PREAMBLE BY THE CHAIRMAN

Dr. P.K. Mishra, Director, ICAR-IISWC and Chairman of Institute Research Committee (IRC) welcomed the Heads of Divisions, Heads of Research Centres and Scientists to the IRC Meeting of 2017. He welcomed the august gathering of scientists and laid emphasis on the emerging issues as per the directions of Hon'ble Director General, ICAR and Financial Advisor, ICAR during their visits to the Institute. Highlighting the importance of IRC meeting, he expressed that the interaction with the farmers is essential for fulfilling the expectations of the nation (from all of us) through participatory problem solving. Clarity about role of each scientist for justifying the huge amount of public money being spent by the Institute and for maintaining the quality work of the Institute is highly needed. He welcomed the new scientists joining the Institute and advised them to concentrate on innovative research programmes.

At the outset, the Chairman presented the progress and achievements of the Institute during the XII Five Year Plan. He told the scientists that the achievements of XII plan should be a guide for the next three years. He emphasized upon to work hard with new ideas and technologies to fulfill the National Programme on "Doubling the Farmers Income". He informed about the Sun Set Date (December, 2018) fixed by the government and all projects to be concluded in 2018-19 must be completed by December, 2018. The projects cannot be extended every time and the objectives framed for the projects must be fully achieved and properly reported. Natural resources need to be protected on which the system can be built. We should start writing Policy Paper at Headquarters and all Research Centres which should be simple and understandable to the policy formulators.

He apprised the House to develop the culture for maintaining expenditure on each project by the leader of project for initiating the culture of Project Based Budgeting. Annual expenditure of a particular project should essentially be submitted with the RPPs as per the format provided to all scientists in the IRC Meeting, 2017 as we are answerable for each rupee spent by the government.

He also emphasized to increase the revenue of the Institute by organizing more training courses as 30% of the expenditure has to be generated by all autonomous organizations like ICAR. We may also increase the course fee of the trainees coming to the Institute for four months regular courses. We can also fix the charges for other services like the visits of museum, farm etc. by the private parties and others.

Concluding his address, the Chairman expressed his happiness on the good work that the Institute is doing. He appreciated the scientists of the Institute for receiving Awards and for good number of publications in the reputed Journals during the year 2016-17. He hoped that the discussion on various aspects of research during the IRC-2017 will be productive with concrete suggestions for better project delivery and increasing Institute's visibility at the highest level. He urged all to contribute heartily in the deliberations for achieving the set objectives.

AGENDA & PROGRAMME OF IRC MEETING, 2017

DATE (Day)	TIME	AGENDA & PROGRAMME
01.05.2017 (Monday)	2:30 pm	Welcome and opening remarks of the Chairman
	3:00 pm	Recommendations of **RAC-2017** & Status of new proposals agreed - Member Secretary, RAC
	3:15 pm	**Action Taken Report** on the actions assigned in the IRC Meeting, 2016 - Member Secretary, IRC
	4:00 pm	**Tea Break**
	4:15 pm	Presentation & Discussion on **"Proper filling & Maintaining RPP I, II, III and IV of Research Projects"** - Mr. S.K. Sinha, ACTO (PME Cell) & Member Secretary, Evaluation Committee of RPPs.
	4:30 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. 43 (Evaluation of hydrological) (P-3) : Dr. J.M.S. Tomar - Sl.No. 60 (Field evaluation of trenches) (P-4) : Dr. P.R. Bhatnagar - Sl.No. 62 (Multiple criteria decision) (P-5) : Dr. Pradeep Dogra - Sl.No. 72 (Assessing farmers knowledge) (P-6) : Dr. Bankey Bihari
02.05.2017 (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. 6 (P-1) - Dr. N.K. Sharma - Sl. No. 7 (P-1) - Dr. D. R. Sena - Sl. No. 11 (P-1) - Dr. D. Mandal - Sl. No. 47 (P-3) - Dr. P.R. Ojasvi
	11:15 am	**Tea Break**
	11:30 am	Presentation of **Externally funded projects** by the **Project Leaders** - Sl. No. 48 (P-3) - Dr. Ambrish Kumar - Sl. No. 54 (P-3) - Dr. P.R. Bhatnagar - Sl. No. 56 (P-3) - Dr. P.R. Bhatnagar - Sl. No. 59 (P-4) - Dr. R.K. Singh
	1:00 pm	**Lunch Break**
	2:00 pm	Presentation of **Externally funded projects** by the **Project Leaders** - Sl. No. 65 (P-5) - Dr. A. Raizada - Sl. No. 67 (P-5) - Dr. V.C. Pande - Sl. No. 69 (P-6) - Mr. Rajesh Bishnoi - Sl. No. 71 (P-6) - Dr. Ramanjeet Singh
	3:30 pm	**Tea Break**
	3:45 pm	Presentation of **Externally funded projects** by the **Project Leaders** - Establishment of model nursery------mango. - Dr. A.C. Rathore - Upscaling------bamboo species in Uttarakhand. - Dr. Rajesh Kaushal - Promotion and expansion-------Dehradun district. - Dr. J.M.S. Tomar - Farmer participatory ----------Himalayas. - Dr. Bankey Bihari

	5:00 pm	Presentation of **Projects due for completion (to be concluded)** in 2016-17 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. 4 (P-1) - Dr. Ch. J.P. Dash - Sl.No. 5 (P-1) - Dr. G.L. Meena - Sl.No. 16 (P-2.1) - Dr. Sharmistha Pal - Sl.No. 17 (P-2.1) - Dr. Pawan Sharma - Sl.No. 23 (P-2.1) - Er. Gaurav Singh - Sl.No. 27 (P-2.2) - Dr. J.M.S. Tomar
03.05.2017 (Wednesday)	10:00 am	Presentation of **Projects due for completion (to be concluded)** in 2016-17 by the **Project Leaders** - Sl.No. 28 (P-2.2) - Dr. J.M.S. Tomar - Sl.No. 30 (P-2.2) - Dr. Rajesh Kaushal - Sl.No. 35 (P-2.2) - Dr. Pankaj Panwar - Sl.No. 50 (P-3) - Dr. K.K. Sharma - Sl.No. 52 (P-3) - Mr. Suresh Kumar
	11:30 am	**Tea Break**
	11:45 am	Presentation of projects **approved in IRC Meeting, 2016** by the **concerned Heads** 10 minutes will be given to each project (05 minutes for presentation and 05 minutes for discussion and comments) - Sl.No. 24 (P-2.2) - Head, SS&A Division - Sl.No. 25 (P-2.2) & 73(P-6) - I/c Head, Plant Science Division - Sl.No. 74 (P-2.2) - I/c Head, HRD&SS Division - Sl.No. 64 (P-5) - Head, Research Centre, Agra - Sl.No. 15 (P-2.1) - Head, Research Centre, Bellary - Sl.No. 13 (P-1) - Head, Research Centre, Koraput - Sl.No. 21 (P-2.1) & 39 (P-2.2) - Head, Research Centre, Kota - Sl.No. 41 (P-2.2) - Head, Research Centre, Vasad
	1:30 pm	**Lunch Break**
	2:30 pm	Presentation & Discussion on the compilation of **Intangible Benefits of NRM interventions in different projects in different climatic regions and network project formulation** - Dr. B.L. Dhyani, Sr. Scientist (Agril. Economics)
	2:45 pm	Presentation of **Observational Trials listed on page no. 37 of IRC proceedings 2016** 20 minutes will be given to each project (15 minutes for presentation and 05 minutes for discussion and comments) - Sl.No. 1(Development-------regions of India) - Dr. N.K. Sharma - Sl.No. 2 (Determining----------profitability) - Dr. Lekh Chand - Sl.No. 3 (Evaluation----------systems) - Dr. Ramanjeet Singh - Sl.No. 4 (Improving---------- bio-fertilizers) - Dr. A.K. Parandiyal
	4:00 pm	**Tea Break**
	4:15 pm	Presentation of **Observational Trials listed on page no. 37 of IRC proceedings 2016** (15 minutes for presentation and 05 minutes for discussion and comments) - Sl.No. 5(Investigation--------Yamuna ravine) - Dr. K.K. Sharma - Sl.No. 6 (Evaluation----------Yamuna ravine) - Dr. R.K. Dubey - Sl.No. 7 (Evaluation----------of Karnataka) - Er. B.S. Naik - Sl.No. 8 (Regulated---------- vertisols) - Mr. A.S. Morade

	5:30 pm	Presentation of **New Project Proposals agreed by RAC 2017** by the **Project Leaders** 30 minutes will be given to each project (20 minutes for presentation and 10 minutes for discussion and comments) - Sl.No.1 (Evaluation -------sloppy lands) - Dr. Ramanjeet Singh - Sl.No.2 (An evaluation ---------in India) - Dr. M. Sankar - Sl.No.3 (Soil erosion----------materials) - Dr. Lekh Chand
04.05.2017 (Thursday)	10:00 am	Presentation of **New Project Proposals agreed by RAC-2017** - Sl.No.4 (Utilization--------management) - Dr. Trisha Roy - Sl.No.5 (Assessment ------- --safeguard) - Dr. Indu Rawat - Sl.No.6 (Quantitative ----------District) - Er. Uday Mandal
	11:30 am	**Tea Break**
	11:45 am	Presentation of **New Project Proposals agreed by RAC-2017** - Sl.No.7 (Employing----------hill region) - Er. Deepak Singh - Sl.No.8 (An assessment--------security) - Mr. D.M. Kadam - Sl.No.9 (Evaluation ---------- ravines) - Dr. R.K. Dubey
	1:15 pm	**Lunch Break**
	2:15 pm	Presentation of **New Project Proposals agreed by RAC-2017** - Sl.No.10 (Performance--------vertisols) - Mr. A.S. Morade - Sl.No.11 (Slope----------geo-textiles) - Er. B.S. Naik - Sl.No.12 (Efficient----------system) - Dr. Sathiya K. - Sl.No.13 (Study of----------Project) - Dr. M. Madhu
	4:15 pm	**Tea Break**
	4:30 pm	Presentation of **New Project Proposals agreed by RAC-2017** - Sl.No.14 (Development --------Odisha) - Dr. Ch. J.P. Dash - Sl.No.15 (Optimizing----------farming) - Dr. P. Jakhar - Sl.No.16 (Multi-scale------- ---of India) - Dr. P.P. Adhikary - Sl.No.17 (Maximization--------region) - Dr. Karm Beer
05.05.2017 (Friday)	10.:00 am	Presentation of **New Project Proposals agreed by RAC-2017** - Sl.No.18 (Effect --------western ghats) - Dr. K. Rajan - Sl.No.19 (Evaluation-----applications) - Dr. S. Manivannan - Sl.No.20 (Evaluation------- rain water) - Dr. P. Raja
	11:30 am	**Tea Break**
	11:45 am	Presentation of **New Project Proposals agreed by RAC-2017** - Sl.No.21 (Land use ----------tropics) - Dr. D. Dinesh - Sl.No.22 (Survey on----------scenario) - Dr. Raj Kumar - Sl.No.23 (Field evaluation------Vasad) - Er. Gaurav Singh
	1:15 pm	**Lunch Break**
	2:15 pm	Presentation of **Ongoing (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. 1 (P-1) - Dr. N.M. Alam - Sl.No. 2 (P-1) - Dr. P.R. Ojasvi
		- Sl.No. 3 (P-1) - Dr. Rajeev Ranjan - Sl.No. 8 (P-1) - Er. Uday Mandal - Sl.No. 10 (P-1) - Dr. M. Sankar - Sl.No. 12 (P-1) - Dr. P.R. Ojasvi
	3:45 pm	**Tea Break**
	4:00 pm	Presentation of **Ongoing (to be continued) projects** by the **Project Leaders** - Sl.No. 14 (P-2.1) - Dr. H. Biswas - Sl.No. 18 (P-2.1) - Dr. Dev Narayan - Sl.No. 19 (P-2.1) - Dr. D.C. Sahoo

		- Sl.No. 20 (P-2.1) - Dr. Kuldeep Kumar - Sl.No. 22 (P-2.1) - Dr. K. Kannan - Sl.No. 26 (P-2.2) - Dr. Harsh Mehta - Sl.No. 29 (P-2.2) - Dr. Rajesh Kaushal - Sl.No. 31 (P-2.2) - Dr. Harsh Mehta - Sl.No. 32 (P-2.2) - Dr. J. Jayaprakash - Sl.No. 33 (P-2.2) - Dr. A. Raizada - Sl.No. 34 (P-2.2) - Dr. Ram Prasad - Sl.No. 36 (P-2.2) - Er. Monalisha Pramanik
06.05.2017 (Saturday)	10:00 am	Presentation of **Ongoing (to be continued) projects** by the **Project Leaders** - Sl.No. 37 (P-2.2) - Dr. Rajeev Ranjan - Sl.No. 38 (P-2.2) - Dr. M. Madhu - Sl.No. 40 (P-2.2) - Dr. R. Ragupathy - Sl.No. 42 (P-3) - Dr. J. Jayaprakash - Sl.No. 44 (P-3) - Dr. Ch. J.P. Dash - Sl.No. 45 (P-3) - Dr. V.K. Thilagam
	11:30 am	**Tea Break**
	11:45 am	Presentation of **Ongoing (to be continued) projects** by the **Project Leaders** - Sl.No. 46 (P-3) - Dr. U.K. Maurya - Sl.No. 49 (P-3) - Mr. A.K. Gupta - Sl.No. 51 (P-3) - Dr. Rama Pal - Sl.No. 53 (P-3) - Dr. G.L. Meena - Sl.No. 55 (P-3) - Dr. P.R. Bhatnagar - Sl.No. 57 (P-4) - Er. S.S. Shrimali - Sl.No. 58 (P-4) - Dr. B.L. Mina
	1:30 pm	**Lunch Break**
	2:30 pm	Presentation of **Ongoing (to be continued) projects** by the **Project Leaders** - Sl.No. 61 (P-4) - Dr. Raj Kumar - Sl.No. 63 (P-5) - Ms. Chayna Jana - Sl.No. 66 (P-5) - Mr. M.K. Meena - Sl.No. 68 (P-6) - Ms. Chayna Jana - Sl.No. 70 (P-6) - Dr. D.V. Singh - Sl.No. 75 (P-6) - Dr. P. Sundarambal
	4:00 pm	**Tea Break**
	4:15 pm	Presentation & Discussion on **TSP running at Divisions & Centres** - Dr. Charan Singh, Principal Scientist & Co-ordinator of TSP
	4:45 pm	Presentation & Discussion on **ToT at Headquarters & Centres** - Dr. Bankey Bihari, I/c Head, HRD & SS Division
	5:15 pm	Presentation & Discussion on **Training, Capacity Building, Mera Gaon Mera Gaurav & Swachchhta Abhiyan at Headquarters & Centres** - Dr. Bankey Bihari, I/c Head, HRD & SS Division
	5:45 pm	Presentation of the status of **Hydrological Instruments at the Headquarters and Research Centres** - Dr. P.R. Ojasvi, Head, H&E Division
	6:00 pm	Presentation of **Performance Indicator** of Research Centres & Divisions - Mr. Suresh Kumar, Scientist (Ag. Econ.), Research Centre, Bellary
	6:15 pm	Presentation on **Foreign Visits** by the following scientists: - Dr. S. Manivannan, Pr. Scientist (Engg.) - Dr. M. Sankar, Scientist (Soils) - Dr. Ramanjeet Singh, Scientist (Agronomy)

	6.30 pm	**Any other presentation with the permission of Chairman**
	7.00 pm	**Plenary Session, Concluding Remarks and Recommendations** **- Chairman, IRC**
	7:15 pm	**Vote of Thanks** **- Member Secretary, IRC**

(Note: Sl.No. of the projects is as per IRC meeting proceedings, 2016)

IMPORTANT GUIDELINES FOR PRESENTATION:

1. Projects concluded in the proceeding year (say 2016-17) 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. Introduction, justification, review should not be presented. Precise write-up and recommendations (half page, one para) emerging out of the projects concluded in 2016-17 should be presented in last slide by the project leader and the hard copy should be submitted to PME Cell.
2. While presenting the progress of a project, the number of slides be restricted to **10 only** including figures / photographs covering title, leader and associates, objectives, achievements, project expenditure (direct & indirect in one slide) during the year.
3. Ongoing projects should focus on activities planned, target fixed vis-à-vis achievements made during the year alongwith deviation from normal / past trend, if any, with drivers of the deviations.
4. New project proposals must be based on extensive review, patent search, technical rigour, availability of resources and project limit prescribed by the ICAR / IRC of 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.
5. Any change in leader or associates be presented before the House in a slide form at the end of the presentation of project for approval of the House.
6. In case the project require extension, the same may be presented to the House with proper justification in slide form for approval.
7. **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 so that one of the Theme Leaders may attend the same. In the IRC of the Research Centre/ Division, 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. Due to paucity of time, the scientist if **not able to present his presentation within stipulated time will not be given extra time.**
8. Programme Leader (s) will work as moderator(s) during presentation, discussion and preparing comments on the project, which is mandatory for each and every project on behalf of IRC. The mandatory comments for a project must be finalized with active participation and comments of concerned Head of Division (as per Project Leader's field/specialization), Programme Leader, and OIC (PME Cell) which will be approved by the Competent Authority during the IRC.

RECOMMENDATIONS OF RAC-2017

1. The Institute should compile long term research information of all the Divisions and Research Centres separately for directing the future research.
   (Action: All the Heads of the Divisions/ Research Centres to provide the information to OIC (PME) for further compilation)

2. Long term experimentation on Conservation Agriculture and Organic Farming with instrumentation for resource loss estimation may be set up at Headquarters and Research Centres considering the potential of promoting Conservation Agriculture in the respective regions.
   (Action: Dr. N.K. Sharma, Head, SS&A Division and Heads of participating Research Centres)

3. Resource Conservation Technologies of the Institute may be transferred / evaluated in a holistic way to develop climate smart agriculture models for different agro-ecological regions in cluster of villages.
   (Action: All the Heads of the Divisions/ Research Centres and provide the information to Dr. Bankey Bihari, I/c Head (HRD&SS) for further compilation).

4. Intensity – Duration – Frequency (IDF) curve may be developed based on the updated time scale daily recording rainfall data available from IMD for designing hydraulic structures in different climatic regions of the country.
   (Action: Dr. N.M. Alam)

5. The Institute may revisit the estimation of potential soil erosion status with higher resolution new data sets of USLE parameters and its projection in climate change scenario.
   (Action: Er. Uday Mandal)

ACTION TAKEN ON "SALIENT RECOMMENDATIONS OF IRC MEETING – 2016"

S.No.	Action Assigned	Action Taken Report
1.	Action is again assigned by the IRC-2016 to Dr. P.R. Ojasvi, Head, H&E Division to explore the possibilities with assigned printers for printing the bulletin on runoff and erosion prediction models at the earliest otherwise, it will be printed by the Institute. **(Action: Dr. P.R. Ojasvi)**	Bulletin is not yet printed. However, printing process is in progress. It is again assigned by the IRC – 2017 to Dr. P.R. Ojasvi to complete the assignment by Dec., 2017 positively.
2.	Due to non-completion of action assigned to Dr. Gopal Kumar, the action is again assigned by the IRC-2016 that a bulletin / brochure may be published on the concluded project entitled "Design and development of site specific artificial groundwater recharge filters" by Dr. B.K. Rao, Sr. Scientist (Engg.), Dr. D.R. Sena, Pr. Scientist (Engg.) and Head of Vasad Centre with the help of Dr. Gopal Kumar, Ex-Scientist (Soils), Research Centre, Vasad by Sept. 30, 2016 positively. **(Action: Dr. B.K. Rao, Dr. D.R. Sena and Head of Vasad Centre)**	The draft copy of Bulletin entitled "Mapping Ravines of Gujarat" and draft brochure entitled "Recharge filter for direct dugwell recharge" have been prepared and submitted by Dr. Gopal Kumar, Ex- Scientist (Soils) in April, 2017.
3.	Action is again assigned by the IRC-2016 that the field level sediment sampler may be tested with tipping bucket during monsoon season by Er. S. Patra, Scientist (Engg.) and Dr. D.R. Sena, Pr. Scientist (Engg.) for bringing it to the full functionality before Sept. 30, 2016 positively. **(Action: Er. S. Patra and Dr. D.R. Sena)**	The instrument has been successfully installed in the field with the help of Er. Deepak Singh and Er. S. Patra. The testing comparison is to be done during this monsoon season.
4.	The components of DSS software may be developed progressively for the end users and presented in the next IRC meeting by Dr. P.R. Ojasvi, Head, H&E Division. **(Action: Dr. P.R. Ojasvi)**	The assignment has been presented in the IRC meeting by Dr. P.R. Ojasvi. Dr. Ojasvi should make it operational for use by stakeholders.
5.	A bulletin / brochure may be published on the results obtained from concluded projects entitled "Productivity enhancement in fruit and flower based two tier horticulture systems through integrated nutrient management and mulching" and "Enhancement of guava productivity through canopy management and mulching in rainfed bouldery riverbed lands" by Dr. A.C. Rathore, Sr. Scientist (Hort.) by September 30, 2016. **(Action: Dr. A.C. Rathore)**	The preparation of bulletin/ brochure on both the concluded projects are under process. Action is again assigned to publish the bulletin / brochure by August, 2017 positively.
6.	A technical bulletin may be published on the results obtained from the project entitled "Peach based agri-horticulture land use system for degraded Shiwaliks" by Dr. Ram Prasad, Pr. Scientist (Hort.) by Sept. 30, 2016. **(Action: Dr. Ram Prasad)**	The preparation of technical bulletin is under process and to be finalised by August, 2017.
7.	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 Sept. 30, 2016. The technology may be transferred to farmer's fields under ToT programme. Economics may be worked out by Mr. Suresh Kumar, Scientist (Ag. Eco.), Research Centre, Bellary. **(Action: Dr. S. Manivannan and Mr. Suresh Kumar)**	Due to economic analysis completed in February, 2017, the preparation of technical bulletin is under process after including economical component. The technology was transferred to one farmer's field under ToT in 2016-17. The bulletin will be finalized by Sept., 2017.

8.	A policy paper may be brought out from the concluded project entitled "Prototype field study on application of potentially important Jute geo-textiles for hill slope stabilization" for Nilgiris area alongwith economic returns by Dr. S. Manivannan, Pr. Scientist (Engg.). Results should be transferred under TSP & ToT programmes. A new project may be formulated with blended geo-textiles in collaboration with NIRJAFT. **(Action: Dr. S. Manivannan)**	The preparation of policy paper is under process and again assigned by the IRC-2017 to Dr. S. Manivannan to complete the assignment by **August, 2017**. A new project in collaboration with NIRJAFT has been formulated and presented in the IRC meeting.
9.	A policy paper on "Present status of shifting cultivation in Odisha and to suggest action plan" may be prepared by Dr. M. Madhu, Head, Research Centre, Koraput by July 31, 2016. **(Action: Dr. M. Madhu)**	The revised policy paper has been submitted in **April, 2017** by Dr. M. Madhu which is under review at the Headquarters.
10.	A policy paper may be prepared from the concluded project entitled "Developing SALT (Sloping Agricultural Land Technology) for resource conservation and economic up-liftment in Shiwaliks" linking with PMKSY by Dr. Pankaj Panwar, Pr. Scientist (Forestry). Probability analysis of getting water may be worked out. Besides, small skill development manual for pond related to Soil & Water Conservation may be prepared. RPP IV may also be submitted. **(Action: Dr. Pankaj Panwar)**	Policy paper published. Probability analysis of getting water in pond completed. Small skill development manual has been prepared. RPP IV of the project has been submitted.
11.	Preparation of Ravine Atlas of Chambal, Mahi and Yamuna ravines has to be initiated and to be reported thereafter in the next IRC meeting by Dr. R.K. Singh, Head, Research Centre, Kota. **(Action: Dr. R.K. Singh)**	Delineation work completed. Field data to be obtained from Vasad Centre.
12.	"Mera Gaon Mera Gaurav" and "Clean India Movement" are to be done very seriously under both TSP and ToT programmes of the Institute which should be co-ordinated by the Nodal Officers Dr. Charan Singh, Pr. Scientist (Forestry) and Dr. Bankey Bihari, Pr. Scientist (Ag.Extn.), respectively identified for these programmes. **(Action: Dr. Charan Singh, Dr. Bankey Bihari and all Scientists/Heads of Research Centres / Divisions)**	Several "Mera Gaon Mera Gaurav" and "Clean India Movement" programmes have been organized by the Headquarters and all Research Centres under TSP and ToT programmes of the Institute.
13.	Document of 60 years research in Soil and Water Conservation may be published by the Head, Research Centres, Agra, Bellary, Kota, Udhgamandalam & H&E and HRD&SS Divisions on or before Oct., 2016. Similar document for 25 years may be published by the Head, Research Centre, Datia by October, 2016. **(Action: Head, Research Centres, Agra, Bellary, Datia, Kota, Udhagamandalam and Head of H&E & HRD&SS Divisions)**	Preparation of the documents of 60 years research in soil and water conservation of Research Centres, Agra, Bellary, Kota, Udhagamandalam and H&E and HRD&SS Divisions and 25 years research document of Research Centre, Datia are under process. It is again assigned by the IRC-2017.
14.	Gauging devices / Silt Monitoring Stations (SMS) should be maintained as working condition at Headquarters / Research Centres by the scientists of Engineering discipline. Before start of *Kharif season*, the condition of SMS should be updated by the engineering scientists associated with the projects alongwith leader of project and details should be sent to the Head, H&E Division by June 30, 2016 positively. **(Action: All Scientists and Head, H&E Division)**	Gauging devices/ SMS are being maintained at all Research Centres and Headquarters.

15.	An Observational Trial on geo-jute textiles may be carried out in collaboration with NIRJAFT by Headquarter and all Research Centres. **(Action: All Heads of Research Centres / Divisions)**	The Observational Trial on geo-jute textiles in collaboration with NIRJAFT is yet to be initiated at Research Centres/ Divisions. However, a new project in collaboration with NIRJAFT has already been formulated.
16.	Digitization of data of research farm regarding spatial and temporal attributes may be done every year at the Headquarters and all Research Centres and submitted. **(Action: OIC (Research Farm) of Headquarters and all Research Centres)**	Digitization of data of research farm at the Headquarters and Research Centres is under process. It is again assigned by the IRC-2017 to complete the assignment.
17.	Crop calendar on soil and water conservation may be developed by all Research Centres and Division of H&E, HRD&SS and Plant Science by June 30, 2016. **(Action: All Heads of Research Centres and Heads of H&E, HRD&SS and Plant Science Division)**	Crop calendars have been developed/ printed by all the Heads of Research Centres and Divisions.
18.	Progress of running projects listed in IRC proceedings in different Research Programmes may be evaluated at the Headquarters and all Research Centres after visiting by seven theme / programme leaders identified for six research programmes running at the Institute and report may be submitted to the Director. Visit and evaluation of TSP works at different Research Centres may also be done by Dr. Charan Singh, Pr. Scientist and Co-ordinator of TSP and reported to the Director. **(Action: Seven Programme Leaders and Dr. Charan Singh)**	On-site evaluation of running projects of Plant Science Division, Soil Science & Agronomy Division and Research Centre, Chandigarh have been completed by the PME Cell of Headquarters visiting on-site with the concerned Theme/ Programme Leaders, Head of Divisions, Head of Research Centres and Scientists during the year 2016-17. Evaluation of remaining Divisions and Research Centres is to be completed during the current year. Dr. Charan Singh, Co-ordinator of TSP visited Udpalta, Block-Kalsi, Dehradun alongwith the National Co-ordinator of TSP.
19.	Culture for maintaining budget estimate of the project must be developed by the leader of individual project. Annual expenditure of a particular project should essentially be presented in one slide in IRC meeting and submitted with RPP II by the project leader w.e.f. 2015-16 onwards otherwise, RPP II will be treated as incomplete. **(Action: All Scientists / Heads of Research Centres / Divisions)**	Annual expenditure of the project is being maintained by all the leaders of individual project. A new format for this purpose has been provided to all scientists during the IRC Meeting 2017 for submitting with RPP II w.e.f. 2016-17 onwards.
20.	Recording of climate data should be ensured by the scientists in all projects related to Plant Science to study the environment effect due to climate change. **(Action: All Scientists / Heads of Research Centres / Divisions)**	Climate data are being recorded regularly at Headquarters and all Research Centres in all the concerned projects.

21.	All associates of that project whose projects is being presented as per schedule in the IRC meeting should essentially be presented himself / herself in the hall for discussion, reply of queries (if any) etc. **(Action: All Scientists of Research Centres / Divisions)**	It has been informed accordingly to all scientists for compliance during the IRC meeting.
22.	It may be ensured by all scientists that the presentation should be objective-wise for all running and concluded projects in the IRC meeting restricted to maximum of ten slides only. **(Action: All Scientists of Research Centres / Divisions)**	It has been noted by all scientists.
23.	A monthly meeting should be organized by all leaders of running projects at Division / Centre level with all associated scientists to discuss the progress of projects and what actions have to be taken. **(Action: Leaders of all running projects)**	The monthly meeting is organized regularly by all leaders of running projects with all associated scientists regarding the progress of projects. However, it was again emphasized in the IRC Meeting, 2017.
24.	Seminar on foreign papers may be conducted every month at Headquarters and all Research Centres for sharing of new thinking in research. **(Action: All Heads / Scientists of Divisions / Research Centres)**	Seminar on foreign papers are not being conducted every month. However, it is conducted intermittently at the Headquarters and Research Centres.
25.	Annexure-A (Details of ongoing projects), Annexure-B (Activity milestone of projects for coming year) and Annexure-C (Research highlights of projects) should not the submitted in future during IRC meeting due to non-relevance of these documents in IRC meeting. **(Action: All Scientists / Heads of Research Centres / Divisions)**	Action has been taken and these Annexures have not been submitted.
26.	During the presentation of concluded projects (i.e. projects going to be concluded in 2016-17) in the next IRC meeting, a slide should be presented by the leader of the project mentioning about details of papers published / submitted on the results obtained pertaining to that project. Further, transfer of technologies, special innovations, expected benefits etc. should also be presented in that slide and accordingly reported in the RPP III of the project. Besides, details of papers and other publications (bulletins, training brochures, technologies, leaflets etc.) published on the projects concluded in 2015-16 should also be submitted project-wise by the concerned Head of Research Centres / Divisions before the next IRC meeting. **(Action: All Scientists / Heads of Research Centres / Divisions)**	It has been noted by all scientists.

SALIENT RECOMMENDATIONS OF IRC MEETING – 2017

1. Action is again assigned by the IRC-2017 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, 2017 positively. **(Action: Dr. P.R. Ojasvi)**

2. Action is again assigned by the IRC-2017 that a bulletin / brochure on the concluded project entitled "Design and development of site specific artificial groundwater recharge filters" may be published by Dr. D.R. Sena, Pr. Scientist (Engg.) and Dr. Gopal Kumar, Sr. Scientist (Soils) by August 31, 2017 positively.
(Action: Dr. D.R. Sena and Dr. Gopal Kumar)

3. Action is again assigned by the IRC-2017 that a bulletin / brochure may be published on the results obtained from concluded projects entitled "Productivity enhancement in fruit and flower based two tier horticulture systems through integrated nutrient management and mulching" and "Enhancement of guava productivity through canopy management and mulching in rainfed bouldery riverbed lands" by Dr. A.C. Rathore, Pr. Scientist (Hort.) by August 31, 2017 positively.
(Action: Dr. A.C. Rathore)

4. Action is again assigned by the IRC – 2017 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 Sept. 30, 2017 positively.
(Action: Dr. S. Manivannan)

5. Action is again assigned by the IRC – 2017 that a policy paper may be brought out from the concluded project entitled "Prototype field study on application of potentially important Jute geo-textiles for hill slope stabilization" for Nilgiris area alongwith economic returns by Dr. S. Manivannan, Pr. Scientist (Engg.) by August 31, 2017 positively.
(Action: Dr. S. Manivannan)

6. Action is again assigned by the IRC – 2017 that a policy paper on "Present status of shifting cultivation in Odisha and to suggest action plan" may be prepared by Dr. M. Madhu, Head, Research Centre, Koraput by August 31, 2017 positively. **(Action: Dr. M. Madhu)**

7. Action is again assigned by the IRC – 2017 that the document of 60 years research in Soil and Water Conservation may be published by the Head, Research Centres, Bellary, Kota, Udhagamandalam & H&E and HRD&SS Divisions on or before Sept. 30, 2017 and Research Centre, Agra by Dec. 31, 2017 positively. Similar document for 30 years of Research Centre, Datia and 25 years of Research Centre, Koraput may be published by August 31, 2017 positively.
(Action: Head, Research Centres, Agra, Bellary, Datia, Koraput, Kota, Udhagamandalam and Head of H&E & HRD&SS Divisions)

8. The complete module on user friendly DSS for planning of watershed development project need to be developed by Dr. P.R. Ojasvi, Head (H&E Division) from the support of Institute for use by the stakeholders to justify the time spent on such project and to arrive at logical conclusion. The action taken may be presented in the IRC meeting 2018.
(Action: Dr. P.R. Ojasvi)

9. The testing comparison of the field level sediment sampler may be done during monsoon season by Er. Deepak Singh, Scientist (Engg.) and the report may be submitted by September 30, 2017 positively. **(Action: Er. Deepak Singh)**

10. 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 December 31, 2017. **(Action: Dr. Ram Prasad)**

11. A meeting may be organized by Dr. B.L. Dhyani, Sr. Scientist (Ag. Eco.) and Dr. Pradeep Dogra, Pr. Scientist (Ag. Eco.) during Nov., 2017 with all scientists of Headquarters and scientists of Economics discipline from Research Centres for discussion on "Intangible benefits of NRM interventions in different projects in different climatic regions and network project formulation". The recommendations of above meeting may be utilized for formulation of core project on above issue for presentation in the next IRC meeting.
(Action: Dr. B.L. Dhyani, Dr. Pradeep Dogra and Scientists of Economics discipline from Research Centres)

12. 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" with the help of Ms. Chayna Jana or a computer programmer.
(Action: Dr. Pradeep Dogra and Ms. Chayna Jana)

13. Preparation of Ravine Atlas of India including the scientific method for delineating the affected areas due to ravines may be completed by Dr. R.K. Singh, Head, Research Centre, Kota and Dr. G.L. Meena, Scientist (Soils) in association with Dr. Gopal Kumar, Sr. Scientist (Soils) by Dec. 31, 2017.
(Action: Dr. R.K. Singh, Dr. G.L. Meena and Dr. Gopal Kumar)

14. A policy paper on Jhola land may be published by Dr. (Ms.) Ch. J.P. Dash by August 31, 2017 related to the concluded project entitled "Mapping and characterization of Jhola land areas in Koraput district". The technologies developed from the above project may be transferred under TSP. RPP IV on the above project may be submitted. A bulletin on Jhola land may also be prepared. **(Action: Dr. (Ms.) Ch. J.P. Dash)**

15. The comparative cost estimate with other standard check dams constructed with standard construction materials may be worked out by Dr. P.R. Bhatnagar, Head, Research Centre, Vasad related to a concluded project entitled "Development of cost-effective plastic check dams for water harvesting in rainfed regions". Patenting of plastic check dams may also be explored.
(Action: Dr. P.R. Bhatnagar)

16. The concluded project entitled "Creation of ICT network to disseminate knowledge about the soil and water conservation technologies to farmers in Himalayan region" may be continued as Transfer of Technology (ToT) for one year by Mr. Rajesh Bishnoi, Scientist (Ag. Extn.) to study the effectiveness of the project and collection of data for good statistical analysis.
(Action: Mr. Rajesh Bishnoi)

17. The comparative analysis of different cover materials with tiles related to the concluded project entitled "Water budgeting of a ravine watershed pond for optimum crop planning under semi-arid region" may be completed by Dr. K.K. Sharma, Sr. Scientist (Engg.) by August 31, 2017 positively. Technologies may also be prepared on the above project.
(Action: Dr. K.K. Sharma)

18. 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.) by August 31, 2017. A policy paper from the above project including techno-economical anlaysis may also be prepared. **(Action: Mr. Suresh Kumar)**

19. The DSS from the concluded project entitled "Decision Support System (DSS) for identifying best management practices in erosion risk area" need to be sent for copy right. The action taken will be presented in the next IRC meeting.

(Action: Dr. N.M. Alam)

20. A new proposal entitled "Evaluation and improvement of water and nutrient use efficiency for potato based cropping sequence through efficient use of harvested rain water" may be conducted as demonstration at the Research Centre, Udhagamandalam by Dr. P. Raja, Dr. K. Kannan and Dr. K. Rajan and DSS may be developed with the existing information and presented in the next IRC meeting. **(Action: Dr. P. Raja, Dr. K. Kannan and Dr. K. Rajan)**

21. Digitization of data of research farm at the Headquarters and all Research Centres may be completed and reported accordingly to Er. S.S. Shrimali, Sr. Scientist (CAA) and Co-ordinator for compilation of data digitization by December 31, 2017 positively.

(Action : Er. S.S. Shrimali, OIC, Research Farm, Selakui and all Heads of Research Centres)

22. Seminar on foreign papers may be conducted every month at Headquarters and all Research Centres for sharing of new thinking in research. One scientist may be identified at all Research Centres for organizing seminar every month. At the Headquarters, a roaster may be prepared by Dr. Pradeep Dogra, Pr. Scientist (Ag. Econ.) for organizing seminar on monthly basis.

(Action: Dr. Pradeep Dogra & all Heads / Scientists of Divisions / Research Centres)

23. Status report of Gauging devices / Silt Monitoring Stations (SMS) working at Headquarters / Research Centres may be prepared by the Head, H&E Division by June 30, 2017. Further, the format may be discussed with the concerned scientists and published by Sept. 30, 2017 by Dr. P.R. Ojasvi, Head, H&E Division and co-ordinator of this assignment.

(Action: Dr. P.R. Ojasvi and all concerned Scientists)

24. 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 Head of Research Centres and Divisions.

(Action: OIC, PME Cell and Head of Research Centres / Divisions)

25. 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", discussed in the IRC meeting, 2017.

(Action: Mr. S.K. Sinha and all Heads / Scientists of Divisions / Research Centres)

26. 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.

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

27. Paper / Abstract sending for publication / presentation should invariably be discussed in the monthly STMIM at the Research Centre / Headquarters in front of all scientists. The proceedings must be attached with the paper / abstract while submitting to the Director for approval through the Head. **(Action: All Scientists/Heads of Research Centres / Divisions)**

28. An externally funded NICRA project entitled "Comprehensive assessment of climate change implications on watershed development component of PMKSY (WDC-PMKSY) approved during July, 2017 for three years (2017-18 to 2019-20) may be conducted by Dr. D.R. Sena, Pr. Scientist (Engg.) as PI at the Headquarters, Dehradun. Names of Dr. P.K. Mishra, Er. Uday Mandal, Dr. Gopal Kumar, Dr. Ramanjeet Singh, Dr. M. Sankar and Dr. Pradeep Dogra are included as Co-PIs of this project.

(Action: Dr. D.R. Sena and all associated Co-PIs)

29. While taking up new R&D projects and upscaling the technologies, the scientist should focus on the location specific research, priorities on ongoing Government programmes, low cost and appropriate technology development, upscaling participatory research etc. The senior level scientists should act as mentor to the newly recruited scientists.

(Action: All Scientists / Heads of Research Centre / Division)

PROPER FILLING AND MAINTAINING RPP I, II, III & IV OF RESEARCH PROJECTS

GENERAL POINTS FOR PREPARING & MAINTAINING RPPS

1. RPP I in Annexure I, II & III (Page No. 24 to 28), RPP II in Annexure V (Page No. 30 to 31), RPP III in Annexure VI, VII, VIII & IX (Page No. 32 to 34 & 37 to 39) and RPP IV in page no. 35 to 36 may be submitted as documented in the ICAR Guidelines on RPPs.
2. All RPPs may be submitted in **two** original copies. One signed copy of RPP to be sent back whose photo copy/ scanned copy may be provided to PI/ Co-PIs.
3. Proforma of all RPPs should be submitted duly signed by PI, all Co-PIs and Head of Research Centre/Division. Scanned signatures of those Co-PIs may be obtained by the PI on RPPs who are not available in the Research Centre/Division.
4. All signatures on RPPs should be with date.
5. Title of project, year of start & completion, sequence of Co-PIs in the project etc. should be kept as per listing in the IRC Proceedings of relevant year. Any change may only be decided by the IRC in the House.
6. "NIL" may be written against those items which are not applicable or no output during the period and no item should be left blank in all RPPs.
7. Serial number of items of all RPPs should be maintained as such as per approved in the ICAR Guidelines on RPPs.
8. Time spent (%) in a particular project by the scientist should be filled-up as reported in the HYPM of that project by the scientist or vice-versa.
9. RPP I of the project approved in the IRC may be submitted before the 31st July of that year. Further, all RPP II & III of proceeding year may be submitted before 30th June of current year.
10. RPP IV may be submitted after the assignments given by the IRC. RPP IV may be submitted if further efforts are made for commercialization/ up-scaling of research output/ technology.
11. In case the Research Papers published after the completion of projects and submission of RPP III, a written information in the following format indicating the title of research project with project code number, title of published paper and name of journal with a copy of first page of published paper may be submitted for record in the concerned RPP file of particular project in the PME Cell:

Title of Research Project & Project Code Number	Title of Published Paper	Name of Journal with NAAS Rating

12. The PI may try to publish at least a review paper relating to his/ her project during the project duration in any NAAS rated journal.

…….Continued

SALIENT POINTS FOR PROPER FILLING RPP I, II, III & IV

1. Institute Project Code Number (RPP Number), which is generated by the PME Cell after the approval of new projects, may be copied in the RPPs from the soft copy of IRC Proceedings.
2. In Annexure III of RPP I, the total % time spent in the details of work load of investigators in approved ongoing projects should not be exceeded 80% including that project (Minimum 20% as PI and 10% as Co-PI). The individual scientist's total time for R&D and other activities together should not exceed 100% and the time spent should also be reflected in the HYPM.
3. In Annexure V of RPP II, item No. 6, the activities and output details of all associated scientists of the project in the particular year should essentially be mentioned for justification of his/ her name in the project in that year. Any new Co-PI can be co-opted during the project period depending on the need of data generation/ analysis by the particular person. Hence, in RPP I, name of all the Co-PIs may not be kept in the beginning. The inclusion and deletion of names will be finalized during IRC and in required circumstances, with the approval of Competent Authority.
4. Self evaluation of the project by the PI and evaluation by PI on his/ her contribution in the project may be done separately in the format of RPP II prescribed in the ICAR Guidelines of RPPs.
5. Specific comments on annual progress/ achievements, shortfall and constraints of the project may be given by the Head of Research Centre/ Division in item No. 13 of RPP II with rating of the project.
6. In RPP III, the final report of project in item No. 10 of Annexure VII may be prepared mentioning the "Material and methods used, Results and discussion, Objective-wise achievements and Conclusions", as per guidelines of ICAR. These are also essential for evaluation of RPP III of concluded projects by the Evaluation Committee.

- S.K. Sinha
Assistant Chief Technical Officer
PME Cell, Dehradun

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 201500100087	Development of intensity-duration-frequency curves using rainfall data for different agro-ecological regions of India.	N.M. Alam P.K. Mishra D.R. Sena Chayna Jana	Soil Science & Agronomy, Dehradun	2015-16	2017-18	Different agro-ecological regions of India	To be concluded
Comments: Progress is very good. Results may be compared from previous studies. Name of Dr. G.C. Sharma is deleted. (Action: Dr. N.M. Alam)								
2.	NRMAIISWCCIL 201500200088	Assessment of soil erosion fluxes of Uttarakhand.	P.R. Ojasvi	Hydrology & Engineering, Dehradun	2015-16	2017-18	Headquarters	To be concluded
Comments: Progress is very good. Name of Er. Uday Mandal is deleted. (Action: Dr. P.R. Ojasvi)								
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 Monalisha Pramanik R.S. Yadav	Datia	2015-16	2018-19	Bundelkhand region	To be continued
Comments: Progress is very good. Names of Mr. Manish Kumar and Dr. Om Prakash are deleted. (Action: Dr. Rajeev Ranjan)								

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
4.	NRMAIISWCCOL 201500400090	National Mission on Sustaining Himalayan Eco-system (NMSHE) - Task force on Himalayan agriculture for lower and middle Himalayan region.	P.K. Mishra N.K. Sharma P.R. Ojasvi Ambrish Kumar Pradeep Dogra Charan Singh D.R. Sena S.S. Shrimali Bankey Bihari Rajesh Kaushal Lekh Chand U.K. Maurya V.C. Pande (Vasad) A.C. Rathore J.M.S. Tomar N.M. Alam Chayna Jana Ramanjeet Singh Uday Mandal A.K. Gupta Trisha Roy Gopal Kumar Rajesh Bishnoi	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 Pawan Sharma	Chandigarh				
Comments: Progress is very good. Names of Dr. Lakhan Singh, Dr. M. Muruganandam, Mr. Suresh Kumar and Dr. A.K. Tiwari are deleted and names of Dr. Gopal Kumar and Mr. Rajesh Bishnoi are included as associate. (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
5.	NRMAIISWCCIL 201500600092	Application of integrated spatial science tools for prediction of soil erosion map under changing climate scenario for the Uttarakhand state.	Uday Mandal Chayna Jana D.R.Sena	Hydrology & Engineering, Dehradun	2015-16	2017-18	Headquarters	To be concluded
Comments: Progress is very good. Soil erosion map under changing climate scenario may be prepared by October, 2017. (Action: Er. Uday Mandal)								
6.	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 O.P.S. Khola	Udhagamandalam	2017-18	2020-21	Research Farm and Nilgiri district	To be continued **(NRSC-ISRO, Hyderabad Funded) (New Project)**

1.3 SOIL CARBON DYNAMICS AND EROSION PRODUCTIVITY STUDIES

7.	NRMACSWCRTI CIL200800100014	Erosion productivity relationships for evaluating vulnerability and resiliency of soils under different agro-climatic regions of India.	D. Mandal Deepak Singh N.K. Sharma Pradeep Dogra	Soil Science & Agronomy, Dehradun	2008-09	2017-18	Research Farm of Headquarters and all Research Centres	To be concluded (**Core Project**)
			S.K. Dubey A.K. Singh R.K.Dubey	Agra	2009-10			
			H. Biswas, S.L. Patil	Bellary	2009-10			
			Sharmistha Pal V.K. Bhatt	Chandigarh	2009-10			
			Dev Narayan S.P. Tiwari	Datia	2009-10			
			P.P. Adhikary M. Madhu	Koraput	2009-10			

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
			R.K. Singh Kuldeep Kumar B.L. Mina	Kota	2009-10			
			K. Kannan P. Raja, V. Selvi	Udhagamandalam	2009-10			
			D. Dinesh, V. Kakade	Vasad	2009-10			
Comments: Progress is very good. Slope and crop-wise analysis may be done for all treatments. Anova for significance of R^2 and coefficient of equations may also be presented in the next IRC meeting. Names of Er. S. Patra and Er. Monalisha Pramanik are deleted at Dehradun and Datia, respectively. Dr. V.K. Bhatt will replace Dr. A.K. Tiwari at Chandigarh as an associate. Name of Er. V. Selvi is included as second associate at Udhgamanadalam. (Action: Dr. D. Mandal and leaders at all Research Centres)								
8.	NRMACSWCRTICIL201100400050	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	2018-19	Research Farm	To be continued
Comments: Progress is very good.								
9.	NRMAIISWCCOL201500700093	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 continued **(ICAR-National Fellow Project)**
Comments: Progress is very good.								
10.	NRMACSWCRTICIL201400200082	Development and validation of a spatially explicit simulation framework to quantify runoff-erosion-carbon flux at watershed scale.	Deepak Singh A.C. Rathore Chayna Jana N.M. Alam Trisha Roy	Hydrology & Engineering, Dehradun	2014-15	2019-20	Research Farm	To be continued
Comments: Progress is very good. Names of Er. S. Patra, Dr. P.R. Ojasvi and Dr. Rajesh Kaushal are deleted and Er. Deepak Singh will be the leader of this project. (Action: Er. Deepak Singh)								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
11.	NRMAIISWCCIL 201600100115	Assessing the vegetation and SOC recovery potentials of abandoned / fallowed shifting cultivated sites in Central Eastern Ghats.	H. Gowda P. Jakhar Karma Beer	Koraput	2016-17	2018-19	Central Eastern Ghats (Malkangiri, Koraput, Raygada and Vishakhapatnam districts)	To be continued
Comments: Progress is very good.								
12.	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: R.S. Singh Co-CCPI: P.C. Moharana	Vasad	2017-18	2020-21	Mahi ravines in Gujarat	To be continued (**Collaborative project with NBSSLUP**) **(New Project)**

P-2 CONSERVATION MEASURES FOR SUSTAINABLE PRODUCTION SYSTEM

2.1 RESOURCE CONSERVATION MEASURES FOR ARABLE LANDS

13.	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 **(New Project)**
14.	NRMAIISWCCIL 201700400134	Evaluation of conservation tillage based *Arundo donax* 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 **(New Project)**

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
15.	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 **(New Project)**
Comments: As discussed in the IRC, treatments may be modified as follows: T_1 – Compost prepared from vegetable and fruit waste, T_2 & T_3 – may be combined, and an additional treatment may be Farm waste (compost) + cow dung (50:50). (Action: Dr. Lekh Chand)								
16.	NRMAIISWCCIL 201700600136	Utilization of different industrially derived waste along with *Arbuscular Mycorrhizal Fungi* (AME) for sustainable soil management.	Trisha Roy Uday Mandal	HRD&SS, Dehradun	2017-18	2020-21	Research Farm	To be continued **(New Project)**
17.	NRMACSWCRTI CIL201300200076	Evaluating the effect of organic amendments on resource conservation and productivity of rainfed semi-arid vertisols.	M. Prabhavathi S.L. Patil	Bellary	2013-14	2017-18	Research Farm	To be concluded
Comment: Progress is very good. Ms. M. Prabhavathi will replace Dr. H. Biswas as leader of project. Name of Mr. Suresh Kumar is deleted. (Action: Ms. M. Prabhavathi)								
18.	NRMAIISWCCIL 201600200116	Effect of varying water regimes on Zn and N dynamics and rice productivity in saline vertisols.	M. Prabhavathi H. Biswas	Bellary	2016-17	2018-19	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
19.	NRMACSWCRTI CIL201000400040	*In situ* 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	2018-19	Research Farm	To be continued
Comments: Progress is very good. Technologies may be transferred to farmers' field. Name of Mr. Manish Kumar is deleted. (Action: Dr. Dev Narayan)								
20.	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. Name of Mr. M.K. Meena is deleted. (Action: Dr. D.C. Sahoo)								
21.	NRMAIISWCCIL 201700700137	*Jhola kundi* based vegetable farming with soil moisture conservation practices for increasing profitability of tribal farmers of Eastern Ghats High Land region.	Karma Beer Ch. J.P. Dash P. Jakhar	Koraput	2017-18	2019-20	Research Farm	To be continued **(New Project)**
Comments: Hydrology part may be done in first year before planning for irrigation. Two vegetable crops may be taken. (Action: Dr. Karma Beer)								
22.	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	Kota	2015-16	2020-21	Research Farm	To be continued
Comments: Progress is very good.								
23.	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
24.	NRMACSWCRTICIL201400300083	Cover crops and reduced tillage for enhancing productivity and soil health in rainfed farming system in the hilly areas.	K. Kannan V.K. Thilagam O.P.S. Khola P. Raja	Udhagamandalam	2014-15	2018-19	Research Farm	To be continued
Comments: Progress is very good.								

2.2 RESOURCE CONSERVATION MEASURES FOR NON-ARABLE LANDS

25.	NRMAIISWCCIL201600400118	Improvisation of soil working techniques for enhancing tree establishment under rainfed conditions of North-Western Himalayas.	D.V. Singh J. Jayaprakash D.M. Kadam Vibha Singhal	Soil Science & Agronomy, Dehradun	2016-17	2019-20	Pasauli, Dhanpau and Lakhwar villages, Dehradun district	To be continued
Comments: Progress is very good.								
26.	NRMACSWCRTICIL200900500034	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	Plant Science, Dehradun	2009-10	2018-19	Research Farm	To be continued
Comments: Progress is very good. Name of Dr.(Ms.) Trisha Roy is deleted. (Action: Dr. Harsh Mehta)								
27.	NRMACSWCRTICIL201101200058	Efficacy of different soil and water conservation measures on bamboo productivity and resource conservation in Himalayan foothills.	Rajesh Kaushal Ambrish Kumar J.M.S. Tomar D.V. Singh	Plant Science, Dehradun	2011-12	2017-18	Near Mednipur Forest Nursery	To be concluded
Comments: Progress is very good. The project is to be concluded in 2017-18. Moreover, it will be the part of INBAR project for economic studies on bamboo productivity. (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
28.	NRMACSWCRTICIL201200200071	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	Plant Science, Dehradun	2012-13	2019-20	Research Farm	To be continued
Comments: Progress is very good.								
29.	NRMAIISWCCIL 201501100097	Evaluation of *Bael* 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 very good.								
30.	NRMAIISWCCIL 201600500119	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	2018-19	Dehradun district	To be continued
Comments: Progress is very good. Title of the project has been modified. (Action: Dr.(Ms.) Vibha Singhal)								
31.	NRMAIISWCCIL 201700800138	Evaluation of rooting media and rootstocks of major sub-tropical fruits spp. for raising quality planting materials on degraded lands.	A.C. Rathore Harsh Mehta J. Jayaprakash M. Sankar D.M. Kadam Deepak Singh	Plant Science, Dehradun	2015-16	2019-20	Research Farm	To be continued **(New Project)**
Comments: The project may be conducted as an Institute project with the budget provided by the Sate Horticultural Mission, Uttarakhand. (Action: Dr. A.C. Rathore)								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
32.	NRMAIISWCCOL 201700900139	Promotion and expansion of Lemon grass (*Cymbopogon flexuosus*) cultivation as an alternative crop for livelihood security in SC and ST communities in Dehradun district.	J.M.S. Tomar Rajesh Kaushal A.K. Gupta Harsh Mehta	Plant Science, Dehradun	2016-17	2018-19	Jaunsar Hill Area, Uttarakhand	To be continued **(DST Project) (New Project)**
Comments: Activity and action plan may be developed in research mode for the areas suitable to the altitude of species. (Action: Dr. J.M.S. Tomar)								
33.	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 N.M. Alam A.K. Gupta	Plant Science, Dehradun	2016-17	2018-19	Madnipur and Dhoolkot, Dehradun	To be continued **(INBAR China Project) (New Project)**
Comments: Performance of bamboo at different sites / soils may be recorded. (Action: Dr. Rajesh Kaushal)								
34.	NRMAIISWCCIL 201701100141	Assessment and improvement of nutritional quality of horticultural crops on sloping lands in North-west Himalayas.	D.M. Kadam M. Sankar D.V. Singh	Plant Science, Dehradun	2017-18	2022-23	Research Farm and Pasauli village, Vikasnagar	To be continued **(New Project)**
35.	NRMAIISWCCIL 201501200098	Phyto-rehabilitation of saline - sodic vertisols through *Prosopis juliflora* based silvipastoral system.	H. Biswas A.S. Morade	Bellary	2015-16	2019-20	Research Farm	To be continued
Comments: Progress is very good. Names of Mr. M.N. Ramesha and Dr. A. Raizada are deleted and Dr. H. Biswas will be the leader of project. Name of Mr. A.S. Morade is included as an associate. (Action: Dr. H. Biswas)								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
36.	NRMAIISWCCIL 201701200142	Regulated deficit irrigation and canopy architecture management for fig (*Ficus carica L.*) in semi-arid vertisols.	A.S. Morade M. Prabhavathi	Bellary	2017-18	2022-23	Research Farm	To be continued **(New Project)**
37.	NRMACSWCRTI CIL200800700020	Peach based agri-horticulture land use system for degraded Shiwaliks.	Ram Prasad Sharmistha Pal S.L. Arya	Chandigarh	2008-09	2017-18	Research Farm	To be concluded
Comments: Progress is very good. A brochure on this project may be prepared for doubling the farmers income. (Action: Dr. Ram Prasad)								
38.	NRMACSWCRTI CIL201000700043	Evaluation of moisture conservation techniques for sustainable production of Tree Borne Oil Seeds (TBOS) in Bundelkhand.	Monalisha Pramanik R.S. Yadav M.K. Meena	Datia	2010-11	2017-18	Research Farm	To be concluded
Comments: Progress is very good. Name of Mr. Manish Kumar is deleted and Ms. Monalisha Pramanik will be the leader of project. Name of Mr. M.K. Meena is included as second associate. (Action: Ms. Monalisha Pramanik)								
39.	NRMAIISWCCIL 201501300099	Evaluation of promising fruit species with different moisture conservation practices in red soils of Bundelkhand region.	Rajeev Ranjan J. Jayaprakash Monalisha Pramanik S.P. Tiwari	Datia	2015-16	2020-21	Research Farm	To be continued
Comments: Progress is very good. Results of moisture and plant growth data may be checked. Name of Mr. Manish Kumar is deleted and Dr. Rajeev Ranjan will be the leader of project. Name of Dr. J. Jayaprakash is included as first associate. (Action: Dr. Rajeev Ranjan)								
40.	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 H. Gowda	Koraput	2015-16	2020-21	Watershed in Semiliguda block, Koraput	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
41.	NRMAIISWCCIL 201600600120	Evaluation, characterization and development of elite genotypes of *Cassia auriculata* for cultivation in semi- arid regions.	S. Kala H.R. Meena I. Rashmi	Kota	2016-17	2021-22	Research Farm	To be continued
Comments: Progress is very good. Title of the project has been modified. Name of Dr. Shakir Ali is deleted. (Action: Dr.(Ms.) S. Kala)								
42.	NRMACSWCRTI CIL201101700063	Effect of shade trees on productivity and soil health in rejuvenated tea plantations in Nilgiris.	R. Ragupathy K. Rajan	Udhagamandalam	2011-12	2017-18	Research Farm	To be concluded
Comments: Progress is good. Survey may be conducted for collection of data / information to arrive at a logical conclusion. The project should be concluded in 2017-18. (Action: Dr. R. Ragupathy)								
43.	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. Name of Dr. Raj Kumar is deleted. (Action: Dr. V. Kakade)								

P-3 WATERSHED HYDROLOGY FOR CONSERVATION PLANNING

3.1 HYDROLOGICAL BEHAVIOUR OF LANDUSES AND MANAGEMENT PRACTICES

44.	NRMACSWCRTI CIL200400100002	Hydrological evaluation of recommended forest grasses in Himalayan foothills.	J. Jayaprakash Ambrish Kumar	Plant Science, Dehradun	2004-05	2017-18	Research Farm	To be concluded
Comments: Progress is very good. All scientific data / information may be collected and anlayzed. The project may be concluded in 2017-18. (Action: Dr. J. Jayaprakash)								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
45.	NRMACSWCRTICIL201101800064	Evaluation of hydrological behaviour and production potential of recommended landuse system / practices under different agro-ecological regions of India.	J.M.S. Tomar A.C. Rathore	Plant Science, Dehradun	2011-12	2017-18	Pasauli, Vikas Nagar	To be concluded **(Core Project)**
			K.K. Sharma S.K. Dubey A.K. Parandiyal	Agra			Garhi Udairaj, Fatehabad	
			V.K. Bhatt Pankaj Panwar Ram Prasad	Chandigarh			Janoli Village, Panchkula	
			Shakir Ali S. Kala B.L. Mina H.R. Meena	Kota			Dhoti Watershed	
Comments: Progress is very good. Trend and statistical analysis taking cumulation with past data may be done. Comparative analysis may also be done. Names of Er. Uday Mandal, Dr. Ramanjeet Singh and Dr. M. Muruganandam at Dehradun and Dr. Dileep Kumar at Agra are deleted. (Dr. J.M.S. Tomar and leaders at other Research Centres)								
46.	NRMAIISWCCIL201501500101	Hydrologic systems analysis across multiple spatial scales and its implications on hydro-logic processes in sub-humid catchment of Eastern Ghat High Land Region of Odisha.	Ch. J.P. Dash P.P. Adhikary D.C. Sahoo N.M. Alam	Koraput	2015-16	2018-19	Watershed in Semiliguda block, Koraput	To be continued
Comments: Progress is very good.								
47.	NRMAIISWCCIL201501600102	Modelling the nutrient movement in agricultural watersheds and their impact on surface water resources of Nilgiris.	V.K.Thilagam S. Manivannan K. Rajan O.P.S. Khola	Udhagamandalam	2015-16	2017-18	The Nilgiris	To be concluded
Comments: Progress is very good. Elevation for upper, middle and lower areas may be defined. (Action: Dr. V.K. Thilagam)								

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
48.	NRMAIISWCSIP 201501700103	Development and rejuvenation of natural springs through soil and water conservation measures	U.K. Maurya Ambrish Kumar CCPI: S.K. Rai Co-CCPI: S.K. Bartarya	Soil Science & Agronomy, Dehradun	2015-16	2017-18	Mid Himalayas in Garhwal region	To be concluded (**Collaborative project with Wadia Institute of Himalayan Geology (WIHG), Dehradun**)
Comments**:** Progress is very good.								
49.	NRMAIISWCSOL 201501900105	Consortia Research Platform-Water Theme 1 Water Resources Augmentation/ Conservation.	P.R. Ojasvi P.K. Mishra S.S. Shrimali	Hydrology & Engineering, Dehradun	2015-16	2017-18	Headquarters and all Research Centres	To be concluded **(Water Platform Project)**
			K.K. Sharma R.B. Meena A.K. Singh	Agra				
			B.S. Naik H. Biswas S.L. Patil	Bellary				
			V.K. Bhatt Sharmistha Pal Pankaj Panwar	Chandigarh				
			Monalisha Pramanik Rajeev Ranjan	Datia				
			D.C. Sahoo Ch. J.P. Dash P. Jakhar	Koraput				
			G.L. Meena R.K.Singh	Kota				

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
			S. Manivannan V.K. Thilagam O.P.S. Khola	Udhagamandalam				
			P.R. Bhatnagar Gaurav Singh O.P. Meena	Vasad				
Comments: Progress is very good. Project is extended for one year till 2017-18 as the project has been extended by the ICAR. Names of Dr. Ambrish Kumar, Dr. A.K. Tiwari, Mr. Manish Kumar and Dr. B.K. Rao are deleted at Dehradun, Chandigarh, Datia and Vasad, respectively. Dr. S.L. Patil will replace Dr. A. Raizada as second associate at Bellary. (Action: Dr. P.R. Ojasvi and leaders at all Research Centres)								
50.	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	Hydrology & Engineering, Dehradun	2017-18	2019-20	Haridwar district	To be continued **(Collaborative project with Central Ground Water Board (CGWB), Uttarakhand region) (New Project)**
Comments: MoU regarding data availability and sharing of data may be signed with Central Ground Water Board. (Action: Er. Uday Mandal)								
51.	NRMAIISWCCIL 201701400144	Employing system approach on zero energy drip irrigation system in bench terrace farming for hill region.	Deepak Singh P.R. Ojasvi A.C. Rathore	Hydrology & Engineering, Dehradun	2017-18	2020-21	Research Farm & Udpalta village, Uttarakhand	To be continued **(New Project)**
Comments: The study may be demonstrated in TSP area. The project may be linked with PMKSY. (Action: Er. Deepak Singh)								
52.	NRMAIISWCCOL 201502000106	Efficient groundwater management for enhancing adaptive capacity to climate change in sugarcane based farming systems in Muzaffarnagar district, U.P.	Ambrish Kumar U.K. Maurya	HRD&SS, Dehradun	2015-16	2017-18	Selected sites in Muzaffarnagar district, UP	To be concluded **(NMSA-MoA Project)**
Comments: Progress is very good. Names of Er. Uday Mandal and Mr. A.K. Gupta are deleted. (Action: Dr. Ambrish Kumar)								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
53.	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 continued
Comments: Progress is very good. Bio-indicators which give an idea of water quality may be included in the project. Name of Dr. Rajesh Kaushal is deleted. (Action: Mr. A.K. Gupta)								
54.	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 A.K. Singh	Agra	2015-16	2019-20	Yamuna river belt	To be continued
Comments: Progress is very good. Hydrology may be studied using AGNPS model. Samples of nearby agricultural areas may be compared. (Action: Dr. (Ms.) Rama Pal)								
55.	NRMAIISWCCIL 201701500145	Evaluation of direct recharge filter for revival of defunt and low yielding borewell vis-a-vis augmentation of ground water table in semi-arid region of Karnataka.	B.S. Naik S.L. Patil	Bellary	2017-18	2020-21	Molakalmur, Chitradurga district, Karnataka	To be continued **(New Project)**
Comments: Water table nearby the borewells may be studied. Two more filters may be constructed. Complete proposal may be submitted by the end of May, 2017. (Action: Dr. B.S. Naik)								
56.	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	Kota	2010-11	2018-19	Research Farm	To be continued
Comments: Progress is very good. A system/strategy may be developed for water budgeting. (Action: Dr. G.L. Meena)								
57.	NRMAIISWCCIL 201502200108	Strategies for rainwater harvesting and its multiple uses in rainfed agriculture in Central Gujarat	P.R. Bhatnagar O.P. Meena V.C. Pande V. Kakade	Vasad	2015-16	2017-18	Research Farm and farmers fields in adopted watersheds	To be concluded
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
58.	NRMAIISWCCIL 201701600146	Field evaluation of ground water recharge filters developed by ICAR-IISWC, Vasad.	Gaurav Singh P.R. Bhatnagar V.C. Pande O.P. Meena	Vasad	2017-18	2019-20	Different watersheds adopted by Vasad Centre	To be continued **(New Project)**

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.

59.	NRMACSWCRTICIL201400600086	Assessment of impact of extraction of RBM (River bed material) on physiography of stream flow courses of Himalayan foot hill streams.	S.S. Shrimali D. Mandal	Hydrology & Engineering, Dehradun	2014-15	2017-18	Rivers of Uttarakhand	To be concluded
Comments: Progress is very good. Name of Ms. Chayna Jana is deleted. (Action: Er. S.S. Shrimali)								
60.	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.								
61.	NRMAIISWCCOL 201600900123	Field evaluation of refinement of ravine reclamation technology in a model ravine area development project at Lohli-Bagli village in district Bundi (Rajasthan).	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	2020-21	Bundi district, Rajasthan	To be continued **(Govt. of Rajasthan funded)**
Comments: Progress is excellent.								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
62.	NRMACSWCRTICIL201102200068	Field evaluation of design of trenches under different agro-climatic regions.	P.R. Bhatnagar V.C. Pande D. Dinesh	Vasad	2011-12	2018-19	Research Farm	To be continued **(Core Project)**
			A.K. Parandiyal A.K. Singh R.B. Meena	Agra			Research Farm	
			V.K. Bhatt Pankaj Panwar	Chandigarh			Research Farm	
			Monalisha Pramanik S.P. Tiwari	Datia			Research Farm	
			D.C. Sahoo H. 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 good. Effect of trenching and water harvesting (Jal Kund) on runoff may be accounted for and designed accordingly. Study of soil physical and hydrological parameters may be done between two trenches. Name of Dr. A.K. Tiwari is deleted and Dr. V.K. Bhatt will be the leader at Chandigarh. Name of Mr. Manish Kumar is deleted at Datia. (Action: Dr. P.R. Bhatnagar and leaders at other Centres)								
63.	NRMACSWCRTICIL200801000023	Enhancing productivity of ravine lands by plantation of *A. sapota* with intercropping systems.	V. Kakade Gaurav Singh V.C. Pande D. Dinesh	Vasad	2008-09	2022-23	Research Farm	To be continued
Comments: Progress is very good. Names of Dr. Raj Kumar and Dr. B.K. Rao are deleted and Dr. V. Kakade will be the leader of project. . (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)

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
64.	NRMAIISWCCIL 201502400110	Evaluation of criteria and techniques for classification of fisheries - sensitive watersheds for conservation and production management.	Chayna Jana A.K. Gupta	Hydrology & Engineering, Dehradun	2015-16	2017-18	Garhwal Himalayas	To be concluded
Comments: Progress is very good. Sensitive watersheds may be tried to select for making the project more user friendly. Name of Dr. M. Muruganandam is deleted and Ms. Chayna Jana will be the leader of project. Name of Er. Uday Mandal is deleted. (Action: Ms. Chayna Jana)								
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 continued
Comments: Progress is very good. Name of Dr. Dileep Kumar is deleted. (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 P.R. Ojasvi Pradeep Dogra S.S. Shrimali	Bellary	2016-17	2018-19	Research Centre, Bellary, Karnataka	To be continued **(Sujala – III Project)**
Comments: Progress is very good. Indicators already developed by the Institute may be reviewed for the project. Names of Dr. A. Raizada and Mr. Suresh Kumar are deleted and Dr. S.L. Patil will be the leader of project. (Action: Dr. S.L. Patil)								
67.	NRMAIISWCCIL 201502500111	Socio-economic analysis of tribal farming system in different topo-sequence in Koraput District, Odisha.	M.K. Meena P.P. Adhikary M. Madhu	Koraput	2015-16	2017-18	Koraput district	To be concluded
Comments: Progress is very good. Data may be collected and analyzed in view of land holding size distribution within a land type holding. Name of Dr. D.C. Sahoo is deleted. (Action: Mr. M.K. Meena)								

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
68.	NRMACSWCRTI SIP201300500079	Role of soil and water conservation technologies for climate resilient agriculture in Himalayan ecosystem - An action research.	D.V. Singh Charan Singh Ramanjeet Singh D.M. Kadam Deepak Singh	Soil Science & Agronomy Dehradun	2013-14	2017-18	Hattal and Sainj villages, Uttarakhand	To be concluded
Comments: Progress is very good.								
69.	NRMAIISWCCIL 201502600112	Developing ICT based e-learning tools for conservation measures and watershed management.	Chayna Jana S.S. Shrimali N.M. Alam Rajesh Kaushal Bankey Bihari	Hydrology & Engineering, Dehradun	2015-16	2018-19	Different agro-ecological regions of India	To be continued
Comments: Progress is very good. Development of bilingual ICT based e-learning tool/model may be initiated for farmers of Western Himalayan region. It may be started with 3-4 technologies of farmers' friendly. Name of Dr. Ramanjeet Singh is deleted. (Action: Ms. Chayna Jana)								

6.2 PARTICIPATORY TECHNOLOGY DISSEMINATION AND ADOPTION

70.	NRMAIISWCSOP 201502800114	Ensuing sustainable agricultural development and livelihood security in lower Shiwalik range of Uttarakhand.	Ramanjeet Singh D.M. Kadam	Soil Science & Agronomy, Dehradun Lead Centre: IARI, New Delhi	2015-16	2017-18	Haridwar district, Uttarakhand	To be concluded **(DST Funded)**
Comments: Progress is very good. Net profit in the system as a whole may be worked out. Name of Dr. Lakhan Singh is deleted and name of Mr. D.M. Kadam is included as an associate. (Action: Dr. Ramanjeet Singh)								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
71.	NRMAIISWCCIL 201601400128	Assessing farmers knowledge, vulnerability and adapting capacity of soil and water conservation technologies under changing climatic scenario.	Bankey Bihari Rajesh Bishnoi Indu Rawat	HRD&SS, Dehradun	2016-17	2018-19	Dehradun district	To be continued **(Core Project)**
			D.C. Meena R.K. Dubey Rama Pal	Agra			Agra	
			S.L. Patil B.S. Naik A.S. Morade	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	
			Ashok Kumar H.R. Meena I. Rashmi	Kota			Kota	
			P. Sundarambal K. Kannan P. Raja O.P.S. Khola	Udhagamandalam			Udhagamandalam	

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
			V.C. Pande O.P. Meena	Vasad			Vasad	
Comments: Progress is very good. Climate change aspect should be covered in the study. Villages from those districts may be selected which are vulnerable to climate change. Name of Dr. Lakhan Singh is deleted and Dr. Bankey Bihari will be the leader of core project. Name of Mr. A.K. Gupta is deleted at Dehradun. Dr. Rama Pal will replace Dr. S.K. Dubey at Agra. Dr. S.L. Patil will replace Mr. Suresh Kumar and Dr. B.S. Naik will replace Dr. A. Raizada as leader and associate, respectively at Bellary Dr. Satihya K. will replace Dr. Pankaj Panwar at Chandigarh however, Dr. Pankaj Panwar may support in providing Climate Change data. Mr M.K. Meena will replace Dr. Om Prakash as leader at Datia. Dr. P. Jakhar will be the leader and Mr. M.K. Meena will be associate at Koraput. Mr. O.P. Meena will replace Dr. Raj Kumar at Vasad. (Action: Dr. Bankey Bihari and Leaders at Research Centres)								
72.	NRMAIISWCCIL 201601600130	Assessment of sustainability factors for soil and water conservation projects.	Rajesh Bishnoi Indu Rawat Bankey Bihari N.M. Alam	HRD&SS, Dehradun	2016-17	2018-19	Dehradun & Tehri Garhwal districts	To be continued
Comments: Progress is very good. Guest experts of different disciplines may be invited for technical back stopping. Project should be completed in December, 2018. Dr.(Ms.) Indu Rawat will replace Dr. Lakhan Singh as first associate. (Action: Mr. Rajesh Bishnoi)								
73.	NRMAIISWCCOL201701700147	Farmer participatory technology application for sustainable resource management and livelihood security in North-west Himalayas.	Bankey Bihari S.S. Shrimali Lekh Chand U.K. Maurya Rajesh Bishnoi D.M. Kadam Trisha Roy	HRD&SS, Dehradun	2016-17	2017-18	Raipur Block, Dehradun	To be concluded **(KVK Scheme of ICAR) (New Project)**
74.	NRMAIISWCCIL 201701800148	Role of women in conservation and management of natural water resources for domestic and irrigation uses.	Indu Rawat Rajesh Bishnoi Vibha Singhal Trisha Roy	HRD&SS, Dehradun	2017-18	2019-20	Mid-Himalayas of Uttarakhand	To be continued **(New Project)**
Comments: NRM related components may be studied. Villages near the oak and pine forests may be selected for the study. Literature may be reviewed. (Action: Dr.(Ms.) Indu Rawat)								

S. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
75.	NRMAIISWCCIL 201601500129	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	2018-19	Dehradun district	To be continued
Comments: Progress is very good. Technologies may be provided to the selected villages under ToT and TSP. (Action: Dr. Charan Singh)								
76.	NRMAIISWCCIL 201502700113	Documentation and validation of ITKs in soil and water conservation practiced by tribal farmers of Tamil Nadu.	P. Sundarambal P. Raja R. Ragupathy K. Kannan V. Selvi	Udhagamandalam	2015-16	2018-19	Tribal districts of Tamil Nadu	To be continued
Comments: Progress is very good. A core project including all Research Centres and Headquarters of the Institute may be planned on above project. Name of Ms. V. Selvi is included as fourth associate. (Action: Dr.(Ms.) P. Sundarambal)								

PROJECTS CONCLUDED DURING THE YEAR 2016-17

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.	1.1	NRMACSWCRTICIL 201400100081	Mapping and characterization of Jhola land areas in Koraput district.	Ch. J.P. Dash P.P. Adhikary M. Madhu U.K. Maurya	Koraput	2014-15	Koraput districts
Comments: Progress is excellent.							
2.	1.1	NRMACSWCRTI CIL201300400078	Developing methodological framework for delineating and characterization of Chambal and Yamuna ravines.	G.L. Meena R.K. Singh	Kota	2013-14	Chambal Valley in Kota region
				R.B. Meena K.K. Sharma S.K. Dubey	Agra		Riparian area of Yamuna river
Comments: Progress is very good.							
3.	1.2	NRMAIISWCCOL 201500500091	Effect of climate change on hydrology of small watersheds vis-à-vis soil and water conservation measures. **(NICRA Project)**	D.R. Sena P.K. Mishra Uday Mandal Chayna Jana N.M. Alam	Hydrology & Engineering, Dehradun	2014-15	River basin Brahmani (Bench mark basin) and 3 other sub-basins in different agro-eco-systems
				Monalisha Pramanik Rajeev Ranjan S.P. Tiwari	Datia		
				P.P. Adhikary Ch.J.P. Dash D.C. Sahoo M. Madhu	Koraput		
				B.K. Rao P.R. Bhatnagar Gaurav Singh V.C. Pande	Vasad		
Comments: Progress is very good. For subsequent research on Climate Change implications on watershed development, a project proposal may be prepared and sent to NICRA for approval for conducting at the Headquarters, Dehradun as the NICRA project is being extended by ICAR. (Action: Dr. D.R. Sena)							

S. No.	Prog. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Year of Start	Location of Project
4.	2.1	NRMACSWCRTICIL 200900200031	Conservation tillage for resource management and higher production from Shiwaliks.	Sharmistha Pal Pawan Sharma S.L. Arya Sathiya K.	Chandigarh	2009-10	Research Farm
Comments: Progress is very good.							
5.	2.1	NRMACSWCRTICIL 201100800054	Adaptation potential and productivity of organic vis-à-vis conventional farming system under rainfed conditions of Shiwaliks region.	Pawan Sharma Sathiya K. V.K.Bhatt	Chandigarh	2011-12	Research Farm
Comments: Progress is very good.							
6.	2.1	NRMAIISWCCIL 201501000096	High value forage grass strips for resource conservation and enhancing production in crop fields.	B.K.Rao Gaurav Singh D. Dinesh V.C.Pande	Vasad	2015-16	Research Farm
Comments: Progress is very good. Figures of net returns may be re-checked. (Action: Er. Gaurav Singh)							
7.	2.2	NRMACSWCRTI CIL201000500041	Effect of degradation on conservation and production attributes of Sal forests in Uttarakhand.	J.M.S. Tomar J. Jayaprakash M. Sankar	Plant Science, Dehradun	2010-11	Rudrapur, Langha & Kalyanpur
Comments: Progress is very good. Estimation of carbon sequestration potential may be done. (Action: Dr. J.M.S. Tomar)							
8.	2.2	NRMACSWCRTI CIL201101100057	Influence of aromatic grasses and tree management on soil moisture and health under silvo-aromatic grass systems on bouldery land of Doon Valley.	J.M.S. Tomar Rajesh Kaushal A.K. Gupta	Plant Science, Dehradun	2011-12	Research Farm
Comments: Progress is very good.							
9.	2.2	NRMACSWCRTI CIL201101300059	Canopy management in *Morus alba* for enhancing productivity and resource conservation.	Rajesh Kaushal Ambrish Kumar J. Jayaprakash D. Mandal	Plant Science, Dehradun	2011-12	Research Farm
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
10.	2.2	NRMACSWCRTI CIL201101400060	Resource budgeting in agro-forestry for livelihood security by applying WANulCAS model under Indian condition.	Pankaj Panwar Sharmistha Pal V.K. Bhatt Ram Prasad	Chandigarh	2011-12	Research Farm
Comments: Progress is very good.							
11.	3.2	NRMACSWCRTI CIL201200400073	Water budgeting of a ravine watershed pond for optimum crop planning under semi-arid region.	K.K. Sharma S.K. Dubey Dileep Kumar	Agra	2012-13	Research Farm
Comments: Progress is very good.							
12.	3.2	NRMACSWCRTI CIL201400400084	Socio-economic implication and vulnerability of farmers to ground water exploitation in hard rock region of the Deccan.	Suresh Kumar A. Raizada	Bellary	2014-15	Four districts of Karnataka
Comments: Progress is excellent.							
13.	3.2	NRMACSWCRTI COL201400500085	Development of efficient and innovative blue and green water harvesting techniques for enhancing the land and water productivity of semi-arid districts of Gujarat. **(DST Funded)**	B.K. Rao P.R. Bhatnagar	Vasad	2014-15	Panchmahal and Dahod districts
Comments: Progress is very good.							
14.	3.2	NRMAIISWCCOL 201600800122	Development of cost effective plastic check dams for water harvesting in rainfed regions. **(Extra Mural Project)**	B.K. Rao P.R. Bhatnagar P.K. Mishra	Vasad	2015-16	Research Farm & Farmers' field
Comments: Progress is very good.							
15.	5.1	NRMACSWCRTICIL 200900700036	Multiple criteria decision for identifying suitable Integrated Farming Systems in different agro-ecological regions for optimizing resource conservation and productivity.	Pradeep Dogra N.K. Sharma A.C. Rathore	PME Cell, Dehradun	2009-10	Asthi Watershed
				A.K. Singh D.C. Meena Dileep Kumar	Agra		Jalalpur Watershed

S. No.	Prog. No.	Project Code No. (RPP No.)	Title of the Project	Leader and Associates	Centre/Division	Year of Start	Location of Project
				S.L. Patil H. Biswas Suresh Kumar	Bellary		Ramasagara Watershed
				S.L. Arya Ram Prasad	Chandigarh		Janoli Village, Panchkula
				Dev Narayan Rajeev Ranjan	Datia		Jigna Watershed
				M.K. Meena	Koraput		Lachhaputraghati Watershed
				Ashok Kumar H.R. Meena	Kota		Dhoti Watershed
				K. Kannan P. Raja	Udhagamandalam		Ayalur Watershed
				V.C. Pande O.P. Meena	Vasad		Vejalpura-Rampura Watershed
Comments: Progress is very good.							
16.	5.2	NRMAIISWCCOL 201601200126	Devising economic frame work for ecosystem services payment and farmers' livelihood in Mahi and Chambal ravine ecosystems. **(Extra Mural Project)**	V.C. Pande P.R. Bhatnagar Raj Kumar D. Dinesh	Vasad	2015-16	Mahi ravine
				Ashok Kumar B.L. Mina S. Kala	Kota		Chambal ravine
Comments: Progress is very good.							
17.	6.1	NRMAIISWCCOL 201601300127	Creation of ICT network to disseminate knowledge about the soil and water conservation technologies to farmers in Himalayan region. **(Extra Mural Project)**	Lakhan Singh Rajesh Bishnoi Bankey Bihari S.S. Shrimali Ramanjeet Singh D.M. Kadam	HRD&SS, Dehradun	2015-16	Himalayan region
Comments: Progress is very good.							

NEW PROJECTS APPROVED DURING IRC MEETING – 2017

S. No.	Prog. No.	Project Code No. (RPP No.)	Title of the Project	Centre/Division
1.	1.2	NRMAIISWCCOL 201700100131	Study of atmospheric and soil carbon dioxide fluxes in temperate mountainous ecosystem of western ghats with reference to climate change impact assessment. **(NRSC-ISRO, Hyderabad Funded)**	Udhagamandalam
2.	1.3	NRMAIISWCSIP 201700200132	Land use effect on soil carbon stock and soil quality in Mahi ravine ecosystem of semi-arid tropics. **(Collaborative project with NBSSLUP)**	Vasad
3.	2.1	NRMAIISWCCIL 201700300133	Development of conservation agriculture practices for rainfed production systems in North-western Himalayan region.	Soil Science & Agronomy, Dehradun
4.	2.1	NRMAIISWCCIL 201700400134	Evaluation of conservation tillage based *Arundo donax* mats for resource conservation and enhancing cropping intensity of sloping crop lands.	Soil Science & Agronomy, Dehradun
5.	2.1	NRMAIISWCCIL 201700500135	Determining resource conservation potential of bio-degradable waste and their on-farm utilization to increase crop productivity and profitability.	HRD&SS, Dehradun
6.	2.1	NRMAIISWCCIL 201700600136	Utilization of different industrially derived waste along with *Arbuscular Mycorrhizal Fungi* (AME) for sustainable soil management.	HRD&SS, Dehradun
7.	2.1	NRMAIISWCCIL 201700700137	*Jhola kundi* based vegetable farming with soil moisture conservation practices for increasing profitability of tribal farmers of Eastern Ghats High Land region.	Koraput
8.	2.2	NRMAIISWCCIL 201700800138	Evaluation of rooting media and rootstocks of major sub-tropical fruits spp. for raising quality planting materials on degraded lands.	Plant Science, Dehradun
9.	2.2	NRMAIISWCCOL 201700900139	Promotion and expansion of Lemon grass (*Cymbopogon flexuosus*) cultivation as an alternative crop for livelihood security in SC and ST communities in Dehradun district. **(DST Project)**	Plant Science, Dehradun
10.	2.2	NRMAIISWCCOL 201701000140	Upscaling research assessment of productivity, hydrological behaviour, resource conservation and intangible benefits of selected commercial bamboo species in Uttarakhand. **(INBAR China Project)**	Plant Science, Dehradun
11.	2.2	NRMAIISWCCIL 201701100141	Assessment and improvement of nutritional quality of horticultural crops on sloping lands in North-west Himalayas.	Plant Science, Dehradun
12.	2.2	NRMAIISWCCIL 201701200142	Regulated deficit irrigation and canopy architecture management for fig (*Ficus carica L.*) in semi-arid vertisols.	Bellary
13.	3.2	NRMAIISWCSIP 201701300143	Quantitative and qualitative assessment and management strategy for the sustainable development of the groundwater resources in Haridwar district. **(Collaborative Project with CGWB)**	Hydrology & Engineering, Dehradun
14.	3.2	NRMAIISWCCIL 201701400144	Employing system approach on zero energy drip irrigation system in bench terrace farming for hill region.	Hydrology & Engineering, Dehradun

S. No.	Prog. No.	Project Code No. (RPP No.)	Title of the Project	Centre/Division
15.	3.2	NRMAIISWCCIL 201701500145	Evaluation of direct recharge filter for revival of defunt and low yielding borewell vis-a-vis augmentation of ground water table in semi-arid region of Karnataka.	Bellary
16.	3.2	NRMAIISWCCIL 201701600146	Field evaluation of ground water recharge filters developed by ICAR-IISWC, Vasad.	Vasad
17.	6.2	NRMAIISWCCOL 201701700147	Farmer participatory technology application for sustainable resource management and livelihood security in North-west Himalayas. **(KVK Scheme of ICAR)**	HRD&SS, Dehradun
18.	6.2	NRMAIISWCCIL 201701800148	Role of women in conservation and management of natural water resources for domestic and irrigation uses.	HRD&SS, Dehradun

STATUS OF NUMBER OF PROJECTS

No. of projects in 2016-17	Projects concluded in 2016-17	New projects added in 2017-18	Total no. of projects in 2017-18
A	**B**	**C**	**D = A-B+C**
75	17	18	76

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	12	31	15	05	04	09	76

OBSERVATIONAL TRIALS APPROVED FOR 2017-18

S.No.	Title of Project	Leader & Associates	Centre / Division
1.	An evaluation of the potential to use the Fallout Radionuclide (FRN) Caesium – 137 ($^{137}C_S$) in national scale soil erosion assessment in India.	M. Sankar	SS&A, Dehradun
Comments: Project is agreed in principle however, it is to be finalized by the ICAR, New Delhi. The study may be conducted as an Observational Trial for the year 2017-18. (Action: Dr. M. Sankar)			
2.	Soil erosion and runoff studies in system crop intensification of different crops with different mulching materials.	Lekh Chand M. Sankar	HED&SS, Dehradun
Comments : The project may be conducted as on Observation Trial for 2017-18 taking only 8% slope with different cropping systems instead of changing the slopes. (Action: Dr. Lekh Chand)			
3.	Improving out-planting success of various multipurpose tree species in Yamuna ravines using improved planting stock and bio-fertilizers.	A.K. Parandiyal R.B. Meena	Agra
Comments: The project may be carried out as an Observational trial for one more year in 2017-18 and presented in the next IRC meeting. (Action: Dr. A.K. Parandiyal)			
4.	Investigation on effect of biodegradable polymer treatment on irrigation planning and water use efficiency in sandy loam soils of reclaimed Yamuna ravine.	K.K. Sharma R.B. Meena S.K. Dubey	Agra
Comments: The study may be conducted for one more year during 2017-18 as an Observational Trial and pot study may be done. Published papers on hydrogels may be reviewed. PF curve may also be worked out. (Action: Dr. K.K. Sharma)			
5.	Performance of fruit trees with physical barriers in the rhizosphere in semi-arid vertisols.	A.S. Morade H. Biswas B.S. Naik	Bellary
Comments: In place of cement pipes, cheaper materials may be used. The study may be conducted as an Observational Trial for 2017-18 and work already done on this aspect may be reviewed. (Action: Mr. A.S. Morade)			
6.	Efficient utilization of fruit / vegetable waste (FVW) for improving soil health and productivity of organic agri-oleri system.	Sathiya K. Pawan Sharma V.K. Bhatt S.L. Arya	Chandigarh
Comments: Treatments may be modified related to Mandi waste only. Recommended dose of N,P,K, may be used. The project may be carried out as an Observation Trial for 2017-18 and detailed review on country level may be done. (Action: Dr.(Ms.) Sathiya K.)			
7.	Developing catchment, storage and command area relationships for enhancing rainwater productivity in Eastern Ghat region of Odisha.	P. Jakhar D.C. Sahoo Karma Beer	Koraput
Comments: The project may be conducted as an Observational Trial for 2017-18 and plan/options for the farmers may be chalked out. (Action: Dr. P. Jakhar)			
8.	Effect of biochar application on soil quality and crop yield in the acid soils of hilly region, Western Ghats.	K. Rajan P. Raja K. Kannan	Udhagamandalam
Comments: The project may be carried out as an Observaitonal Trial for 2017-18 and doses of biochar may be tested as 2 t/ha and 4 t/ha. (Action: Dr. K. Rajan)			

NEW PROJECT PROPOSALS SUBMITTED FOR CONSIDERATION IN THE RAC / IRC MEETINGS - 2017

NEW PROJECT PROPOSALS AGREED BY THE RAC

S. No.	Prog. No.	Title of Project	Leader & Associate	Duration	Location of Project	Remarks of the RAC	Remarks of the IRC
SOIL SCIENCE & AGRONOMY DIVISION, DEHRADUN							
1.	2.1	Evaluation of conservation tillage based *Arundo donax* mats for resource conservation and enhancing cropping intensity on sloping crop lands.	Ramanjeet Singh N.K. Sharma Trisha Roy Uday Mandal N.M. Alam A.K. Gupta	2017-18 to 2022-23	Research Farm, Selakui	**Agreed**	**Approved**
2.	1.1	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 **Co-PIs**: One from Soil Science, Agronomy & Soil Conservation Engineering from different participating centres	2017-18 to 2020-21	For objective I: Agricultural fields from Ooty, Koraput, Vasad and Datia centres will be used and for Dehradun archived soil samples will be used. For objective I: Uneroded, undisturbed reference sampling sites (for fallout estimation) will be identified at Dehradun, the new sites in Objective 1, and at complimentary locations identified along latitudinal and rainfall gradients across India	**Agreed**	**Agreed** in principle. **Approved** as an **Observational Trial** for one year.
HUMAN RESOURCE DEVELOPMENT AND SOCIAL SCIENCE DIVISION, DEHRADUN							
3.	2.1	Soil erosion and runoff studies in system crop intensification of different crops with different mulching materials	Lekh Chand M. Sankar	2017-18 to 2020-21	Research Farm, Selakui	**Agreed as observation trial with comments** 1. Treatment should be practical utility and of locally available material. 2. Review the previous work done so	**Approved** as an **Observational Trial** for one year.

						far in the country. 3. Specify the quantity and quality of weed mulch. 4. Mulch material should be taken before flowering. 5. Runoff measuring system and plots should be repaired at Selakui Research Farm for initiating the project as OT.	
4.	2.1	Utilization of different industrially derived waste along with Arbuscular Mycorrhizal Fungi (AMF) to improve nutrient and water use efficiency for sustainable soil management.	Trisha Roy Uday Mandal Ramanjeet Singh D. Mandal N.M. Alam	2017-18 to 2020-21	Research Farm, Selakui	**Agreed as observation trial with comments** 1. Title not matching as per objectives (WUE missing in objectives). 2. Specify the basis of the treatments. Availability of amendments (treatments) may be reviewed considering its practical application. 3. VAM need substrate to grow; therefore consortia approach should be followed instead of AMF alone. 4. Specify the quantity of amendments. 5. Pot studies should be done rather than going directly for field studies. 6. Soil microbiologist should be consulted before finalizing the proposal.	**Approved**
5.	6.2	Assessment of drudgery level of farm women in rainfed hill agriculture of Uttarakhand and	Indu Rawat Rajesh Bishnoi Bankey Bihari	2017-18 to 2020-21	3 villages in Dehradun District	**Agreed with comments** 1. Major objective of the project should be Role of Women in Soil and water Conservation and title	**Approved**

		intervention for their safeguard.				of the project should be modified accordingly. 2. Work done by ICAR-Central Institute for Women in Agriculture may be reviewed. 3. Report of AICRP on Ergonomics and Safety in Agriculture by ICAR – Central Institute of Agricultural Engineering, Bhopal should be consulted while formulating methodology.	
HYDROLOGY & ENGINEERING DIVISION							
6.	3.2	Quantitative and qualitative assessment and management strategy for the sustainable development of the groundwater resources in Haridwar District.	Uday Mandal D.R. Sena	2017-18 to 2021-22	Secondary data from CGWB, Dehradun and Haridwar District	**Agreed with comment:** Agreement with CGWB regarding data availability and sharing should be done.	**Approved**
7.	3.2	Employing system approach on zero energy drip irrigation system in bench terrace farming for hill region	Deepak Singh P.R. Ojasvi D.R. Sena Trisha Roy Uday Mandal A.C. Rathore	2017-18 to 2020-21	Research Farm, Selakui	**Agreed with comments** 1. Specify the water source. 2. Provide the details of demand and supply of water.	**Approved**
PLANT SCIENCE DIVISION, DEHRADUN							
8.	2.2	An Assessment of the gradient of erosion process impacts on nutritional quality of horticulture crops: to address nutritional security.	D.M. Kadam M. Sankar A. K. Gupta H. Mehta	2017-18 to 2022-23	Research Farm, Selakui, Pasauli and Dhulkot villages	**Agreed**	**Approved**

AGRA							
9.	2.1	Evaluation of different nutrient options and plant growth regulators in pearl millet–wheat sequence on reclaimed Yamuna ravines.	R.K. Dubey S.K. Dubey Rama Pal A.K. Singh	2017-18 to 2020-21	Research Farm	**Agreed with comments** 1. Include Green manuring – bajra and wheat – bajra as main plot treatment. 2. Specify control treatment. 3. Bio-fertilizer alone should not be used as treatment. 4. FYM dose should be increased to 10 t/ha and nutrient contents should be analysed before adding FYM to the crop. 5. Sub plot treatment should include: • FYM+NPK (50% of recommended) • FYM+ bio-fertilizer • FYM • Control 6. Sub-sub plot i.e PGRs should not be part of study. 7. Weed diversity and soil biological properties should also be monitored. 8. Plot size should be increased upto 25 m^2. 9. Project should be of minimum 5 years.	Almost similar project was conducted as an **Observation Trial** in the year 2016-17 and **Not Approved** as a project in the IRC – 2017.
BELLARY							
10.	2.2	Performance of fruit trees with physical barriers in the rhizosphere in semi-arid vertisols	A.S. Morade H. Biswas B.S. Naik	2017-18 to 2025-26	Research Farm	**Agreed with comments** 1. Cement pipe treatments are not cost effective and easy to handle. Instead empty coal tar drum may be used. 2. Specify pit filling mixture. It should be manipulated for rhizosphere management	**Approved** as an **Observational Trial** for one year.

						favourable for growth of plant and microorganisms. 3. Provision should be kept for taking HDPE sheet out. 4. The work done at Agra and other ICAR institutes like CRIDA may be reviewed.	
11.	4.1	Slope stabilization and erosion control for restoration of mined out areas in the semi-arid region of Karnataka using natural fibre based geotextiles	B.S. Naik A.S. Morade	2017-18 to 2022-23	Bellary and other Centres	**Agreed with comments** 1. Core project on rehabilitation of degraded lands through geojute may be formulated by involving other centres. 2. Proposal for core project may be discussed in IRC and with Dr. K.K. Satapathy, Member RAC. 3. Project may be submitted to jute board for external funding. 4. Jute blended fabrics may also be included in the treatments.	**Not Approved.** Efforts may be made to approach local agencies for funding. It may be linked to core project.
CHANDIGARH							
12.	2.1	Efficient utilization of fruit /vegetable wastes (FVW) for improving soil health and productivity of organic agri-oleri system	Sathiya.K Pawan Sharma V.K.Bhatt S.L.Arya	2017-18 to 2022-23	Research Farm, Panchkula (1-5 years in the research farm and also creating infrastructure in the farmers field in the 1st year and starting trial in the farmers field in 2-5 years)	**Agreed with comments** 1. Treatment may be changed to: • Recommended NPK • FVW (100% decomposed) • Vermicompost (prepared by traditional method) • FYM (10 t/ha) 2. Sub-plot treatment may be excluded. 3. Observation on earthworm population may be included. 4. Quantity of FVW may be specified. Nutrient content of composted FVW should be taken into account while quantifying its dose.	**Approved** as an **Observational Trial** for one year.

						5. Soil microbial properties may also be monitored. 6. Decomposition time of fruits/ vegetables may be recorded.	
KORAPUT							
13.	5.1	Study of production resource developmental unit (PRDU) based best management practices on watershed ecosystem services in Eastern Ghats region of Odisha under Neeranchal National Watershed Project.	M. Madhu P.K. Mishra D.R. Sena B.L. Dhyani D.C. Sahoo P.P. Adhikary H. Gowda P. Jakhar Ch. J.P. Dash M.K. Meena Karm Beer	2017-18 to 2022-23	Kandhamal District of Odisha under Neeranchal National Watershed Project (NNWP)	**Agreed with comment** PI has to be from Koraput Centre	**Agreed** in principle. Project is **deferred** till the final approval from the funding agency.
14.	1.1	Development of Kinetic Energy-Intensity relationship and its usefulness in predicting hydro-sedimentological variables in a small watershed of EGHL region of Odisha.	Ch. J.P. Dash	2017-18 to 2021-22	Semiliguda block, Koraput district, Odisha	**Agreed**	**Not Approved** due to unavailability of required equipment.
15.	2.1	Optimizing rainwater and nutrient use efficiency in maize based runoff farming.	P. Jakhar	2017-18 to 2020-21	Research Farm/ Farmer's field, Semiliguda, Koraput, Odisha	**Agreed with comments** 1. Runoff induction treatment should be replaced with method of planting. 2. Fertilizer placement treatments should be excluded and only recommended dose should be used.	**Approved** as an **Observational Trial** for one year.
16.	3.2	Multi-scale controls on spatial patterns of soil water storage in the	P.P. Adhikary	2017-18 to 2021-22	Semiliguda block, Koraput district, Odisha	**Agreed as observation trial with comments :** Methodology as given in objective 1	**Not presented** hence, **Not Approved**

		Eastern Ghats High Land Regions of India.				may be presented during the IRC meeting.	
17.	2.1	Maximization of nutrients and rainwater use efficiency under vegetable based cropping system for small tribal farmers in Eastern Ghats region.	Karma Beer	2017-18 to 2020-21	Research Farm, Sunabeda, Koraput	**Agreed with comments** 1. Specify traditional irrigation method in the treatment. 2. If possible, fertigation treatment should be added. 3. Only one or two major inter-cropping system should be taken. 4. Treatments should be limited to seven with bigger plot size. 5. Use RBD instead of Split Plot Design. 6. Water productivity should also be calculated.	**Approved**
UDHAGAMANDALAM							
18.	2.1	Effect of biochar application on soil quality and crop yield in the acid soils of hilly region, Western Ghats	K. Rajan P. Raja K. Kannan	2017-18 to 2022-23	Research Farm	**Agreed with comments** 1. Review scope of biochar in high rainfall areas. 2. Leaf litter can also be better option than biochar so may be included as treatment.	**Approved** as an **Observational Trial** for one year.
19.	4.1	Evaluation of potentially important jute soil savers and jute blended fabrics for various soil and water conservation applications.	S. Manivannan V.K. Thilagam K. Kannan Suresh Kumar O.P.S. Khola **ICAR-NIRJAFT, Kolkata** Gautham Bose, Pr. Scientist & Head	2017-18 to 2022-23	Nilgiri District, Tamil Nadu	**Agreed with comments** 1. Objective 1 should be replaced by –To study the mulching effect of non-woven jute fabrics on vegetable crops. 2. Objective 4 should be deleted but economics have to be worked out. 3. Project may be submitted to jute board for external funding. 4. Core project should be formulated by involving other centres.	**Agreed** in principle. Project is **deferred** till the final approval from the funding agency.

20.	2.1	Evaluation and improvement of water and nutrient use efficiency for potato based cropping sequence through efficient use of harvested rain water.	P. Raja K. Kannan K. Rajan	2017-18 to 2022-23	Nilgiri District, Tamil Nadu	**Agreed**	**Not Approved as project.** However, it may be conducted as demonstration and DSS may be developed with the existing information.
VASAD							
21.	1.3	Land use effect on soil carbon stock and soil quality in Mahi ravine ecosystem of semi-arid tropics.	D. Dinesh V. Kakade Gaurav Singh	2017-18 to 2020-21	Mahi ravines in Gujarat	**Agreed with comments** 1. Available information in ravine should be reviewed and compiled. 2. As the project involves soil survey, therefore, collaboration of NBSSLUP should be explored.	**Approved**
22.	1.2	Survey on assessment of response of resource conserving trees and agroforestry systems to extreme weather events under climate change scenario.	Raj Kumar V. Kakade Gaurav Singh V.C. Pande P.R. Bhatnagar D. Dinesh	2017-18 to 2020-21	Different agro-climatic zones of Gujarat state	**Agreed with comments** 1. Specify how extreme weather response will be measured /identified/quantified. 2. Crops, shrubs, grasses and herbs also need to be considered. 3. PI should contact Dr. P.S. Pathak, Member, RAC for formulating methodology to be used for collecting the data.	**Cancelled** due to transfer of PI
23.	3.2	Field evaluation of groundwater recharge filters developed by ICAR-IISWC, Vasad.	Gaurav Singh P.R. Bhatnagar V.C. Pande D. Dinesh O.P. Meena	2017-18 to 2019-20	Existing groundwater recharge filters under different watersheds adopted by ICAR-IISWC, RC-Vasad under different completed projects	**Agreed**	**Approved**

NEW PROJECT PROPOSALS NOT AGREED BY THE RAC

S.No.	Prog. No.	Title of Project	Leader	Centre/Division	Remarks of the RAC
1.	2.1	Assessing climatic resilience of a management intensive maize based cropping system in north-western Himalayan region	Ramanjeet Singh	SS&A, Dehradun	**Not Agreed** Considering the work load of PI, the project may be taken up through NICRA/NMSHE modeling group.
2.	2.1	Comparing different irrigation methods for tomato crop in saline vertisols of North Karnataka	S.K. Srivastava	Bellary	**Not Agreed**
3.	1.2	Quantification of soil and nutrient losses through harvested produces of root and tuber crops in the Nilgiris	K. Rajan	Udhagamandalam	**Not Agreed**
4.	2.2	Characterization of Swamp *Environs* (Forest, Agriculture, Grasslands, Plantation and Urban areas) for the strategic restoration of Nilgiri fragile ecosystems in South India	P. Raja	Udhagamandalam	**Not Agreed**

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		
	➢ Soil Science & Agronomy	1, 4, 7, 8, 13, 14, 25, 48, 68, 70	**10**
	➢ HRD&SS	15, 16, 52, 71, 72, 73, 74	**07**
	➢ Hydrology & Engineering	2, 5, 10, 49, 50, 51, 59, 64, 69	**09**
	➢ Plant Science	26, 27, 28, 29, 30, 31, 32, 33, 34, 44, 45, 53, 75	**13**
	➢ National Fellow Programme	9	**01**
2.	Agra	7, 45, 49,54, 62, 65, 71	**07**
3.	Bellary	7, 17, 18, 35, 36, 49, 55, 66, 71	**09**
4.	Chandigarh	4, 7, 37, 45, 49, 62, 71	**07**
5.	Datia	3, 7, 19, 38, 39, 49, 62, 71	**08**
6.	Koraput	7, 11, 20, 21, 40, 46, 49, 62, 67, 71	**10**
7.	Kota	7, 22, 23, 41, 45, 49, 56, 60, 61, 62, 71	**11**
8.	Udhagamandalam	6, 7, 24, 42, 47, 49, 62, 71, 76	**09**
9.	Vasad	7, 12, 43, 49, 57, 58, 62, 63, 71	**09**
		TOTAL	**110**

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**							
	➢ Soil Science & Agronomy	4	3	1	-	-	2	**10**
	➢ HRD&SS	-	2	1	-	-	4	**07**
	➢ Hydrology & Engineering	3	-	3	1	1	1	**09**
	➢ Plant Science	-	9	3	-	-	1	**13**
	➢ National Fellow Programme	1	-	-	-	-	-	**01**
2.	Agra	1	-	3	1	1	1	**07**
3.	Bellary	1	4	2	-	1	1	**09**
4.	Chandigarh	2	1	2	1	-	1	**07**
5.	Datia	2	3	1	1	-	1	**08**
6.	Koraput	2	3	2	1	1	1	**10**
7.	Kota	1	3	3	3	-	1	**11**
8.	Udhagamandalam	2	2	2	1	-	2	**09**
9.	Vasad	2	1	3	2	-	1	**09**
	TOTAL	**21**	**31**	**26**	**11**	**04**	**17**	**110**

NUMBER OF PROJECTS WITH INDIVIDUAL SCIENTIST

The number of projects with each individual scientist of the Institute, after the IRC Meeting of 2017 is as follows:

S. No.	Name	Designation	Leader	Associate	Total	S. No. of projects to be concluded
1.	Dr. P.K. Mishra	Director	1(4)	2(1, 49)	3	1, 49
Soil Science and Agronomy Division						
2.	Dr. N.K. Sharma	Head of Division	1(13)	4(4,7,14,15)	5	7
3.	Dr. D.V.Singh	Pr. Scientist (Soils)	2(25, 68)	4(27,29,33,34)	6	27,68
4.	Dr. D. Mandal	ICAR-National Fellow	2(7, 9)	2(33, 59)	4	7,59
5.	Dr. U.K. Maurya	Sr. Scientist (Soils)	1(48)	5(4,15,52,53,73)	6	48,52,73
6.	Dr. Gopal Kumar	Sr. Scientist (Soils)	-	2(4,14)	2	-
7.	Dr. N.M. Alam	Scientist (SS) (Ag. Stat.)	1(1)	6(4,10,33,46,69, 72)	7	1
8.	Dr. M. Shankar	Scientist (Soils)	1(8)	2(31,34)	3	-
9.	Dr. Ramanjeet Singh	Scientist (Agro.)	2(14,70)	3(4,13,68)	5	68,70
Human Resource Development and Social Science Division						
10.	Dr. Bankey Bihari	I/c Head of Division	2(71,73)	4(4,69,72,75)	6	73
11.	Dr. Ambrish Kumar	Pr. Scientist (Engg.)	1(52)	6(4,27,33,44,48,53)	7	27,44,48,52
12.	Dr. Lekh Chand	Sr. Scientist (Agro.)	1(15)	3(4, 8, 73)	4	73
13.	Dr.(Ms) Indu Rawat	Scientist(Home Management/FRM)	1(74)	2(71,72)	3	-
14.	Mr. Rajesh Bishnoi	Scientist (Agril. Extn.)	1(72)	4(4,71,73,74)	5	73
15.	Dr.(Ms.) Trisha Roy	Scientist (Soils)	1(16)	6(4,10,13,30,73,74)	7	73
Hydrology and Engineering Division						
16.	Dr. P.R. Ojasvi	Head of Division	2(2,49)	3(4,51,66)	5	2,49
17.	Dr. D.R. Sena	Pr. Scientist (Engg.)	-	5(1,4,5,8,50)	5	1,5
18.	Er. S.S. Shrimali	Sr. Scientist (Com.App.)	1(59)	5(4,49,66,69,73)	6	49,59,73
19.	Dr. M. Muruganandam	Sr. Scientist (Fisheries)	---------- On Foreign Deputation----------			
20.	Er. S. Patra	Scientist (SS) (Engg.)	---------- On Foreign Deputation----------			
21.	Ms. Chayna Jana	Scientist (Ag. Stat.)	2(64,69)	4(1,4,5,10)	6	1,5,64
22.	Er. Uday Mandal	Scientist (Engg.)	2(5,50)	3(4,13,16)	5	5
23.	Er. Deepak Singh	Scientist (Engg.)	2(10,51)	3(7,31,68)	5	7,68
Plant Science Division						
24.	Dr. Harsh Mehta	I/c Head of Division & OIC, PME Cell	2(26,28)	4(29,31,32,33)	6	-
25.	Dr. Charan Singh	Pr. Scientist (Forestry)	1(75)	3(4,30,68)	4	68
26.	Dr. J.M.S. Tomar	Pr. Scientist (Forestry)	2(32,45)	4(4,26,27,33)	6	27,45
27.	Dr. A.C. Rathore	Pr. Scientist (Hort.)	1(31)	5(4,10,29,45,51)	6	45
28.	Dr. Rajesh Kaushal	Sr. Scientist (Forestry)	2(27,33)	4(4,28,32,69)	6	27
29.	Dr. J. Jayaprakash	Sr. Scientist (Forestry)	2(29,44)	3(25,31,39)	5	44
30.	Dr.(Ms.)Vibha Singhal	Sr. Scientist(Agro Forestry)	1(30)	3(25,74,75)	4	-
31.	Mr. A.K. Gupta	Scientist (Envt. Sc.)	1(53)	6(4,13,28,32,33,64)	7	64
32.	Mr. D.M. Kadam	Scientist (Hort.)	1(34)	5(25,31,68,70,73)	6	68,70,73
Prioritization, Monitoring and Evaluation Cell						
33.	Dr. Pradeep Dogra	Pr. Scientist (Ag. Eco.)	-	4(4,7,33,66)	4	7
34.	Dr. B.L. Dhyani	Sr. Scientist (Ag. Eco.)	-	-	-	-

Research Centre, Agra						
35.	Dr. S.K. Dubey	Head of Centre	1(7)	2(45,54)	3	7,45
36.	Dr. A.K. Parandiyal	Pr. Scientist (Forestry)	1(62)	2(45,65)	3	45
37.	Dr. A.K. Singh	Pr. Scientist (Engg.)	-	4(7,49,54,62)	4	7,49
38.	Dr. K.K. Sharma	Sr. Scientist (Engg.)	2(45,49)	-	2	45,49
39.	Dr. R.K. Dubey	Sr. Scientist (Agro.)	-	3(7,54,71)	3	7
40.	Dr. R.B. Meena	Scientist (Soils)	-	2(49,62)	2	49
41.	Dr. D.C. Meena	Scientist (Ag. Eco.)	2(65,71)	-	2	-
42.	Dr.(Ms.) Rama Pal	Scientist (Envt.Sc.)	1(54)	1(71)	2	-
Research Centre, Bellary						
43.	Dr. S.L. Patil	Head of Centre	2(66,71)	4(7,17,49,55)	6	7,17,49
44.	Dr. H. Biswas	Sr. Scientist (Soils)	2(7,35)	3(18,49,66)	5	7,49
45.	Dr. B.S. Naik	Scientist (S.S.) (Engg.)	2(49,55)	2(66,71)	4	49
46.	Mr. M.N. Ramesha	Scientist (Forestry)	----------On Study Leave----------			
47.	Ms. M. Prabhavathi	Scientist (Soils)	2(17,18)	2(36,66)	4	17
48.	Mr. Suresh Kumar	Scientist (Ag. Eco.)	----------On Study Leave----------			
49.	Mr. A.S. Morade	Scientist (Hort.)	1(36)	3(35,66,71)	4	-
Research Centre, Chandigarh						
50.	Dr.(Ms.) Pawan Sharma	I/c Head of Centre	-	1(4)	1	-
51.	Dr. (Ms.) S.L. Arya	Pr. Scientist (Ag. Eco.)	1(71)	2(4,37)	3	37
52.	Dr. V.K. Bhatt	Pr. Scientist (Engg.)	3(45,49,62)	2(4,7)	5	7,45,49
53.	Dr. Ram Prasad	Pr. Scientist (Horti.)	1(37)	2(4,45)	3	37,45
54.	Dr. Pankaj Panwar	Pr. Scientist (Forestry)	1(4)	3(45,49,62)	4	45,49
55.	Dr.(Ms.)Sharmistha Pal	Scientist (SS) (Soils)	1(7)	4(4,37,49,71)	5	7,37,49
56.	Dr. Sathiya K.	Scientist (Agro.)	-	1(71)	1	-
Research Centre Datia						
57.	Dr. R.S. Yadav	Head of Centre	-	4(3,19,38,71)	4	38
58.	Dr. S.P. Tiwari	Pr. Scientist (Soils)	-	3(7,39,62)	3	7
59.	Dr. Dev Narayan	Pr. Scientist (Agro.)	2(7,19)	-	2	7
60.	Dr. Rajeev Ranjan	Scientist (Soils)	2(3,39)	2(49,71)	4	49
61.	Er.(Ms.) Monalisha Pramanik	Scientist (Engg.)	3(38,49,62)	2(3,39)	5	38,49
62.	Mr. M.K. Meena	Scientist (Ag.Eco.)	2(67,71)	2(38,71)	4	38,67
Research Centre, Koraput						
63.	Dr. M. Madhu	Head of Centre	1(40)	2(7,67)	3	7,67
64.	Dr. D.C. Sahoo	Sr. Scientist (Engg.)	3(20,49,62)	2(40,46)	5	49
65.	Dr. H. Gowda	Scientist (Forestry)	1(11)	2(40,62)	3	-
66.	Dr. P. Jakhar	Scientist (Agro.)	1(71)	4(11,20,21,49)	5	49
67.	Dr. P.P. Adhikary	Scientist (Soils)	1(7)	5(20,40,46,62,67)	6	7,67
68.	Dr.(Ms.) Ch. J.P. Dash	Scientist (Engg.)	1(46)	2(21,49)	3	49
69.	Dr. Karma Beer	Scientist (Hort.)	1(21)	2(11,20)	3	-
Research Centre, Kota						
70.	Dr. R.K. Singh	Head of Centre	2(7,61)	2(49,56)	4	7,49
71.	Dr. Ashok Kumar	Pr. Scientist (Ag. Eco.)	1(71)	4(22,23,60,61)	5	-
72.	Dr. Shakir Ali	Pr. Scientist (Engg.)	2(45,62)	4(22,23,60,61)	6	45
73.	Dr. B.L. Mina	Sr. Scientist (Soils)	1(60)	5(7,22,23,45,61)	6	7,45
74.	Mr. H.R. Meena	Scientist (SS) (Hort.)	-	6(41,45,56,60,61,71)	6	45
75.	Dr. G.L. Meena	Scientist (Soils)	2(49,56)	1(61)	3	49
76.	Dr. Kuldeep Kumar	Scientist (Agro.)	1(22)	3(7,23,61)	4	7
77.	Dr. (Ms.) S. Kala	Scientist (Forestry)	1(41)	4(45,60,61,62)	5	45
78.	Dr. (Ms.) I. Rashmi	Scientist (Soils)	1(23)	3(41,61,71)	4	-

Research Centre, Udhagamandalam						
79.	Dr. O.P.S. Khola	Head of Centre	-	5(6,24,47,49,71)	5	47,49
80.	Dr. K. Kannan	Pr. Scientist (Agro.)	2(7,24)	4(6,62,71,76)	6	7
81.	Dr. S. Manivannan	Pr. Scientist (Engg.)	2(49,62)	1(47)	3	47,49
82.	Dr.(Ms) P.Sundarambal	Pr. Scientist (Ag. Extn.)	2(71,76)	-	2	-
83.	Dr. K. Rajan	Pr. Scientist (Soils)	-	4(6,42,47,62)	4	42,47
84.	Dr. P. Raja	Sr. Scientist (Soils)	1(6)	4(7,24,71,76)	5	7
85.	Dr. R. Ragupathy	Scientist (SS)(Forestry)	1(42)	1(76)	2	42
86.	Er. (Ms) V. Selvi	Scientist (SS) (Engg.)	-	2(7,76)	2	7
87.	Dr.(Ms) V.K. Thilagam	Scientist (Soils)	1(47)	2(24,49)	3	47,49
Research Centre, Vasad						
88.	Dr. P.R. Bhatnagar	Head of the Centre	3(49,57,62)	2(43,58)	5	49,57
89.	Dr. V.C. Pande	Pr. Scientist (Ag.Eco.)	1(71)	5(4,57,58,62,63)	6	57
90.	Dr. D. Dinesh	Scientist (Soils)	2(7,12)	3(43,62,63)	5	7
91.	Dr. V. Kakade	Scientist (Hort.)	2(43,63)	3(7,12,57)	5	7,57
92.	Er. Gaurav Singh	Scientist (Engg.)	1(58)	3(12,49,63)	4	49
93.	Mr. O.P. Meena	Scientist (Soils)	-	4(49,57,58,71)	4	49,57

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

LIST OF PARTICIPANTS

S.No.	Name	Designation	Participation in IRC as
1.	Dr. P.K. Mishra	Director	Chairman
Headquarters, DEHRADUN			
2.	Dr. N.K. Sharma	Head (SS&A Division)	Member & PI: P-2.1
3.	Dr. P.R. Ojasvi	Head (H&E Division)	Member & PI: P-1
4.	Dr. Harsh Mehta	OIC (PME Cell) & I/c Head (Plant Science Division)	Member Secretary, IRC & PI: P-2.2
5.	Dr. Bankey Bihari	I/c Head (HRD&SS Division)	Member & PI: P-6
6.	Dr. Charan Singh	Principal Scientist(Forestry)	
7.	Dr. Pradeep Dogra	Principal Scientist (Ag. Eco.)	PI: P-5
8.	Dr. Ambrish Kumar	Principal Scientist (Engg.)	PI: P-4
9.	Dr. D.V. Singh	Principal Scientist (Soils)	
10.	Dr. D.R. Sena	Principal Scientist (Engg.)	PI: P-3
11.	Dr. J.M.S. Tomar	Principal Scientist (Forestry)	
12.	Dr. D. Mandal	ICAR-National Fellow	
13.	Dr. A.C. Rathore	Principal Scientist (Hort.)	
14.	Dr. B.L. Dhyani	Senior Scientist(Ag. Eco.)	
15.	Er. S.S. Shrimali	Senior Scientist(CAA)	
16.	Dr. Rajesh Kaushal	Senior Scientist (Forestry)	Member Secretary, RAC
17.	Dr. U.K. Maurya	Senior Scientist (Soils)	
18.	Dr.(Ms.)Vibha Singhal	Senior Scientist(Agro Forestry)	
19.	Dr. J. Jayaprakash	Senior Scientist (Forestry)	
20.	Dr. Lekh Chand	Senior Scientist (Agro.)	
21.	Dr. N.M. Alam	Scientist (SS) (Ag. Stat.)	
22.	Ms. Chayna Jana	Scientist (Ag. Stat.)	
23.	Dr. M. Sankar	Scientist (Soils)	
24.	Dr. Ramanjeet Singh	Scientist (Agro.)	
25.	Er. Uday Mandal	Scientist (Engg.)	
26.	Mr. D.M. Kadam	Scientist (Hort.)	
27.	Mr. Rajesh Bishnoi	Scientist (Ag. Extn.)	
28.	Dr.(Ms.) Indu Rawat	Scientist (Home Management)	
29.	Mr. A.K. Gupta	Scientist (Envt. Science)	
30.	Dr. (Ms.) Trisha Roy	Scientist (Soils)	
31.	Er. Deepak Singh	Scientist (Engg.)	
32.	Dr.(Mrs.) Sangeeta N.Sharma	Chief Technical Officer	Rapporteur
33.	Dr. Matish Chandra	Chief Technical Officer	Rapporteur
34.	Mr. S.K. Sinha	Asstt. Chief Technical Officer	Rapporteur
RESEARCH CENTRE, AGRA			
35.	Dr. S.K. Dubey	Head of the Centre	Member
36.	Dr. A.K. Parandiyal	Principal Scientist (Forestry)	
37.	Dr. A.K. Singh	Principal Scientist (Engg.)	
38.	Dr. K.K. Sharma	Senior Scientist (Engg.)	
39.	Dr. R.B. Meena	Scientist (Soils)	
40.	Dr. Dileep Kumar	Scientist (Agro.)	
41.	Dr. D.C. Meena	Scientist (Ag.Eco.)	
42.	Dr. (Ms.) Rama Pal	Scientist (Envt. Science)	
RESEARCH CENTRE, BELLARY			
43.	Dr. S.L. Patil	Head of the Centre	Member
44.	Dr. A. Raizada	Principal Scientist (Forestry)	
45.	Dr. H. Biswas	Senior Scientist (Soils)	

46.	Dr. B.S. Naik	Scientist (SS) (Engg.)	
47.	Ms. M. Prabhavathi	Scientist (Soils)	
48.	Mr. Suresh Kumar	Scientist (Ag. Eco.)	
49.	Mr. A.S. Morade	Scientist (Hort.)	
RESEARCH CENTRE, CHANDIGARH			
50.	Dr. A.K. Tiwari	Head of the Centre	Member
51.	Dr. (Ms.) Pawan Sharma	Principal Scientist (Soils)	
52.	Dr. (Ms.) Swarn Lata Arya	Principal Scientist (Ag. Eco.)	
53.	Dr. V.K. Bhatt	Principal Scientist (Engg.)	
54.	Dr. Ram Prasad	Principal Scientist (Hort.)	
55.	Dr. Pankaj Panwar	Principal Scientist (Forestry)	
56.	Dr. (Ms.) Sharmistha Pal	Scientist (SS) (Soils)	
57.	Dr. (Ms.) Sathiya K.	Scientist (Agro.)	
RESEARCH CENTRE, DATIA			
58.	Dr. R.S. Yadav	Head of the Centre	Member
59.	Dr. Dev Narayan	Principal Scientist (Agro.)	
60.	Dr. Rajeev Ranjan	Scientist (Soils)	
61.	Er.(Ms.) Monalisha Pramarik	Scientist (Engg.)	
62.	Mr. M.K. Meena	Scientist (Ag. Eco.)	
RESEARCH CENTRE, KORAPUT			
63.	Dr. M. Madhu	Head of the Centre	Member
64.	Dr. D.C. Sahoo	Senior Scientist (Engg.)	
65.	Dr. P. Jakhar	Scientist (Agro.)	
66.	Dr. P.P. Adhikary	Scientist (Soils)	
67.	Dr. Karma Beer	Scientist (Hort.)	
RESEARCH CENTRE, KOTA			
68.	Dr. R.K. Singh	Head of the Centre	Member
69.	Dr. Shakir Ali	Principal Scientist (Engg.)	
70.	Dr. B.L. Mina	Senior Scientist (Soils)	
71.	Mr. H.R. Meena	Scientist (SS) (Hort.)	
72.	Dr. G.L. Meena	Scientist (Soils)	
73.	Dr. Kuldeep Kumar	Scientist (Agronomy)	
74.	Dr. I. Rashmi	Scientist (Soils)	
RESEARCH CENTRE, UDHAGAMANDALAM			
75.	Dr. O.P.S. Khola	Head of the Centre	Member
76.	Dr. K. Kannan	Principal Scientist (Agro.)	
77.	Dr. S. Manivannan	Principal Scientist (Engg.)	
78.	Dr. P. Sundarambal	Principal Scientist (Ag. Extn.)	
79.	Dr. K. Rajan	Principal Scientist (Soils)	
80.	Dr. P. Raja	Senior Scientist (Soils)	
81.	Dr. R. Ragupathy	Scientist (SS) (Forestry)	
82.	Dr.(Ms.) V.K. Thilagam	Scientist (Soils)	
RESEARCH CENTRE, VASAD			
83.	Dr. P.R. Bhatnagar	Head of the Centre	Member
84.	Dr. V.C. Pande	Principal Scientist (Ag. Eco.)	
85.	Dr. D. Dinesh	Scientist (Soils)	
86.	Dr. V. Kakade	Scientist (Hort.)	
87.	Er. Gaurav Singh	Scientist (Engg.)	
88.	Mr. O.P. Meena	Scientist (Soils)	