, Uttarakhand
Comments: Progress is very good.							
6.	3.2	NRMAIISWCCOL 201502000106	Efficient groundwater management for enhancing adaptive capacity to climate change in sugarcane based farming systems in Muzaffarnagar district, U.P. (NMSA-MoA Project)	Ambrish Kumar U.K. Maurya	HRD&SS, Dehradun	2015-16	Selected sites in Muzaffarnagar district, UP
Comments: Progress is very good.							

S. No.	Prog. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre / Division	Year of Start	Location of Project
7.	4.1	NRMAIISWCCOL201600900123	Field evaluation of refinement of ravine reclamation technology in a model ravine area development project at Lohli-Bagli village in district Bundi (Rajasthan). (Govt. of Rajasthan Funded)	R. K. Singh, H.R. Meena Shakir Ali, Ashok Kumar B.L. Mina Kuldeep Kumar, S. Kala G.L. Meena, I. Rashmi	Kota	2016-17	Bundi district, Rajasthan
Comments: Project is closed due to withdrawl of funds from the funding agency.							(Action: Dr. R.K. Singh)
8.	4.1	NRMACSWCRTI CIL201102200068	Field evaluation of design of trenches under different agro-climatic regions. (Core Project)	P.R. Bhatnagar D. Dinesh	Vasad	2011-12	Research Farm
				A.K. Parandiyal K.K. Sharma, R.B. Meena	Agra		Research Farm
				V.K. Bhatt, Pankaj Panwar	Chandigarh		Research Farm
				M. Pramanik, S.P. Tiwari	Datia		Research Farm
				D.C. Sahoo Hombe Gowda P.P. Adhikary	Koraput		Research Farm
				Shakir Ali, S. Kala	Kota		Dhoti Watershed
				S. Manivanan K. Kannan, K. Rajan	Udhagamandalam		Research Farm
				Comments: Progress is very good.			
9.	6.2	NRMAIISWCCIL2 01601400128	Assessing farmers knowledge, vulnerability and adapting capacity of soil and water conservation technologies under changing climatic scenario. (Core Project)	Bankey Bihari Madan Singh, Indu Rawat	HRD&SS, Dehradun	2016-17	Dehradun district
				D.C. Meena, R.K. Dubey Rama Pal	Agra		Agra
				S.L. Patil, B.S. Naik A.S. Morade, Ravi Dupdal	Bellary		Bellary
				S.L. Arya, Sharmistha Pal Sathiya K.	Chandigarh		Chandigarh
				M.K. Meena Rajeev Ranjan, R.S. Yadav	Datia		Datia
				P. Jakhar , M.K. Meena	Koraput		Koraput

S. No.	Prog. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre / Division	Year of Start	Location of Project
				Ashok Kumar, H.R. Meena I. Rashmi	Kota		Kota
				P. Sundarambal K. Kannan, P. Raja O.P.S. Khola	Udhagamandalam		Udhagamandalam
				V.C. Pande	Vasad		Vasad
Comments: Progress is very good.							
10.	6.2	NRMAIISWCCIL2 01601600130	Assessment of sustainability factors for soil and water conservation projects.	Madan Singh Indu Rawat Bankey Bihari	HRD&SS, Dehradun	2016-17	Dehradun & Tehri Garhwal districts
Comments: Progress is very good.							
11.	6.2	NRMAIISWCCIL2 01601500129	Determination of heterogeneity in agro-forestry practices and acceptability alongwith altitude gradient in Western Himalayas.	Charan Singh Vibha Singhal Bankey Bihari	Plant Science, Dehradun	2016-17	Dehradun district
Comments: Progress is very good.							
12.	6.2	NRMAIISWCCIL 201502700113	Documentation and validation of ITKs in soil and water conservation practiced by tribal farmers of Tamil Nadu.	P. Sundarambal P. Raja K. Kannan V. Selvi	Udhagamandalam	2015-16	Tribal districts of Tamil Nadu
Comments: Progress is very good.							

NEW PROJECTS APPROVED DURING IRC MEETING – 2019

S.No.	Prog. No.	Project Code No. (RPP No.)	Title of the Project	Centre/Division
1.	1.2	NRMAIISWCCIL 201900100160	Development of Artificial Intelligence (AI) models for watershed scale modelling using the data of Ramganga watershed.	Hydrology & Engineering, Dehradun
2.	1.2	NRMAIISWCCIL 201900200161	Development of rainfall energy based erosivity factor to formulate a daily based generic erosion equation.	Hydrology & Engineering, Dehradun
3.	1.3	NRMAIISWCCIL 201900300162	Carbon sequestration potential of prevailing and recommended land uses in reclaimed degraded ecosystems under different agro-ecological regions of India. (Core Project)	SS&A, Dehradun/ Agra / Bellary / Chandigarh/ Datia/ Koraput/ Kota/ Udhagamandalam / Vasad
4.	2.1	NRMAIISWCCIL 201900400163	Soil erosion and runoff studies in system crop intensification of different crops with mulching.	HRD&SS, Dehradun
5.	2.1	NRMAIISWCSIP 201900500164	Effect of integrated nutrient management on soil properties and productivity of chickpea under rainfed vertisols of South India. (AICRPDA Collaborative Project)	Ballari
6.	2.1	NRMAIISWCCOL 201900600165	Biochar for acid soil improvement and climate change mitigation in temperate ecosystem. (DST Funded)	Udhagamandalam
7.	2.2	NRMAIISWCCIL 201900700166	Microsite modification and soil and water conservation techniques for improving productivity of <i>Melia dubia</i> on degraded lands. (Core Project)	Plant Science, Dehradun/ Chandigarh/ Udhagamandalam / Vasad
8.	2.2	NRMAIISWCCIL 201900800167	Evaluation of agri-horticulture land use systems for degraded eco-system of South-Eastern Rajasthan.	Kota
9.	2.2	NRMAIISWCCOL 201900900168	Establishment and promotion of suitable grasses for soil conservation and fodder production in Nilgiris. (DBT Funded)	Udhagamandalam
10.	3.1	NRMAIISWCSOP 201901000169	Enhancing food and water security in arid region through improved understanding of quantity, quality and management of blue, green and grey water. (DST Network Project)	Hydrology & Engineering, Dehradun
11.	5.1	NRMAIISWCCIL 201901100170	Resource conservation practices for Doubling Farmers Income in North West Himalayas: An adaptive approach.	Plant Science, Dehradun

STATUS OF NUMBER OF PROJECTS

No. of projects in 2018-19	Projects concluded in 2018-19	New projects added in 2019-20	Total no. of projects in 2019-20
A	B	C	D = A-B+C
73	12	11	72

TOTAL NUMBER OF PROJECTS IN DIFFERENT RESEARCH PROGRAMMES

Research Programmes	P-1	P-2	P-3	P-4	P-5	P-6	Total
Total No. of Projects	16	30	14	02	06	04	72

OBSERVATIONAL TRIALS APPROVED FOR 2019-20

S.No.	Title of the Project	Leader & Associates	Centre/ Division
1.	Evaluation of Olive cultivars for resource conservation and enhancing productivity of degraded lands.	Ram Prasad	Chandigarh
Comments: The project may be conducted as an Observational Trial for one year in 2019-20 in degraded lands only. (Action: Dr. Ram Prasad)			

NEW PROJECT PROPOSALS SUBMITTED FOR CONSIDERATION IN THE RAC/ IRC – 2019

NEW PROJECT PROPOSALS AGREED BY THE RAC

S. No	Prog No.	Title of the Project	Leader and Associates	Duration	Location of Project	Remarks of the RAC	Remarks of the IRC
PLANT SCIENCES DIVISION, DEHRADUN/ RESEARCH CENTRE, CHANDIGARH/ UDHAGAMANDALAM/VASAD (CORE PROJECT PROPOSAL)							
1.	2.2	Productivity, hydrological behavior and resource conservation potential of recommended short rotation clonal agroforestry tree species of northern India.	Rajesh Kaushal	2019-20 to 2027-28	Research Farm, Selaqui	Agreed with following comments <ul style="list-style-type: none"> The project may be reformulated in form of a core project including RC-Vasad, RC- Chandigarh & RC-Udhagamandalam. Research Centres can select three dominant trees (including <i>Melia dubia</i>) and 1-2 dominant crops for the agro forestry system. 	Projects at S.No. 1-4 are Approved as a single Core Project with modified title.
2.	2.2	Productivity studies and bioameliorative abilities of <i>Melia dubia</i> based agroforestry system in degraded land of Shivaliks.	P.L. Bhutia	2019-20 to 2027-28	Research Farm, Chandigarh	Agreed with following suggestions <ul style="list-style-type: none"> Reformulate the project in consultation with Dr. Rajesh Kaushal. The project and team need to be recasted as part of a core project. It was suggested to select three dominant tree (including <i>Melia dubia</i>) and 1-2 dominant crops. 	
3.	2.2	Diagnostic survey of <i>Melia dubia</i> agro forestry systems for optimizing biomass production through management practice in Deccan plateau.	Hombe Gowda	2019-20 to 2022-23	Seven locations of Karnataka, Tamil Nadu and Andhra Pradesh states	Agreed with following suggestions <ul style="list-style-type: none"> Mere survey work does not suit to the mandate of the Institute. Reformulate the project in consultation with Dr. Rajesh Kaushal, to be part of the core project. However, the objectives, treatments, observations etc. need to be modified taking into account the predominant cropping systems of the region but within the broad framework of the project. 	

S. No	Prog No.	Title of the Project	Leader and Associates	Duration	Location of Project	Remarks of the RAC	Remarks of the IRC
4.	2.2	Remunerative castor based agro forestry systems for reclaimed Mahi ravine lands.	Dinesh Jinger	2019-20 to 2026-27	Research Farm, Vasad	<p>Agreed with following comments</p> <ul style="list-style-type: none"> • Find the scope of application of output. • It was also suggested to collect information on spread of output of past experiment completed at RC-Vasad on agroforestry. • The project and team need to be recasted as part of a core project in consultation with Dr. Rajesh Kaushal. It is suggested to select three dominant tree (including <i>Melia dubia</i>) and 1-2 dominant crops. 	
HYDROLOGY AND ENGINEERING DIVISION, DEHRADUN							
5.	1.2	Development of Artificial Intelligence (AI) models for watershed scale modelling using the data of Ramganga watershed.	Sadikul Islam	2019-20 to 2021-22	Ramganga river	<p>Agreed with following comments</p> <ul style="list-style-type: none"> • Project team may be recasted. 	Approved
6.	3.1	Development of rainfall energy based erosivity factor to formulate a daily based generic erosion equation.	Sadikul Islam	2019-20 to 2024-25	Dehradun , Koraput and Kota	<p>Agreed with Following comments</p> <ul style="list-style-type: none"> • Project team may be recasted. 	Approved

S. No	Prog No.	Title of the Project	Leader and Associates	Duration	Location of Project	Remarks of the RAC	Remarks of the IRC
PLANT SCIENCES DIVISION, DEHRADUN							
7.	5.1	Integrated farming system approaches using soil water conservation measures for livelihood security and resource conservation in Himalayan foothills.	J.M.S. Tomar	2019-20 to 2023-24	Pasauli & Langha, Vikasnagar	May be Agreed with following comments <ul style="list-style-type: none"> Objectives are not well defined and do not match with the title of the project. Activities / interventions are not clear and look like collection of data without scientific background. Project may be reformulated to analyze the impact of intervention already undertaken in the project under different enterprises. 	Approved
RESEARCH CENTRE, CHANDIGARH							
8.	2.2	Evaluation of Olive cultivars for resource conservation and enhancing productivity of degraded lands.	Ram Prasad	2019-20 to 2026-27	Research Farm, Chandigarh	Agreed for Observational trial for one year to establish different cultivars <ul style="list-style-type: none"> It must be planted on degraded land only. 	Approved as an Observational Trial
RESEARCH CENTRE, KOTA							
9.	2.1	Performance and resource use efficiency of soybean-wheat cropping system with limited irrigation under conservation agriculture in vertisols of south-eastern Rajasthan	Anita Kumawat	2019-20 to 2023-24	Research Farm, Kota	Agreed with following comments <ul style="list-style-type: none"> Project may be reformulated to include conservation aspects in the study which should be reflected in the methodology and treatments. Irrigation treatments may be avoided. 	Not Approved

NEW PROJECT PROPOSALS NOT AGREED BY THE RAC

S. No.	Prog. No.	Title of the Project	Leader and Associates	Division/ Centre	Remarks of the RAC
1.	3.1	Assessing and modelling plot and watershed scale nutrient movement through water erosion under different conservation practices.	Gopal Kumar	SS&A, Dehradun	Not Agreed <ul style="list-style-type: none"> • The proposed project is more of academic interest than applied. • It was suggested to propose technology oriented projects of larger significance.
2.	2.2	Evaluation of short rotational peripheral agro-forestry system for productivity, soil health and livelihood security in Himalayan foothills.	Pawan Kumar	Plant Science, Dehradun	Not Agreed <ul style="list-style-type: none"> • PI may be associated as Co-PI with the core project at Dehradun.
3.	2.1	Augmenting organic matter of reclaimed Yamuna ravines for sustainable production, higher resource conservation and healthy and resilient soil under pearl millet-wheat system.	R.K. Dubey S.K. Dubey Rama Pal	Research Farm, Agra	Not Agreed <ul style="list-style-type: none"> • The sources of availability and cost effectiveness of organic materials in the newly reclaimed ravine lands need to be ascertained to ensure replicability of the experimental findings in the identical regions before the study is planned. • CA in low rainfall areas is generally not successful due to lack of availability of organic material/crop residue (mainly used as a fodder) and its decomposition in the soil to improve SOM due to poor moisture conditions. This aspect needs to be analysed.
4.	5.1	Assessment of urbanization impact on arable land loss and its effect on farmers livelihood in the peri-urban transition zones of Bengaluru.	Ravi K.N.	Bellary	Not Agreed <ul style="list-style-type: none"> • Not fit to the mandate of the Institute. • The PI may be associated with other ongoing project.

S. No.	Prog. No.	Title of the Project	Leader and Associates	Division/ Centre	Remarks of the RAC
5.	2.1	Leaf Color Chart (LCC) guided precision N management under CA based maize-wheat-mungbean in Bundelkhand region.	Dinesh Kumar	Datia	Not Agreed <ul style="list-style-type: none"> • Not fit to the mandate. • This type experiment can be conducted by other Institutes also.
6.	6.2	Documentation and validation of soil and water conservation ITKs practiced by tribal farmers of various agro climatic regions of India.	P.Sundarambal and Scientists from other Research Centres	Udhagamandalam & other Centres	Not Agreed for separate presentation <ul style="list-style-type: none"> • However, it may be discussed while presenting the progress of ongoing project on the ITK. • Significant achievements in validating the ITK in the ongoing project may be highlighted.
7.	2.1	Effect of bench terraces with different crop sequences on carbon sequestration potential of high altitude arable lands.	V.K. Thilagam S. Manivannan K. Kannan	Udhagamandalam	Not Agreed <ul style="list-style-type: none"> • The project has been discussed last year. • It was suggested to club similar projects as core project with CCPI at participating centre. • May be discussed while presenting the progress of the core project.

DIVISION/CENTRE-WISE NUMBER OF RUNNING PROJECTS**A. S. NO. OF PROJECTS AT DIFFERENT LOCATIONS**

S. No.	DIVISION / CENTRE	S. NO. OF RUNNING PROJECTS	TOTAL
1.	Dehradun		
	➤ Hydrology & Engineering	1, 6*, 7, 8, 9, 15, 47*, 51*, 52, 53, 63, 69	12
	➤ Soil Science & Agronomy	2, 5*, 11, 12, 14, 17, 18, 30, 50	09
	➤ Plant Science	31, 32, 33, 34*, 35*, 36, 37, 54, 64	09
	➤ HRD&SS	19, 20, 21, 55, 70, 71*, 72	07
	➤ PME Cell	68	01
	➤ National Fellow Programme	13*	01
2.	Agra	7, 11, 14, 38, 51*, 56, 65, 68	08
3.	Ballari	7, 11, 14, 22, 39, 40, 51*, 57, 66*, 67, 68	11
4.	Chandigarh	5*, 7, 11, 14, 23, 37, 51*, 68	08
5.	Datia	3, 7, 11, 14, 41, 51*, 68	07
6.	Koraput	4, 7, 11, 14, 24, 25, 42, 48, 49, 51*, 68	11
7.	Kota	7, 11, 14, 26, 27, 43, 44, 51*, 58, 61, 68	11
8.	Udhagamandalam	7, 10*, 11, 14, 28, 29*, 37, 45*, 51*, 68	10
9.	Vasad	7, 14, 16, 37, 46, 59, 60, 62, 68	09
		TOTAL	114

❖ Figures with asterisk (*) sign are running Externally Funded Projects listed in these proceedings.

B. PROGRAMME-WISE NUMBER OF PROJECTS AT DIFFERENT LOCATIONS

S. No.	DIVISION / CENTRE	P-1	P-2	P-3	P-4	P-5	P-6	TOTAL
1.	Dehradun							
	➤ Hydrology & Engineering	6	-	4	-	1	1	12
	➤ Soil Science & Agronomy	5	3	1	-	-	-	09
	➤ Plant Science	-	7	1	-	1	-	09
	➤ HRD&SS	-	3	1	-	-	3	07
	➤ PME Cell	-	-	-	-	1	-	01
	➤ National Fellow Programme	1	-	-	-	-	-	01
2.	Agra	3	1	2	-	2	-	08
3.	Ballari	3	3	2	-	3	-	11
4.	Chandigarh	4	2	1	-	1	-	08
5.	Datia	4	1	1	-	1	-	07
6.	Koraput	4	3	3	-	1	-	11
7.	Kota	3	4	2	1	1	-	11
8.	Udhagamandalam	4	4	1	-	1	-	10
9.	Vasad	3	2	2	1	1	-	09
	TOTAL	40	33	21	02	14	04	114

NUMBER OF PROJECTS WITH INDIVIDUAL SCIENTIST

The number of projects with each individual scientist of the Institute, after the IRC Meeting of 2019 is as follows:

S. No	Name	Designation	Leader	Associate	Total	S. No. of projects to be concluded
Hydrology and Engineering Division						
1.	Dr. P.R. Ojasvi	Head of Division	3(1,47*,51*)	7(5*,7,8,14,53,64,66*)	10	1,51*,66*
2.	Dr. D.R. Sena	Pr. Scientist (Engg.)	1(6*)	7(5*,7,9,12,14,52,68)	8	6*,52
3.	Dr. M. Muruganandam	Pr. Scientist (Fisheries)	1(63)	3(5*,64,71*)	4	63,71*
4.	Er. S.S. Shrimali	Sr. Scientist (Com.App.)	1(69)	7(4,5*,8,47*,51*,66*,71*)	8	51*,66*,69,71*
5.	Er. S. Patra	Scientist (SS) (Engg.)	----- On Foreign Deputation-----			
6.	Er. Uday Mandal	Scientist (Engg.)	2(7,52)	5(5*,6*,9,17,20)	7	6*,52
7.	Er. Deepak Singh	Scientist (Engg.)	----- On Study Leave-----			
8.	Dr. Sadikul Islam	Scientist (Ag. Stat.)	2(8,9)	2(11,37)	4	-
9.	Er. Saswat K. Kar	Scientist (Engg.)	2(15,53)	5(8,34*,47*,63,64)	7	15,34*,63
Soil Science and Agronomy Division						
10.	Dr. N.K. Sharma	Head of Division	2(5*,17)	3(11,18,19)	5	-
11.	Dr. D.V.Singh	Pr. Scientist (Soils)	1(30)	5(21,33,35*,36,37)	6	30,35*
12.	Dr. D. Mandal	ICAR-National Fellow	2(11,13*)	5(7,14,31,35*,68)	7	13*,35*
13.	Dr. U.K. Maurya	Sr. Scientist (Soils)	1(50)	4(5*,19,54,71*)	5	54,71*
14.	Dr. Gopal Kumar	Sr. Scientist (Soils)	1(14)	8(5*,6*,7,9,18,37,55,64)	9	6*
15.	Dr. M. Shankar	Scientist (Soils)	2(2,12)	3(6*,34*,36)	5	6*,34*
16.	Dr. Ramanjeet Singh	Scientist (Agro.)	1(18)	6(5*,6*,14,17,64,68)	7	6*
17.	Dr. Devideen Yadav	Scientist (Agro.)	-	2(20,37)	2	-
Plant Science Division						
18.	Dr. Harsh Mehta	Head of Division & OIC, PME Cell	2(31,32)	4(33,34*,35*,37)	6	32,34*,35*
19.	Dr. Charan Singh	Pr. Scientist (Forestry)	-	2(5*,50)	2	-
20.	Dr. J.M.S. Tomar	Pr. Scientist (Forestry)	1(64)	4(5*,31,35*,37)	5	35*
21.	Dr. A.C. Rathore	Pr. Scientist (Hort.)	2(34*,36)	5(5*,15,30,33,53)	7	15,30,34*
22.	Dr. Rajesh Kaushal	Pr. Scientist (Forestry)	2(35*,37)	7(5*,14,32,55,64,68,69)	9	32,35*,69
23.	Dr. J. Jayaprakash	Sr. Scientist (Forestry)	1(33)	2(30,34*)	3	30,34*
24.	Dr. (Ms.)Vibha Singhal	Sr. Scientist(Agro-For.)	-	2(30,72)	2	30,72
25.	Mr. A.K. Gupta	Scientist (Envt. Sc.)	1(54)	6(5*,17,32,35*,37,63)	7	32,35*,54,63
26.	Mr. D.M. Kadam	Scientist (Hort.)	----- On Study Leave-----			
27.	Dr. Pawan Kumar	Scientist (Plant Breeding)	-	4(31,32,37,64)	4	32
Human Resource Development and Social Science Division						
28.	Dr. Bankey Bihari	Head of Division	1(71*)	3(5*,69,70)	4	69,71*
29.	Dr. Ambrish Kumar	Pr. Scientist (Engg.)	1(55)	4(5*,35*,50,54)	5	35*,54
30.	Dr. Lekh Chand	Sr. Scientist (Agro.)	2(19,21)	3(5*,12,71*)	5	71*
31.	Dr. (Ms.) Indu Rawat	Scientist(Home Management/FRM)	1(72)	1(64)	2	72
32.	Mr. Rajesh Bishnoi	Scientist (Agril. Extn.)	----- On Study Leave-----			
33.	Dr. (Ms.) Trisha Roy	Scientist (Soils)	1(20)	5(5*,14,15,17,71*)	6	15,71*
34.	Dr. Madan Singh	Scientist (Agril. Extn.)	1(70)	4(5*,64,71*,72)	5	71*,72

NUMBER OF PROJECTS WITH INDIVIDUAL SCIENTIST

S. No	Name	Designation	Leader	Associate	Total	S. No. of projects to be concluded
Prioritization, Monitoring and Evaluation Cell						
35.	Dr. Pradeep Dogra	Pr. Scientist (Ag. Eco.)	1(68)	5(5*,6*,11,35*,66*)	6	6*,35*,66*
Research Centre, Agra						
36.	Dr. S.K. Dubey	Head of Centre	1(11)	5(14,38,51*,56,68)	6	51*,56
37.	Dr. A.K. Parandiyal	Pr. Scientist (Forestry)	2(14,38)	2(65,68)	4	65
38.	Dr. K.K. Sharma	Pr. Scientist (Engg.)	2(7,51*)	3(11,56,68)	5	51*,56
39.	Dr. R.K. Dubey	Sr. Scientist (Agro.)	-	3(11,56,68)	3	56
40.	Mr. R.B. Meena	Scientist (Soils)	----- On Study Leave-----			
41.	Dr. D.C. Meena	Scientist (Ag. Eco.)	2(65,68)	2(14,70)	4	65
42.	Dr. (Ms.) Rama Pal	Scientist (Envt. Sc.)	1(56)	1(68)	2	56
Research Centre, Ballari						
43.	Dr. S.L. Patil	Head of Centre	2(22,66*)	5(11,14,51*,57,67)	7	51*,66*
44.	Dr. H. Biswas	Pr. Scientist (Soils)	3(11,14,39)	4(7,22,51*,66*)	7	39,51*,66*
45.	Dr. B.S. Naik	Sr. Scientist (Engg.)	3(7,51*,57)	3(66*,67,68)	6	51*,66*
46.	Mr. M.N. Ramesha	Scientist (Forestry)	-----On Study Leave-----			
47.	Ms. M. Prabhavathi	Scientist (Soils)	-	3(40,66*,68)	3	66*
48.	Mr. Suresh Kumar	Scientist (Ag. Eco.)	-----On Study Leave-----			
49.	Mr. A.S. Morade	Scientist (Hort.)	1(40)	6(14,22,39,66*,67,68)	7	39,66*
50.	Dr. Ravi Dupdal	Scientist (Ag. Eco.)	2(67,68)	2(57,66*)	4	66*
51.	Dr. Ravi K.N.	Scientist (Ag. Extn.)	-	3(22,66*,70)	3	66*
Research Centre, Chandigarh						
52.	Dr. O.P.S. Khola	Head of Centre	1(7)	2(14,37)	3	-
53.	Dr. (Ms.) S.L. Arya	Pr. Scientist (Ag. Eco.)	1(68)	2(5*,23)	3	-
54.	Dr. V.K. Bhatt	Pr. Scientist (Engg.)	1(51*)	7(5*,7,11,14,23,37,68)	8	51*
55.	Dr. Ram Prasad	Pr. Scientist (Hort.)	-	2(5*,23)	2	-
56.	Dr. Pankaj Panwar	Pr. Scientist (Forestry)	2(5*,37)	3(14,51*,68)	5	51*
57.	Dr.(Ms.)Sharmistha Pal	Scientist (SS) (Soils)	2(11,14)	5(5*,37,51*,68,70)	7	51*
58.	Dr. (Ms.) Sathiya K.	Scientist (Agro.)	1(23)	1(68)	2	-
59.	Dr. (Ms.) P.L. Bhutia	Scientist (Agro.)	-	3(14,37,68)	3	-
Research Centre Datia						
60.	Dr. R.S. Yadav	Head of Centre	-	3(3,14,68)	3	3
61.	Dr. Dev Narayan	Pr. Scientist (Agro.)	1(11)	-	1	-
62.	Dr. Rajeev Ranjan	Scientist (Soils)	5(3,7,14,41,51*)	2(2,68)	7	3,51*
63.	Er. (Ms.) M. Pramanik	Scientist (Engg.)	----- On Study Leave-----			
64.	Mr. M.K. Meena	Scientist (Ag. Eco.)	1(68)	1(70)	2	-
65.	Dr. Dinesh Kumar	Scientist (Agro.)	-	3(11,14,41)	3	-

NUMBER OF PROJECTS WITH INDIVIDUAL SCIENTIST

S. No	Name	Designation	Leader	Associate	Total	S. No. of projects to be concluded
Research Centre, Koraput						
66.	Dr. M. Madhu	Head of Centre	2(42,68)	1(11)	3	-
67.	Dr. D.C. Sahoo	Pr. Scientist (Engg.)	2(24,51*)	3(9,42,49)	5	51*
68.	Dr. P. Jakhar	Sr. Scientist (Agro.)	1(49)	5(14,24,25,51*,68)	6	25,51*
69.	Dr. P.P. Adhikary	Scientist (Soils)	2(11,14)	7(2,7,24,42,48,49,68)	9	-
70.	Dr. (Ms.) Ch. J. Dash	Scientist (Engg.)	3(4,7,48)	2(25,51*)	5	25,51*
71.	Dr. Karma Beer	Scientist (Hort.)	1(25)	5(14,24,42,49,70)	6	25
Research Centre, Kota						
72.	Dr. R.K. Singh	Head of Centre	1(11)	4(14,51*,58,68)	5	51*,58
73.	Dr. Ashok Kumar	Pr. Scientist (Ag.Eco.)	1(68)	4(26,27,44,61)	5	-
74.	Dr. Shakir Ali	Pr. Scientist (Engg.)	1(7)	8(9,14,26,27,44,47*,58,61)	9	58
75.	Dr. A.K. Singh	Pr. Scientist (Engg.)	-	3(14,43,68)	3	-
76.	Dr. B.L. Mina	Pr. Scientist (Soils)	1(61)	3(11,26,27)	4	-
77.	Dr. H.R. Meena	Sr. Scientist (Hort.)	1(44)	4(14,43,58,61)	5	58
78.	Dr. G.L. Meena	Scientist (Soils)	3(14,51*,58)	3(7,44,68)	6	51*,58
79.	Dr. Kuldeep Kumar	Scientist (Agro.)	1(26)	5(11,27,44,68,70)	6	-
80.	Dr. (Ms.) S. Kala	Scientist (Forestry)	1(43)	2(61,68)	3	-
81.	Dr. (Ms.) I. Rashmi	Scientist (Soils)	1(27)	2(43,44)	3	-
82.	Ms. Anita Kumawat	Scientist (Agro.)	-	2(14,26)	2	-
Research Centre, Udhagamandalam						
83.	Dr. K. Kannan	Head of Centre	3(11,28,45*)	4(10*,14,29*,37)	7	28
84.	Dr. S. Manivannan	Pr. Scientist (Engg.)	3(7,51*,68)	2(14,37)	5	51*
85.	Dr. (Ms) P.Sundarambal	Pr. Scientist (Ag. Extn.)	-	2(45*,68)	2	-
86.	Dr. K. Rajan	Pr. Scientist (Soils)	1(29*)	2(10*,45*)	3	-
87.	Dr. P. Raja	Pr. Scientist (Soils)	1(10*)	4(11,28,29*,45*)	5	28
88.	Dr. Hombe Gowda	Sr. Scientist (Forestry)	1(37)	3(10*,14,68)	4	-
89.	Er. (Ms) V. Selvi	Scientist (SS) (Engg.)	-	1(11)	1	-
90.	Dr. (Ms) V.K. Thilagam	Scientist (Soils)	1(14)	6(2,7,28,51*,68,70)	7	28,51*
Research Centre, Vasad						
91.	Dr. P.R. Bhatnagar	Head of Centre	1(59)	3(37,46,68)	4	59
92.	Dr. V.C. Pande	Pr. Scientist (Ag.Eco.)	1(68)	5(5*,37,59,60,62)	6	59,60
93.	Dr. D. Dinesh	Scientist (Soils)	2(14,16)	7(2,7,37,46,59,62,70)	9	59
94.	Dr. V. Kakade	Scientist (Hort.)	2(46,62)	5(14,16,37,59,68)	7	59
95.	Dr. Gaurav Singh	Scientist (Engg.)	2(7,60)	4(14,16,62,68)	6	60
96.	Dr. Dinesh Jinger	Scientist (Agro.)	1(37)	3(14,62,68)	4	-

❖ Figures in parenthesis are serial numbers of running projects listed in these proceedings.

❖ Figures with asterisk (*) sign are Externally Funded Projects listed in these proceedings.

LIST OF PARTICIPANTS

S.No.	Name	Designation	Participation in IRC as
1.	Dr. P.R. Ojasvi	Acting Director	Chairman
HEADQUARTERS, DEHRADUN			
2.	Dr. N.K. Sharma	Head (SS&A Division)	Member & PI: P-2.1
3.	Dr. Harsh Mehta	OIC (PME Cell) & Head (Plant Science Division)	Member Secretary, IRC & PI: P-2.2
4.	Dr. Bankey Bihari	Head (HRD&SS Division)	Member & PI: P-6
5.	Dr. Charan Singh	Principal Scientist (Forestry)	
6.	Dr. Pradeep Dogra	Principal Scientist (Ag. Eco.)	PI: P-5
7.	Dr. Ambrish Kumar	Principal Scientist (Engg.)	PI: P-4
8.	Dr. D.R. Sena	Principal Scientist (Engg.)	PI: P-3
9.	Dr. D.V. Singh	Principal Scientist (Soils)	
10.	Dr. J.M.S. Tomar	Principal Scientist (Forestry)	
11.	Dr. D. Mandal	ICAR-National Fellow	
12.	Dr. A.C. Rathore	Principal Scientist (Hort.)	
13.	Dr. Rajesh Kaushal	Principal Scientist (Forestry)	
14.	Dr. M. Muruganandam	Principal Scientist (Fisheries)	
15.	Er. S.S. Shrimali	Senior Scientist (CAA)	
16.	Dr. U.K. Maurya	Senior Scientist (Soils)	
17.	Dr. (Ms.) Vibha Singhal	Senior Scientist (Agro Forestry)	
18.	Dr. Lekh Chand	Senior Scientist (Agro.)	
19.	Dr. Gopal Kumar	Senior Scientist (Soils)	Member Secretary, RAC
20.	Dr. J. Jayaprakash	Senior Scientist (Forestry)	
21.	Dr. M. Sankar	Scientist (Soils)	
22.	Dr. Ramanjeet Singh	Scientist (Agro.)	
23.	Er. Uday Mandal	Scientist (Engg.)	
24.	Dr. (Ms.) Indu Rawat	Scientist (Home Management)	
25.	Dr. (Ms.) Trisha Roy	Scientist (Soils)	
26.	Mr. A.K. Gupta	Scientist (Envt. Science)	
27.	Dr. Sadikul Islam	Scientist (Ag. Stat.)	
28.	Dr. (Ms.) Sangeeta N. Sharma	Chief Technical Officer	Rapporteur
29.	Mr. S.K. Sinha	Asstt. Chief Technical Officer	Rapporteur
RESEARCH CENTRE, AGRA			
30.	Dr. S.K. Dubey	Head of the Centre	Member
31.	Dr. A.K. Parandiyal	Principal Scientist (Forestry)	
32.	Dr. D.C. Meena	Scientist (Ag. Eco.)	
33.	Dr. (Ms.) Rama Pal	Scientist (Envt. Science)	
RESEARCH CENTRE, BALLARI			
34.	Dr. S.L. Patil	Head of the Centre	Member
35.	Dr. B.S. Naik	Senior Scientist (Engg.)	
36.	Mr. A.S. Morade	Scientist (Hort.)	
37.	Dr. Ravi Dupdal	Scientist (Ag. Eco.)	
38.	Mr. Ravi K.N.	Scientist (Ag. Extn.)	

S.No.	Name	Designation	Participation in IRC as
RESEARCH CENTRE, CHANDIGARH			
39.	Dr. O.P.S. Khola	Head of the Centre	Member
40.	Dr. (Ms.) Swarn Lata Arya	Principal Scientist (Ag. Eco.)	
41.	Dr. V.K. Bhatt	Principal Scientist (Engg.)	
42.	Dr. Ram Prasad	Principal Scientist (Hort.)	
43.	Dr. Pankaj Panwar	Principal Scientist (Forestry)	
44.	Dr. (Ms.) Sharmistha Pal	Scientist (Soils)	
45.	Dr. (Ms.) P.L. Bhutia	Scientist (Agroforestry)	
RESEARCH CENTRE, DATIA			
46.	Dr. R.S. Yadav	Head of the Centre	Member
47.	Dr. Dev Narayan	Principal Scientist (Agro.)	
48.	Dr. Rajeev Ranjan	Scientist (Soils)	
49.	Dr. Dinesh kumar	Scientist (Agro.)	
RESEARCH CENTRE, KORAPUT			
50.	Dr. M. Madhu	Head of the Centre	Member
51.	Dr. D.C. Sahoo	Principal Scientist (Engg.)	
52.	Dr. P. Jakhar	Senior Scientist (Agro.)	
53.	Dr. (Ms.) Ch. J. Dash	Scientist (Engg.)	
54.	Dr. Karma Beer	Scientist (Hort.)	
RESEARCH CENTRE, KOTA			
55.	Dr. R.K. Singh	Head of the Centre	Member
56.	Dr. Ashok Kumar	Principal Scientist (Ag. Econ.)	
57.	Dr. Shakir Ali	Principal Scientist (Engg.)	
58.	Dr. B.L. Mina	Principal Scientist (Soils)	
59.	Dr. H.R. Meena	Senior Scientist (Hort.)	
60.	Dr. G.L. Meena	Scientist (Soils)	
61.	Dr. Kuldeep Kumar	Scientist (Agronomy)	
62.	Dr. (Ms.) I. Rashmi	Scientist (Soils)	
RESEARCH CENTRE, UDHAGAMANDALAM			
63.	Dr. K. Kannan	Head of the Centre	Member
64.	Dr. S. Manivannan	Principal Scientist (Engg.)	
65.	Dr. P. Sundarambal	Principal Scientist (Ag. Extn.)	
66.	Dr. K. Rajan	Principal Scientist (Soils)	
67.	Dr. P. Raja	Principal Scientist (Soils)	
68.	Dr.(Ms.) V.K. Thilagam	Scientist (Soils)	
RESEARCH CENTRE, VASAD			
69.	Dr. P.R. Bhatnagar	Head of the Centre	Member
70.	Dr. V.C. Pande	Principal Scientist (Ag. Eco.)	
71.	Dr. V. Kakade	Scientist (Hort.)	
72.	Dr. Gaurav Singh	Scientist (Engg.)	
73.	Dr. Dinesh Jinger	Scientist (Agro.)	