PREAMBLE BY THE CHAIRMAN

Dr. P.K. Mishra, Director, CSWCRTI and Chairman of Institute Research Committee (IRC) welcomed the Heads of Research Centres and Divisions, and scientists to the IRC Meeting held during May 20-24, 2013 at CSWCRTI, Dehradun. He expressed his happiness on the awards earned by various scientists of the Institute. However, he felt that since our Institute is a public funded organisation, hence, we are not working to earn awards but for fulfilling the mandate and objectives of the Institute i.e. find solutions to problems and provide the solution to planning/implementation organizations of the governments.

About the proposed Standing Finance Committee (SFC) Memo of the Institute for the XII Five Year Plan, he informed the house that good discussion has been held in its preparation and finalization. Depending upon the finally approved budget for the Institute by the ICAR, its scientists shall work accordingly to achieve quality as well as quantity in its research endeavours. The RFD document of the Institute is a good guide in this regard. Platforms identified for undertaking research on themes of national importance will also help the Institute to do qualitative research for the nation. A national perspective should be developed in the Institute's research activities and national level projects should be undertaken for contribution to the nation.

About the human resource available within the Institute, he was of the view that the situation is not alarming since new scientists and staffs have joined the Institute in the recent past years. However, loss of experienced persons through superannuations will certainly be felt. New techniques available, such as easy review of past research works through internet, can help in this regard. The younger generation can infuse innovative ideas for undertaking research in new directions. Therefore, for the future betterment of the Institute, scientists of younger generation need to be in forefront of its research activities. Experienced scientists should support them in their endeavours. On the whole, we need to work as a team, and utilize our energies and thoughts together for betterment of the nation.

The Chairman informed the house that he had visited all the Research Centres except Datia, after taking the responsibility of directing the Institute. A Head of Research Centre is the officer selected for taking similar responsibility at the Research Centre level. There should be an element of trust and sacrifice from the Head towards his fellow scientists working at the Centre. This will lead to a congenial environment that will comfortably deliver outputs.

In his concluding remarks, the Chairman hoped that four days discussion on various aspects of research during the IRC-2013 will be productive, giving concrete suggestions for better project delivery and Institute's visibility at highest level, and urged all to contribute heartily in the deliberations for achieving them.

AGENDA & PROGRAMME OF IRC MEETING, 2013

DATE (Day)	TIME (hrs)	AGENDA & PROGRAMME
20.05.2013 (Monday)	14:30	Welcome and opening remarks of the Chairman
	15:00	Recommendations of RAC-2013 & Status of new proposals agreed - Member Secretary, RAC
	15:15	Action Taken Report on the actions assigned in the IRC Meeting, 2012 - Member Secretary, IRC
	16:15	**Tea Break**
	16:30	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.6 (Erosion productivity relationships) (P-1) : Dr. D. Mandal - Sl.No. 46 (Evaluation of hydrological) (P-3) : Dr. J.M.S. Tomar - Sl.No. 57 (Field evaluation of trenches) (P-4) : Dr. R.S. Kurothe
21.05.2013 (Tuesday)	10:00	Presentation of **Core Projects** by the **leaders of core groups** - Sl.No. 59 (Multiple criteria decision) (P-5) : Dr. P. Dogra - Sl. No.60 (Evaluation of institutional) (P-6) : Dr. P. Dogra - Sl. No.61 (Post-adoption behaviour) (P-7) : Dr. G.L. Bagdi
	11:30	**Tea Break**
	11:45	Presentation of projects **concluded in 2012-13 listed on page no. 29-30 of IRC meeting proceedings 2012 by the respective project leaders** 20 minutes will be given to each project (15 minutes for presentation and 05 minutes for discussion and comments) - Sl.No. 1 (P-1) - Dr. Gopal Kumar - Sl.No. 2 (P-2.1) - Dr. O.P.S. Khola - Sl.No. 3 (P-2.2) - Dr. J. Jayaprakash - Sl.No. 4 (P-3) - Dr. V.K. Bhatt - Sl.No. 5 (P-3) - Dr. P.P. Adhikary
	13:30	**Lunch Break**
	14:30	Presentation of projects **concluded in 2012-13** - Sl.No. 6 (P-3) - Er. S. Patra - Sl.No. 7 (P-5) - Er. R.N. Adhikari - Sl.No.9 (P-5) - Er. V. Selvi - Sl.No.10 (P-6) - Dr. B. Mondal - Sl.No.11 (P-7) - Dr. Bankey Bihari - Climate Change (NPCC) project (P-3) - Er. K.P. Tripathi - TDET (MoRD) Project, Dehradun (P-6) - Dr. B.L. Dhyani
	16:45	**Tea Break**
	17:00	Presentation of **Externally funded project** by the **Project Leader** (10 minutes for presentation and 05 minutes for discussion and comments) - Sl. No.8 (P-1) - Dr. D. Mandal
	17:15	Presentation of projects **approved in IRC Meeting, 2012** 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. 9 (P-1) - Head, Research Centre, Bellary - Sl.No. 32 (P-2.2) - Head, Plant Science Division - Sl. No. 44 (P-3) - Head, H&E Division - Sl.No. 52 (P-3) - Head, Research Centre, Agra
	18.00	**Presentation and discussion on RFD** - Dr. B.L. Dhyani, Nodal Officer, RFD

22.05.2013 (Wednesday)	10:00	Presentation of **Projects due for completion (to be concluded)** in 2013-14 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.1, 2, 3 (P-1) - Sl.No. 12, 13 (P-2.1)
	11:45	**Tea Break**
	12:00	Presentation of **Projects due for completion (to be concluded)** in 2013-14 by the **Project Leaders** - Sl.No. 23, 24 (P-2.1) - Sl.No. 50 (P-3) - Sl.No. 54, 56 (P-4)
	13:30	**Lunch Break**
	14:30	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. 4, 5, 7 (P-1) - Sl.No. 10, 11, 14, 15 (P-2.1)
	16:15	**Tea Break**
	16:30	Presentation of **Ongoing (to be continued) projects** - Sl.No. 16, 17, 18, 19, 20, 21 (P-2.1)
23.05.2013 (Thursday)	10.:00	Presentation of **Ongoing (to be continued) projects** - Sl.No. 22, 25 (P-2.1) - Sl.No. 26, 27, 28, 29 (P-2.2)
	11.30	**Tea Break**
	11.45	Presentation of **Ongoing (to be continued) projects** - Sl.No. 30, 31, 33, 34, 35, 36 (P-2.2)
	13:15	**Lunch Break**
	14:15	Presentation of **Ongoing (to be continued) projects** - Sl.No. 37, 38, 39, 40, 41, 42, 43 (P-2.2)
	16:00	**Tea Break**
	16:15	Presentation of the **Ongoing (to be continued) projects** - Sl.No. 45, 47, 48, 49, 51, 53 (P-3) - Sl.No. 55 (P-4) - Sl.No. 58 (P-5)
24.05.2013 (Friday)	10:00	**Presentation of Observational Trials listed on page no. 31 of IRC meeting proceeding 2012** 15 minutes will be given to each project (10 minutes for presentation and 05 minutes for discussion and comments) Observational Trials approved in IRC,2012 at - Sl.No. 1 (P-2.1) - Dr. D. V. Singh - Sl.No.2 (P-2.1) - Ms. M. Prabhavathi
	10:30	**Presentation of New Proposals presented in IRC-2012 but not approved (listed on page no. 32)** (10 minutes for presentation and 05 minutes for discussion and comments) - Presentation and discussion on Sl.No.3 (P-1) - Dr. D.Dinesh - Discussion only on Sl.No.2 – Dr. Om Prakash & Dr. D.R. Sena
	10:45	Presentation of **New Project Proposals agreed by RAC 2013** 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. 2(Delineation ----- rehabilitation) (P-1) - Dr. S.K. Dubey - Sl.No.3 (Integration ----- lands) (P-2.2) - Dr. S. Kala

	11:45	**Tea Break**
	12:00	Presentation of **New Project Proposals agreed by RAC-2013** - Sl.No.4 & 13 (Quantification ---- loss) (P-2.2) - Dr. S.K. Dubey & - Dr. R.C. Jakhmola - Sl.No.5 (Risk ------- Deccan) (P-6) - Dr. B. Mondal - Sl.No.8 (Exploration ---- Himalayas) (P-3) - Er. S. Patra
	13:30	**Lunch Break**
	14:30	Presentation of **New Project Proposals agreed by RAC-2013** - Sl.No.9 (Evaluation ---------- study) (P-4) - Dr. G.P. Juyal - Sl.No.12 (Linking ---------- region) (P-6) - Mr. Suresh Kumar - Sl.No.14 (Design------- Himalayas) (P-3) - Dr. Ambrish Kumar - Sl.No.15(Role ---------- ecosystem) (P-7) - Dr. D.V. Singh
	16:30	**Tea Break**
	16:45	Presentation of **New Project Proposals agreed by RAC-2013** - Sl.No.16 (Developing -----Chambal) (P-5) - Dr. G.L. Meena - Sl.No.18 (Decision ------security) (P-2.1) - Dr. A.K. Vishwakarma
	17:45	**Any other presentation with the permission of Chairman**
	18:15	**Plenary Session, Concluding Remarks and Recommendations by the Chairman**
	18:45	Vote of Thanks – Member Secretary, IRC

(Note: Sl.No. of the projects is as per IRC meeting proceedings 2012)

IMPORTANT GUIDELINES FOR PRESENTATION:

1. Projects concluded in 2012-13 and to be concluded during 2013-14 should be presented giving overall findings under the project till date and conclusions in terms of stated short term / long term objectives clearly spell out the findings and possibilities for upscaling, domain area, mechanism and resources required. Introduction, justification, review should not be presented.

2. While making the presentation of the progress for all ongoing projects, the number of slides be restricted to 10 including figures / photographs covering title, leader and associates, objectives, achievements during the year.

3. Ongoing project presentation be focused 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 only. Introduction, review etc. may be presented in brief.

4. New project proposals must be based on extensive review, patent search, technical rigour, resource availability 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. It will be more appropriate if presentation is made on 1:1 mapping with respect to short/ medium / long term objectives and possible outcome / impact(s).

6. Any change in name of Leader or Associates be presented before the House in a slide at the end of the presentation and get approval of the House for the proposed modification.

7. In case the project require extension, the same may be presented to the House with proper justification.

8. The presentation of the projects must be well rehearsed at the Division/Centre level, so that it may be completed smoothly within the stipulated time frame. It may be brought to the notice of all scientists of the Research Centre/Division. Due to paucity of time, the scientist not able to present his presentation within stipulated time will not be given extra time.

9. As per recommendation of RAC 2013, the project agreed by the RAC at S.No.4 and 13 have to be integrated to form a complete project proposal. Hence, leader of the project proposals submitted to the RAC & listed at S.No. 4 & 13 should present only one presentation after integrating the objectives of both the projects.

10. Programme Implementor(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 of specialization), Programme Implementor, and OIC (PME Cell) which will be approved by the Competent Authority during the IRC.

RECOMMENDATIONS OF RAC – 2013

1. RAC recommended for conducting research on the effect of dyke height on the conservation of soil, nutrients, and rain water resources in the cropped fields in different Agro-Climatic Regions of the country. Mathematical model needs to be developed to simulate in-situ conservation of soil and rain water resources as influenced by various dyke heights.

2. RAC was of opinion that Water Harvesting Structures (WHS) developed at Hampi, Bellary (Karnatka) and Chittorgarh (Rajasthan) during medieval age are exemplary endeavor of SWC and still significant for learning. RAC recommended that the newly recruited scientists of the Institute may be facilitated to visit these sites as a part of study tour to learn the state-of-art science of these structures.

3. RAC stressed the need to collect data on conservation efficiency of different crops, grasses and fruit trees grown in different Agro-Climatic Regions of the country as information on these aspects is less available at the national level.

4. RAC appreciated that a number of WHS have been developed and being developed by the Institute at many locations across the country under various projects and recommended to equip these WHS with micro-irrigation systems for efficient utilization of the stored water for crops.

5. RAC enunciated that mine spoil areas caused by different types of mining activities in the country are posing serious land degradation problems that need to be reclaimed. It recommended to formulate projects on reclamation of mine spoil areas in order to improve the soil quality and other biophysical aspects of the affected sites for ecological restoration.

ACTION TAKEN ON "SALIENT RECOMMENDATIONS OF IRC MEETING – 2012"

S.No.	Action Assigned	Action Taken Report
1.	Final Report (RPF III) of the core project on runoff and erosion prediction models must be submitted by June 30, 2012 positively by Dr. P.R. Ojasvi and Dr. D.R. Sena. A bulletin giving details of various models and highlighting their utility (region-wise) should be published by September 30, 2012 positively. **(Action: Dr. P.R. Ojasvi, Dr. D.R. Sena and leaders at other Centres of Core Project)**	**Head, H&E**: RPF III of the project has been submitted. **PME Comments**: ➢ RPF III received ➢ No action on bulletin.
2.	Head, Research Centre, Vasad will provide data set consisting of rainfall and conservation measure wise production data to the PI of NPCC project for correlating the production data with rainfall and conservation measures. Dr. D.R. Sena will develop the model and sample data-set in consultation with PI and team members. The report may be submitted to Director by December, 2012. On approval of that report, the developed data-set may be sent by Dr. D.R. Sena to all Research Centres and Divisions to maintain uniformity of data analysis. **(Action: Head, Research Centre, Vasad, Dr. D.R. Sena, Er. K.P. Tripathi and Er. S. Patra)**	**Head, Vasad**: Data set on rainfall was given to Dr. N.M. Alam at Dehradun on the day of discussion. Model and sample data-set for compilation is yet to be received. From a short term projects (3 to 4 years) it is not possible to develop correlation. **Head, H&E**: No information has been received from Research Centre, Vasad, Dr. D.R. Sena did not consult**.** **PME Comments**: No proper action taken.
3.	As the project entitled "Assessment of impact of climate change on hydrology and crop production in the selected watersheds" was extended by the funding agency (NPCC) for one year till 2012-13, hence, the project will conclude in March, 2013. Any information on ITK on SWC available with any team member or any scientist at the Research Centres may be passed on to Er. K.P. Tripathi by August 31, 2012. Information on ITKs should be published by Er. K.P. Tripathi by October 31, 2012 positively. Alternatives may be searched out for mitigating climate change impacts, which can be merged with NICRA project. **(Action: Er. K.P. Tripathi and all Scientists/Heads of Research Centres)**	**Head, H&E**: Dr. A.K.Vishwarma has sent two proverbs collected from Gujarat and Dr. Gopal Kumar has sent 34 proverbs compiled from Hindi belt**.** This alongwith other material already collected and compiled by K.P. Tripathi is ready with over 98 percent translation. This will be ready for printing by middle of June, 2013. **PME Comments**: ➢ ITKs publication is due. ➢ Alternatives for mitigating climate change impacts not reported.
4.	All the Heads of Research Centres and Head, SS&A Division should ensure that either the soil samples or analyzed data as per the requirement of the assignment given to Dr. (Ms.) Sharmistha Pal for computation of Soil Threat Index may be provided to Dr. Pal at the earliest. Dr. Pal should periodically report the progress to the Headquarters and final report should be presented in the next IRC meeting. **(Action: Dr.(Ms.) Sharmistha Pal, all Heads of Research Centres and Head, SS&A Division)**	**Head, Chandigarh:** Soil samples for microbial analysis were sent by the Centres. Soil samples were analysed for microbial properties. However, the results were not satisfactory, because soil samples received by post were dry. **PME Comments**: ➢ Progress is not satisfactory. ➢ Not reported periodically to Headquarters by Dr. Sharmistha Pal.

5.	Head, HRD&SS Division should once again try to organize a meeting of officers of state departments that have undergone regular training course at our Institute for discussing and developing a consensus regarding propogation of the theme of natural resource management (NRM) in general and our Institute's mandate in particular. Feedback of new training modules and shortened regular training course of four months may be obtained from State Agriculture, Soil Conservation & Watershed departments, SLNA, NRAA etc. and then send to ICAR for approval. These assignments may be given top priority and should be completed before the end of year 2012. **(Action: Head, HRD&SS Division)**	**Head, HRD&SS**: National Consultation Workshop was organized during Feb. 1-2, 2013. Recommendations have been finalized based on the feedback that was received. Recommendations and revised syllabi have been sent to DDG (NRM) for his response and the approval of the Council. **PME Comments**: Action completed. Report to this effect is not received.
6.	The modified sediment yield sampler may be tested under field conditions during the *kharif*, 2012 by Dr. Gopal Kumar and the results be reported to Dr. Harsh Mehta, OIC (ITMU) at Headquarters with the information regarding patent of this equipment. A team from Institute may visit to examine performance of the equipment in field condition. Patent filing based on research conducted at Institute Headquarters or its Centre be done only after verification of results by the duly approved committee of the Institute. No Centre or individual should directly file any patent without the approval of Institute. **(Action: Dr. Gopal Kumar and Dr. Harsh Mehta)**	**Head, Vasad**: Field installable version of the sediment yield sampler is ready. There is no setup at Research Centre Vasad to generate reference data of similar temporal resolution. Telephonic discussion was held with the Director in this regard and he suggested procuring automatic runoff sampler from ICRISAT. A detailed discussion is further required. **Head, Pl.Sci.**: Not applicable **PME Comments**: Action not completed. Project under extension period from 2007 to 2010.
7.	A common report on the criteria for identification of landslide prone areas and cumulative index for indentifying vulnerability of landslide prone areas may be prepared by Dr. G.P. Juyal, Dr. R.P. Yadav and Dr. D.V. Singh and submitted to the Director by September 30, 2012 positively. A meeting may be conducted for the purpose. **(Action: Dr. G.P. Juyal, Dr. R.P. Yadav and Dr. D.V. Singh)**	**Head, H&E**: This assignment was given during IRC-2010 and a report on the said aspect was prepared alongwith landslide hazard index for the Nilgiris. It could only be prepared for the Nilgiris as there was an externally funded project on landslide running at Ooty Centre under which basic data on different aspects of landslides was collected for the Nilgiris. Thereafter, during IRC-2011 Dr. G.P. Juyal and Dr. R.P. Yadav were assigned to do the said work for Himalayan and Shiwalik hills. Dr. G.P. Juyal prepared a report on landslide for Himalayan hill eco-system based on review of literature. Dr. R.P. Yadav had prepared the report on soil stability in Shiwalik hills based on the data collected under a different Institute project related to influence of soil properties on slope stability. As per the comments of IRC-2012, further it was attempted to prepare a common report on the criteria for identification of landslide prone areas and cumulative index for identifying vulnerability of landslide prone areas in different hilly ecosystems. Based on the information/data available

		on different aspects of landslides in different hilly areas, it was observed by the team that landslides in different hilly areas are affected by different set of factors. For example in the Himalayas and Shiwaliks geology plays a crucial role in causing landslides whereas in the Nilgiris, landuse is the main factor for causing landslides. Therefore, developing a common index for different hilly areas was not found possible. However, the team suggests that if systematic study under core project is taken up in collaboration with other concerned Institutes like IIT, Roorkee, WIHG, IIRS, Dehradun etc. on this aspect. **Head, Chandigarh**: Report have been submitted by Dr. G.P. Juyal. **Head, HRD&SS**: Not applicable **PME Comments**: Action not completed
8.	A common terminology and methodology of measuring carbon sequestration, carbon stock and carbon budgeting need to be finalized that can be adopted by Headquarters and all Research Centres of the Institute uniformly. For this, a team under the leadership of Dr. B.N. Ghosh is constituted and Dr. Rajiv Singh, Dr. O.P. Chaturvedi and Dr. A. Raizada will be associates. The report on methodology (after conducting a meeting at Dehradun) may be sent to all Heads of Research Centres and Divisions by August 31, 2012 which will be followed by all scientists. **(Action: Dr. B.N. Ghosh, Dr. Rajiv Singh, Dr. O.P. Chaturvedi and Dr. A. Raizada)**	**Head, SS&A**: Document has been prepared by Dr. B.N. Ghosh and communicated to scientists involved in the Research Centres (Dr. R.K. Singh, Kota and Dr. A. Raizada, Bellary) and head-quarters (Dr. O.P. Chaturvedi). Final document will be submitted to the PME Cell after receiving necessary modification, if any, by 15th of May, 2013. **Head, Kota**: A report on carbon sequestration methodology has been prepared and is being circulated by Dr. B.N. Ghosh. **Head, Pl.Sc.**: Meeting could not be arranged. However will be discussed as per suggestion of the leader. **Head, Bellary**: Comments on the document prepared have been submitted to Dr. B.N. Ghosh, who in turn will incorporate them and submit the final document to the PME cell. **PME Comments**: Action not achieved.
9.	Research Centre, Agra and Kota should also take-up the study for delineation and characterization of Yamuna and Chambal ravines, respectively using the methodology adopted by Vasad Centre for Mahi ravine. The methodology needs to be standardized. **(Action: Heads of Agra and Kota Centres)**	**Head, Agra & Kota**: New projects on Yamuna and Chambal ravines have been agreed by the RAC which will be presented in the IRC meeting. **PME Comments**: Action completed.
10.	As conservation is the main mandate of our Institute, the trenching software may be developed by Dr. R.S. Kurothe, Head, Research Centre, Vasad by November 30, 2012 as s Institute's product and send to the Institute for filing copyright. (**Action: Dr. R.S. Kurothe)**	**Head, Vasad**: Trenching software already sent to Dehradun for filing copyright. **PME Comments**: ➢ Action Completed. ➢ Further action may be assigned to OIC (ITMU) for filing copyright.

11.	As per recommendations of RAC-2012 regarding collaboration with other Institutes to formulate network projects, a team of scientists from Agra and Datia Centres may visit IGFRI, NRCAF and CIRG while scientists from Kota Centre may visit CAZRI and CSWRI to explore the level of collaboration possible for soil degradation, moisture retention and over all local environment. This assignment may be completed by September 30, 2012. **(Action: Head, Research Centres Agra, Datia and Kota)**	**Head, Agra, Datia & Kota**: A team of scientists form Agra, Datia and Kota Centres visited the IGFRI, NRCAF, CIRG, CAZRI and CSWRI Institutes for exploring the possibilities of collaborative projects. The proposal of collaborative project has been agreed by the RAC which will be presented in the IRC meeting. **PME Comments**: Collaborative project developed for approval of IRC without the names of scientists from collaborating Centres of our Institute.
12.	RAC emphasized on the projects based on quality of ground water, and laboratory and field studies to assess the sediment trap behaviour in conjunction with recharge filters. As these issues are being addressed by our Institute, hence, a suitable reply as action points may be submitted by the Head, Research Centres, Bellary and Vasad by December 31, 2012. **(Action: Head, Research Centres Vasad and Bellary)**	**Head, Vasad**: Agronet material has been tested and report sent to RAC. Horizontal/inverse filtering is under testing **Head, Bellary**: (a) Assessment of water quality has been carried out in the ongoing watershed projects and in an earlier project dealing exclusively with GW. Results indicate that GW in the hard rock regions collected during 2011 from 66 bore wells from two watersheds were analyzed for suitability for irrigation based on electrical conductivity, sodium percentage, sodium absorption ratio (SAR), residual sodium carbonate (RSC), Kelly's ratio and permeability index etc. Results indicate that sodium and electrical conductivity levels in the water was so high that out of 66 samples analyzed, only 23 (35%) were fit for irrigation. (b) In a study at KD Pally, water quality analysis revealed that except pH, all other water quality parameters like EC, SAR, RSC, total hardness, nitrate & fluoride content reached desirable limits in close vicinity (< 100m) to the water harvesting structures. A paper on the 2nd part of the study has been accepted for publication in *Current Science.* **PME Comments**: Action completed but report not submitted to RAC by Bellary Centre.
13.	RAC-2012 has recommended for disseminating the technologies developed by the Institute in collaboration with SAUs, KVKs and other line departments for making the production system resilient to climate change. For strengthening the linkages and inter-operatibility between Institute and concerned departments, Head, HRD&SS Division may co-ordinate the action taken in this regard by getting reports from all Heads of Research Centres and Divisions. **(Action: Head, HRD&SS Division and all Heads of Research Centres and Divisions)**	**Head, Agra**: Not applicable **Head, Bellary:** Activities were taken up under the ToT program only in vertisols & in the TDET project in alfisols. These were institute projects and no state dept. was involved. **Head, Chandigarh:** Water conveyance system is upgraded in Kajiyana watershed to increase water availability for adaptation to climate change scenario. **Head, Datia:** ➢ Three technology brochures of the centre have been given to KVK, Datia

		(under RVSKVV, Gwalior), Dy Director, ATMA and Dy. Director (Agril) Datia ➢ More then 314 technology brochures have also been purchased by the state line departments, NGO for distribution among farmers/trainees/ stakeholders in their meetings/ Kisan Mela etc. ➢ SWC technologies were also explained/ discussed among group of farmers during workshop cum field day organized at the centre on 18.9.12 and FID on 28.2.13 and more than 100 technology brochures were distributed to progressive farmers. ➢ Besides, 10 demonstrations covering 5 villages of District Datia (MP) were also laid down on farmer's field by the centre under TOT programme during the year. **Head, Koraput:** Action taken reported submitted to Head, HRD and also attached here with. **Head, Kota :** KVKs, SAUs and other line departments have included technologies developed by the centre in their recommendations. **Head, Udhagamandalam:** Technologies of the Centre are disseminated through training programmes. One day workshop for Horticulture Officials of Nilgiri District was organized at the Centre on 04 Sept. 2013. KVK is taking up front line demonstrations on four technologies of Udhagamandalam Centre. The Centre also had technology demonstrations under two externally funded Model Watersheds (MMA-NWDPRA and HADP) and TOT programme (10 farmers, 10 acres, 7 villages) in the region. **Head, Vasad:** Krishi Vigyan Kendra (KVK) Devataj, Sojitra in Anand district was contacted for dissemination of well recharge filters in farmers' fields in water scarcity areas nearby the KVK under the TOT scheme of CSWCRTI, Dehradun. The Project Coordinator, KVK, Devataj selected suitable farmers for transfer of recharge filter technology during 2013-14. **Head, H&E :** Not applicable **Head, Pl.Sci:** Proposal submitted under TSP. **Head, HRD&SS:** ➢ MoU was signed with a NGO Himalayan Action Research Centre (HARC) for this purpose. ➢ CSWCRTI, Research Centre, Koraput and M S Swaminathan Research

		Foundation, Regional Centre, Jeypore have undertaken project on 'Ensuring safe drinking water to the tribal households in Koraput region of Odisha' sponsored by Department of Science and Technology. ➢ CSWCRTI, Research Centre, Koraput developed link with Watershed Committee for Transfer of Technology project at LPG watershed. ➢ CSWCRTI, Research Centre, Koraput developed links with Odisha Forestry Sector Development Programme (OFSDP) and Odisha Watershed Development Mission (OWDM) for capacity building programmes. ➢ Attached two separate sheets submitted by the Head, H&E Division where he reported linkages with state line departments and NGOs on some of the technologies developed. **Head, SS&A**: Technologies developed by the SS&A division demonstrated in the farmers field under TOT after getting the consent from Head, HRD&SS. **PME Comments**: An action was assigned by the IRC-2012 to the Head of HRD&SS Division to co-ordinate the action taken in this regard by getting reports from all Heads. Only two Heads i.e. Head, H&E & RC, Koraput have reported to the Head, HRD&SS. Head, HRD&SS submitted the compiled report of his Division and Koraput Centre only. All other Heads sent their reports in this reference to PME Cell directly.
14.	As opined by the RAC, the Head, Research Centre Agra may correspond with CIPHET for technique and possibilities of collaboration for packeting and marketing of *Aloe vera* in ravine affected areas so that farmers can get remunerative price for their horticulture based product. **(Action: Head, Research Centre, Agra)**	**Head, Agra**: Dr. A. K. Singh has visited CIPHET and work is under progress. **PME Comments**: Initiation has been taken.
15.	Technology brochure based on research findings of the project entitled "Optimum tillage and organic manuring practices for crop production and resource conservation in the Nilgiris" should be brought out by Dr. O.P.S. Khola and Dr. K. Kannan by November 30, 2012 positively. **(Action : Dr. O.P.S. Khola and Dr. K. Kannan)**	**Head, Udhagamandalam**: The draft of technology brochure is ready. Codal formalities are being initiated for printing. **PME Comments**: Action completed partially.
16.	Complete Annual Report of the Research Centres/Divisions must be submitted as per the latest Annual Report pattern giving all captions	**All Heads**: Annual Report submitted in time. **PME Comments**: ➢ Captions of tables, photos and figures in

	(tables, photos and figures) alongwith brief summary of finding of projects in Hindi by February 28, 2013, to print a bilingual Annual Report as desired by ICAR. **(Action: All Heads of Research Centres/ Divisions)**	Hindi have not been provided by Research Centres/ Divisions. ➢ Research project summary in English and Hindi : - In both - Kota - In English only - Chandigarh, Udhagamandalam and Vasad - Not submitted - other eight Research Centres and Divisions.
17.	The Monthly Cabinet Reports should be prepared in bullet form highlighting the Salient Achievements only in a quantifiable manner for onward transmission to the Council latest by 12th of every month. Further, monthly highlights of research projects with photographs / tables etc. for publication in ICAR News / ICAR Reporter and DARE Report may also be submitted regularly by all the Heads of Research Centres / Divisions. **(Action: All Heads of Research Centres/ Divisions)**	**All Heads except Datia**: It is being submitted regularly. **Head, Datia**: ➢ The monthly material for News letter submitted on 21.9.12 as per given format, with news paper cutting and photographs etc. ➢ Sr. Scientist (Agril Ext) was assigned to prepare a list of salient research findings based on concluded projects (not reported before) and submit monthly reports in bullet form. But it could not be regular. **PME Comments**: Monthly Cabinet Reports (MCR) are normally being submitted by Research Centres however, Chandigarh Centre is submitting Nil reports and Agra Centre is sending only rainfall, runoff and soil loss data. HRD&SS Division is reporting only the training aspects and SS&A Division is rarely reporting the achievements. Datia Centre has not reported any MCR.
18.	Information for Result Framework Document (RFD) progress must be submitted with documentary proof regularly. RFD 2013-14 must be discussed at the Centre/Division level. The Centre/Division are free to add any 'Action' within any objective alongwith corresponding success indicator. However, it must be ensured that the 'Action' should be of longterm nature and one to three years 'Action' should not be included in the RFD 2013-14. The 'Action' which is likely to be finished/completed within short term of three years should not be listed in the RFD. **(Action: All Heads of Research Centres / Divisions)**	**All Heads**: Action is being taken regularly. **PME Comments**: Monthly RFD progress is regularly submitted. The documentary proof is not submitted in proper shape. Agra, Datia Centres and H&E, Plant Science Divisions are submitting Nil reports. Chandigarh, Vasad Centres and HRD&SS Division are reporting mostly training aspects.
19.	All the scientist must append the data sheet containing raw data collected / generated under the project alongwith RPFs II & RPF III for record at the Institute.. **(Action: All Scientists of Research Centre/ Division)**	**All Heads**: Action will be taken accordingly. **PME Comments**: Raw data sheet has not been appended with the RPFs submitted by the Research Centres and Divisions. In the light of RPPs, raw data should be submitted with RPP III. In RPP II, Heads of Centres/Divisions may submit a certificate that "Raw data from the project have been collected meticulously and recorded in the data register with the PI. I have checked and satisfied".

20.	As the Research Centre, Datia is completing 25 years of its establishment, Head of Datia Centre should organize some programmes in which dignitaries from ICAR, New Delhi may participate. Immediate action is required in this direction. **(Action: Head, Research Centre, Datia)**	**Head, Datia**: ➢ In fact, completion of 25 years of centre's establishment was in preceding year i.e. Sept, 2011 and a workshop was organized as per approval of the then Director. ➢ During current year, 26th foundation day was celebrated on 18.9.2012 which was attended by representative of Director's from HQ, I/c Director, NRCAF, Dy. Conservator of forest Datia and Dy. Director ATMA . **PME Comments**: Action completed.
21.	PI of the project entitled "Resource conservation and sustainable crop production using bio-fertilizers and organics in degraded Shiwaliks" should make efforts to upscale the good findings of the project through external funding. **(Action: Dr. (Ms.) Pawan Sharma)**	**Head, Chandigarh**: Institute Project on organic farming based on previous study is being taken up. A core project is being formulated for its funding. **PME Comments**: Not proper action taken.
22.	As the project entitled "Participatory dissemination and assessment of land and water management technologies for livelihood security in rainfed areas of north-western Himalayas under TDET scheme, Dept. of Land Resources, Ministry of Rural Development" carried out at Headquarters, Dehradun was extended by the funding agency (TDET-MoRD) for one year hence, the project will conclude in March, 2013. **(Action: Dr. B.L. Dhyani)**	**Dr. B.L. Dhyani**: As per the extension by the funding agency (TDET-MoRD), the project activities have been executed till March, 2013. However, the funding agency has agreed in principal to extend the project period for current financial year. **PME Comments**: Action completed. Extension may be granted after receiving extension letter from Funding Agency.
23.	User name and password of the projects approved in IRC-2012 may be provided by the Nodal Officer (PIMS-ICAR) by 20th August, 2012. Data of these new projects and other ongoing projects of Research Centres/ Divisions whose data entry is still incomplete may be entered into Project Information and Management System (PIMS) of ICAR by September 15, 2012, positively. **(Action: All Scientists and Heads of Research Centres/ Divisions and Nodal Officer, PIMS-ICAR)**	**Head, SS&A**: User name and password have been sent to all the PIs whose project has been approved during IRC 2012 in August, 2012. **All Heads**: All projects have been entered into PIMS. **PME Comments**: Action completed.
24.	While submitting new project proposals by the scientists for consideration of RAC/IRC, the PI and Head should provide financial requirement (year wise) and other implications besides ensuring the availability of budget, equipments, manpower (scientific, technical etc.) and other resources (land etc.) required to the project(s) at the Research Centres/Divisions.**(Action: All Heads of Research Centres/ Divisions and all scientists)**	**All Heads**: Action is being taken accordingly and financial requirement (year wise) and other implications will be submitted while presenting new projects. **PME Comments**: It may be observed during the presentation of new projects.
25.	Heads of Research Centres / Divisions and scientists should ensure that the norms fixed by the IRC regarding number of research projects with individual scientist are followed. In case, the scientist has less than the requisite scientific workload in terms of Research Projects, the Head should ensure that the scientist submits	**All Heads**: Norms fixed by the IRC regarding number of research projects with individual scientist are being followed. **PME Comments**: It may be observed during presentation of on-going and new projects.

	new project proposals for presentation and consideration of RAC/IRC. However, if the number of projects with a scientist is exceeding the maximum limit as per norms, the new project proposals should not be forwarded by the Head. The scientist may withdraw his/her name from a project with valid justification. **(Action: All Heads of Research Centres/ Divisions and all Scientists)**	
26.	Before submitting any new project proposal, an extensive upto date review of all aspects related to researchable problem / issue must be undertaken by the scientists to know the importance of the project. It should also be reported in detail in the RPF I of the related project. **(Action : All Scientists/Heads of Research Centres /Divisions)**	**All Heads**: Extensive review on new proposals are being undertaken. **PME Comments**: It should be reported in the concerned RPP-I if the project is approved in IRC meeting.
27.	The scientists, whose new projects have been agreed upon by the RAC, should invariably attend the IRC meeting for finalization of objectives and methodologies of the projects or else he/she must submit proper factual written justification to the Competent Authority for absence from the IRC meeting before the IRC, otherwise project will not be discussed and it will be reflected adversely in AAR of the scientist. **(Action: All Scientists and Heads of Research Centres/Divisions)**	**All Heads**: Action will be taken accordingly. **PME Comments**: As per directives given by the DG, ICAR in the Interactive meeting of NRM Division on 12th March, 2013, all scientists should attend the IRC meeting of the Institute.
28.	As per requirement of the current water scenario in the country, there should be one project on water harvesting at each Research Centre. Efforts may be made for this project by all scientists and Heads of Research Centres. Demonstrations on rainwater harvesting is must at all Centres. **(Action: All Scientists and Heads of Research Centres)**	**All Heads**: Action is being followed. **PME Comments**: It may be observed during the presentation of projects.
29.	While making presentation of a project to the IRC and during submission of RPFs, the title of the project and leader and associates should be kept the same as mentioned in the IRC meeting proceedings of the related year. These should not be modified / changed without the approval of IRC. **(Action: All Scientists/Heads of Research Centres/Divisions)**	**All Heads**: Action has been noted for compliance by all the scientists. **PME Comments**: It will be observed during presentation of projects and submission of RPPs.
30.	Before presenting a project in the IRC meeting, the presentation must be well rehearsed by the scientist at the Division/Research Centre level, so that it may be completed smoothly within the stipulated time frame in the IRC. Any change in leader or associates and objectives or treatments of the project should be presented by the scientist in the IRC meeting with proper written justification and approval of the House must be taken for the proposed changes. **(Action: All Scientists/Heads of Research Centres / Divisions)**	**All Heads**: This action is being taken accordingly by all the scientists. **PME Comments**: It may be observed during presentation.

31.	Abstract of published paper be sent by each scientist to Er. S.S. Shrimali, OIC, AKMU through respective Heads/ Controlling Officer only, for uploading on the Institute website. Information regarding list and success stories of the projects, important events, visits of dignitaries etc. may also be sent by all Heads of Research Centres and Divisions alongwith proper photographs to Er. S.S. Shrimali for updation of Institute's website. **(Action: Er. S.S. Shrimali & All Scientists/Heads of Res.Centres /Divisions)**	**All Heads except H&E**: Published papers and other relevant information are being sent to OIC, AKMU as and when available. **Head, H&E:** Action been taken accordingly. **PME Comments:** According to STMIM report, OIC, AKMU reported that the information regarding published papers has not been reported from the Research Centre and Divisions. Hence, the action taken is unsatisfactory.
32.	If supplemental irrigation is applied to any crop or tree in a project, it must be mentioned as life saving irrigation in the concerned RPFs as well as in the presentation of project by the scientist in the IRC meeting. **(Action: All Scientists/ Heads of Research Centres / Divisions)**	**All Heads**: The action has been noted for compliance by all scientists. **PME Comments**: It may be observed during presentation.
33.	In case of multiple / intercropping systems, yield data should be presented in a single major crop yield equivalent only. In case, the experimental yield of any crop is less than the normal yield, the technical reasons for this may be documented and presented in IRC and concerned RPFs. Rainwater use efficiency should be presented in case of each rainfed project. **(Action: All Scientists/Heads of Res.Centres/ Div.)**	**All Heads**: This will be followed by all scientist and reported accordingly. **PME Comments**: It may be observed during presentation.
34.	Standard and uniformly accepted scientific terminology of respective discipline may be adopted by all the scientists. **(Action: All Scientists/Heads of Res.Centres / Div.)**	**All Heads**: The action will be adopted by all scientists. **PME Comments**: It may be observed during presentation.
35.	The leader of each project should maintain a register and enter the day to day expenditure (with purpose) including labour (mandays) so that a tentative expenditure statement can be made at the end of the project as a part of Project Based Budgeting. This will help in fund allocation for the succeeding year from the Institute. **(Action: All PIs)**	**All Heads**: The procedures for keeping the track of expenditure made in the project are being followed by all PIs. **PME Comments**: Action completed.
36.	In response to recommendation no. 1 of RAC – 2012, the status on soil erosion due to grazing of goat and sheep at national level may be compiled and submitted by Dr. R.C. Jakhmola, Pr. Scientist (Animal Nutrition) to the competent authority. **(Action: Dr. R.C. Jakhmola, Pr. Scientist)**	**Head, HRD&SS**: Dr. R.C. Jakhmola has developed and presented this information. A sharing workshop for developing multi-institution project on the subject is proposed on May 15-16, 2013 at Dehradun. **PME Comments**: Status report on soil erosion due to grazing of goats and sheep at national level has not presented. PME Cell has also not received the report. No proper action taken.
37.	Once a project is approved it will continue till its logical end. Termination of the project in between is not permitted in a normal situation. However, if the leader leaves the project in between for some valid reason, the project will continue with any associate or a	**All Heads**: Action point has been noted for compliance by all the scientists as and when needed in future. **PME Comments**: Action completed and may be observed during IRC in future.

	new scientist who replaces the leader at the Centre/Institute depending on the convenience for smooth functioning of the project with the approval of IRC. The leader who leaves the project must deposit layout, data sheet and other documents related to the project to the first associate with due acknowledgement. This is required to be completed before recommending the case for relieving the scientist. **(Action: All Scientists/ Heads of Res.Centres/ Div.)**	
38.	For each project, a detail activity sheet should be maintained with all operations and inputs for calculating energy use efficiency. **(Action: All Scientists of Res.Centres/ Div.)**	**All Heads**: The detail activity sheets are being maintained by all the concerned scientists for each project. **PME Comments**: Action completed.
39.	The earlier action points which have not been completed last year should be completed in 2012-13. The defaulters for RPFs should submit the RPFs immediately. **(Action: All concerned scientists of Research Centres & Divisions)**	**All Heads**: Action taken accordingly. **PME Comments**: All RPF's up to March, 2012 have been received, scrutinized, signed by the competent authority, inspected by the auditors and sent back to the concerned Head of Divisions and Research Centres. RPP I of all the new projects approved in the IRC-2012 have been received from all the concerned scientists except from Dr. D.R. Sena, Sr. Scientist (Engg.).
40.	A meeting must be organized by all the Heads of Research Centres/Divisions after the IRC meeting with all Scientists and Technical Officers of the Centre/Division and decisions of IRC should be discussed indicating what actions have to be taken in the stipulated time frame. **(Action: All Heads of Research Centres/Divisions)**	**Head, Agra**: Meeting was held on 20th Nov., 2012 & stipulated time frame for various actions was cleared. **Head, Bellary:** This meeting is normally held after the IRC tour at the centre. **Head, Chandigarh:** It was done at the centre. **Head, Datia:** Decision of IRC-2012 was discussed among all Scientist and Technical staff Meeting at the centre. ATR was also submitted on 17.10.12 along with other compliance report on comments under different project. **Head, Koraput:** Being Followed **Head, Kota:** STIMM is being organized every month and works are being assigned, monitored and assessed regularly to meet the requirements within stipulated time frame. **Head, Udhagamandalam:** The IRC proceedings were made available to all scientists for taking action on comments and recommendations. **Head, Vasad:** Action is being taken **Head, H&E :** Action taken accordingly. **Head, Pl.Sci:** Meeting arranges and discussed. **Head, HRD&SS:** This meeting was organized and necessary action was initiated. **Head, SS&A**: Noted **PME Comments**: Meetings organized only at Chandigarh, Bellary, Datia & Agra Centres and reports were submitted by Chandigarh Centre in Aug., 2012, Bellary and Datia Centres during Oct., 2012 and Agra Centre in Nov., 2012. Other Research Centres and all Divisions have not submitted the reports on organizing the meeting.

SALIENT RECOMMENDATIONS OF IRC MEETING – 2013

1. A format may be prepared by Dr. P.R. Ojasvi, Pr. Scientist (Engg.) and sent to all concerned scientists for getting the information for preparing a bulletin from the core project on runoff and erosion prediction models. Dr. P.R. Ojasvi will be the senior author and Dr. R.S. Kurothe, Dr. A.K. Tiwari, Dr. Ambrish Kumar, Dr. V.K. Bhatt and Dr. D.R. Sena will be co-authors of the bulletin. Information on the given format may be submitted by concerned scientists to Dr. P.R. Ojasvi and the bulletin may be published by next IRC meeting.
   (Action: Dr. P.R. Ojasvi, Dr. R.S. Kurothe, Dr. A.K. Tiwari, Dr. Ambrish Kumar, Dr. V.K. Bhatt and Dr. D.R. Sena)

2. Rainfall data set of Vasad Centre may be provided by Dr. N.M. Alam to Dr. D.R. Sena for its analysis. Analysis results may be provided to Er. K.P. Tripathi, PI, NPCC project for correlating the production data with rainfall and conservation measures by July 15, 2013. Findings of NPCC project may be circulated to all scientists by Er. K.P. Tripathi and all the data be handed over to Dr. D.R. Sena before his retirement.
   (Action: Dr. D.R. Sena, Er. K.P. Tripathi and Dr. N.M. Alam)

3. Data format of modeling developed for collection of data in different projects may be sent by Dr. D.R. Sena, Sr. Scientist (Engg.) to all Heads of Research Centres and Divisions by June 30, 2013.
   (Action: Dr. D.R. Sena)

4. First draft regarding information on ITKs collected and compiled by Er. K.P. Tripathi, Pr. Scientist (Engg.) may be submitted by July 10, 2013 positively.
   (Action: Er. K.P. Tripathi)

5. Report on all data computed and analyzed from Chandigarh and other Research Centres on Soil Threat Index by Dr.(Ms.) Sharmistha Pal, Scientist, should be submitted by June 30, 2013 positively. **(Action: Dr.(Ms.) Sharmistha Pal)**

6. Two units of field level sediment sampler may be got fabricated by Dr. Gopal Kumar, Scientist and tested at Vasad Centre and Headquarters, Dehradun. Funds for this activity will be provided by the Institute. **(Action: Dr. Gopal Kumar)**

7. Final report on the criteria for identification of landslide prone areas and cumulative index for identifying vulnerability of landslide prone areas may be submitted by Dr. G.P. Juyal, Head, H&E Division by June 30, 2013 positively. The report may include the reasons for not developing a common report for different hilly ecosystems i.e. Himalayan, Shiwalik and Nilgiris hills. **(Action: Dr. G.P. Juyal)**

8. The technologies developed by the Institute in collaboration with SAUs, KVKs and other line departments should be disseminated for making production systems resilient to climate change. Dr. Bankey Bihari, Pr. Scientist (Ag. Extn.) may co-ordinate the action taken in this regard by getting reports from all Research Centres and Divisions, and a compiled report may be submitted by July 31, 2013 positively. **(Action: Dr. Bankey Bihari)**

9. A common terminology and methodology of measuring carbon sequestration, carbon stock and carbon budgeting should be finalized by the constituted team headed by Dr. B.N. Ghosh in association with Dr. Rajive Singh, Dr. O.P. Chaturvedi and Dr. A. Raizada, and sent to all scientists by June 15, 2013 for comments and suggestions. Final report on methodology may be sent to all Heads of Research Centres and Divisions by June 30, 2013, which will be followed by all scientists.
   (Action: Dr. B.N. Ghosh, Dr. Rajive Singh, Dr. O.P. Chaturvedi and Dr. A. Raizada and all scientists)

10. Rainfall chart of all previous years available at Research Centres may be sent by all Heads to Dr. N.M. Alam, Scientist (Ag. Stat.). Initial analysis of rainfall chart may be done by Dr. N.M. Alam and submitted by August, 2013.
    (Action : Dr. N.M. Alam and All Heads of Research Centres)

11. Capacity building of other scientists from Agra and Kota Centres may be takenup by Dr. Gopal Kumar, Scientist (Soils), Research Centre, Vasad for learning the methodologies of RS/GIS used for Mahi ravines under a concluded project. **(Action: Dr. Gopal Kumar)**

12. A technology brochure may be published with all options for economical use / establishment of terrace risers under concluded project entitled "Technique for establishment of tea on terrace risers in the Nilgiris". Liasoning with state departments, KVKs and line departments may be done for upscaling the developed technologies. Collection of yield data may be continued. Economics may be worked out before submitting final recommendations by June, 2013.
(Action: Dr. O.P.S. Khola)

13. A bulletin may be published on results obtained from concluded project entitled "Fuelwood and fodder production from densified plantations on old riverbed lands". Economics may also be worked out and included in the bulletin. **(Action: Dr. J. Jayaprakash)**

14. Information on different crops may be synthesized by Dr. P.P. Adhikary, Scientist (Soils) under concluded project entitled "Analysis of climatic data for evolving drought indices towards planning sustainable cropping systems in Bundelkhand". Number of crops may be reduced for demonstration of the results under the ToT programme. **(Action: Dr. P.P. Adhikary)**

15. Economic analysis, water use efficiency and water saving may be calculated by Er. S. Patra, Scientist (Engg.) under concluded project entitled "Integration of low cost water harvesting and micro irrigation for resource conservation and sustainable vegetable production in terraced lands in North-Western Himalayas". It may also be demonstrated in technology park.
(Action: Er. S. Patra)

16. As the project entitled "Participatory dissemination and assessment of land and water management technologies for livelihood security in rainfed areas of north-western Himalayas" under TDET scheme, Dept. of Land Resources, MoRD carried out at Headquarters, Dehradun has been extended by the funding agency (TDET-MoRD) for one more year vide the letter No. 5-2/2006-TE dated 14.06.2013, hence, the project will conclude in March, 2014. Findings of the project may be published for which the write-ups may be submitted by Dr. Charan Singh and Dr. Bankey Bihari to Dr. B.L. Dhyani by June, 2013. All the scientists associated with this project must work hard to bring out good publication out of it so that the good work is properly documented.
(Action: Dr. B.L. Dhyani, Dr. Charan Singh and Dr. Bankey Bihari)

17. Cumulative index of constraints may be developed under concluded core project entitled "Capacity building programmes for watershed management in India: Assessment and impact analysis". Correlation between variables and policy prescriptions may also be estimated and reported. **(Action: Dr. Bankey Bihari)**

18. Complete Annual Report of Research Centres/Divisions should be submitted by the concerned Heads as per the latest Annual Report format giving all captions (tables, photos and figures) in English and Hindi by February 28, 2014 positively. Executive summary of research projects should also be submitted in English and Hindi by all Heads to print a bilingual Annual Report, as desired by ICAR. The list of publications from a Centre / Division must have latest NAAS rating of each research paper included in the list. **(Action: All Heads of Research Centres / Divisions)**

19. A hard copy of the published papers during the year be submitted to the PME Cell alongwith latest NAAS Rating every year. In case, there is more than one author from our Institute, only first author should submit the paper. **(Action: All Heads of Research Centres and Divisions)**

20. If Leader of a project proceeds on leave for more than six months at a stretch, he/she may join the project after returning from the leave as Project Leader on submission of formal request to the Director, who shall approve depending upon merit of the case. During the leave period, the First Associate of the project or a Scientist nominated by the Head of the Centre/Division (with approval of the Director) will work as Leader of the Project and name of the person (Project Leader) on leave will be deleted from list of the project team for the year(s) during which the leave period falls for more than six months at a stretch.
(Action: All Scientists / All Heads of Research Centres and Divisions)

21. On joining of a scientist during the year at a Centre or Division, and Head of the Centre / Division feels that his association to a particular project will help in achieving its objectives significantly, the same may be discussed at local level and proper proposal to this effect may be submitted to the Director through OIC, PME Cell so that interest of the scientist may be protected.

(Action: All Heads of Research Centres/Divisions)

22. Monthly Cabinet Reports should be submitted by all Heads highlighting salient achievements of research projects for onward transmission to the Council latest by 15th of every month. The report must be regular, proper, reportable and in quantifiable manner as per 'Time Frame Proforma' for the report circulated during IRC meeting, 2013.

(Action: All Heads of Research Centres /Divisions)

23. Information for Results Framework Document (RFD) progress must be submitted regularly by all Heads of Research Centres and Divisions. Documentary proof should also be submitted in proper shape in the format already circulated in "Time Frame Performa".

(Action: All Heads of Research Centres /Divisions)

24. All the Research Progress reports from the year 2013-14 is to be submitted in RPP format only. While submitting RPPs by leader of a project, a certificate should be submitted by the leader and countersigned by the concerned Head that "Raw data from the project have been collected meticulously and recorded in the data register in the custody of the leader of project".

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

25. Precise write-up and recommendations emerging out from projects concluded in 2012-13 should invariably be submitted by the leader of projects through their respective Heads by June 30, 2013 positively.

(Action: Leader of projects concluded in 2012-13 and All Heads of Centres/Divisions)

26. Each scientist of Headquarters and Research Centres may be allowed to attend only two conferences / workshops etc. in a year, preferably by train for which prior approval of the Director may be taken by the senior author on the recently developed proforma for presentation of paper. Case of attending more than two conferences in a year by a scientist will be considered only on merit by the Director.

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

27. Gauging devices should be maintained at all Research Centres for which the name of Engineering Scientist / Technical Officer (Engg.) responsible for monitoring may be identified and communicated to the Head, H&E Division for record under intimation to the Director.

(Action: All Heads of Research Centres and Head, H&E Division)

28. For all the projects recording runoff and soil loss, an attempt should be made to calculate the nutrient (primary and secondary) loss alongwith carbon and clay loss. The nutrient status in soil sample may also be calculated.

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

29. It is mandatory to attend the IRC meeting of the Institute by all scientists of Research Centres and Divisions. In case of absence by any scientist due to any specific reason, a written justification through the concerned Head must be submitted to the Director prior to IRC meeting. Otherwise, disciplinary action will be taken and reflected in ACR of the scientist.

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

30. A certificate should be submitted by all Heads of Research Centres/Divisions prior to IRC meeting that "Local IRC has been organized at the Research Centre/Division level and all the projects have been presented before Scientists and Technical Officers and all the concerned Salient Recommendations of IRC have been discussed".

(Action: All Heads of Research Centres and Divisions)

RESEARCH PROGRAMMES AND SUB-PROGRAMMES

P-1 WATER EROSION APPRAISAL IN DIFFERENT AGRO-ECOLOGICAL REGIONS (P.I. – Dr. P.R. Ojasvi)

1.1 Inventory and database of erosion status using modern tools and procedures
1.2 On-site and off-site effects of erosion
1.3 Soil erosion processes and models

P-2 CONSERVATION MEASURES FOR SUSTAINABLE PRODUCTION SYSTEMS

2.1 Resource conservation measures for arable lands **(P.I. – Dr. N.K. Sharma)**
2.2 Resource conservation measures for non-arable lands **(P.I. – Dr. O.P. Chaturvedi)**

P-3 HYDROLOGICAL BEHAVIOUR OF WATERSHEDS FOR CONSERVATION PLANNING (P.I. – Dr. Ambrish Kumar)

3.1 Rainfall, runoff, vegetation, soil characteristics and management practices
3.2 Effect of conservation measures and landuse on ground water recharge
3.3 Water harvesting

P-4 REHABILITATION OF AREAS AFFECTED BY MASS EROSION (P.I. – Dr. G.P. Juyal)

4.1 Refinement of technologies for torrent training, landslide control and minespoils rehabilitation

P-5 PARTICIPATORY INTEGRATED WATERSHED MANAGEMENT (P.I. – Dr. D.R. Sena)

5.1 Methodologies for development of watersheds and decision support systems for interventions
5.2 Landuse planning
5.3 Impact on production, environment and bio-diversity
5.4 Farming system approach.
5.5 Watershed technologies (Strategic research)

P-6 SOCIO-ECONOMIC ANALYSIS AND POLICY DEVELOPMENT FOR WATERSHED MANAGEMENT (P.I. – Dr. Pradeep Dogra)

6.1 Resource economics
6.2 Institute village linkage programme for technology assessment and refinement
6.3 Common property resource management

P-7 HUMAN RESOURCE DEVELOPMENT AND TECHNOLOGY TRANSFER (P.I. – Dr. Bankey Bihari)

7.1 Training methodology, need assessment, gender neutrality and evaluation
7.2 Organizational infrastructure & motivational parameters
7.3 Participatory approaches, dissemination of technology and adoption

STATUS OF PROGRAMME WISE ON-GOING 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.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
1.	Impacts of landuse changes on surface hydrology in Doon Valley through remote sensing and GIS approach.	Chayna Jana D. Mandal S.S. Shrimali Raj Kumar	Hydrology & Engineering, Dehradun	2011-12	2013-14	Headquarters	To be concluded
Comments: Progress is very good. Landuse changes conversion matrix may be prepared. GIS based FSI data may be used for verification. Remote Sensing data of 2013 or 2012 (which ever is latest) may be purchased from NRSA for authenticity. (Action: Ms. Chayna Jana)							
2.	Decision Support System (DSS) for identifying best management practices in erosion risk area.	N.M. Alam D. Mandal S.S. Shrimali Chayna Jana	Soil Science & Agronomy, Dehradun	2011-12	2013-14	Headquarters	To be concluded
Comments: Progress is very good. BMPs may be integrated for watershed mode. (Action: Dr. N.M. Alam)							
3.	Landuse analysis by using remote sensing and GIS for resource conservation in shifting cultivated Eastern Ghats region of Orissa.	P.P. Adhikary M. Madhu	Koraput	2010-11	2013-14	Koraput district	To be concluded
Comments: Progress is very good. Analysis may be done in collaboration with NBSSLUP, Kolkata. Names of Mr. H. Gowda and Er. B.S. Naik are deleted. (Action: Dr. P.P. Adhikary)							
4.	Effect of slope and land uses on soil carbon stock and soil quality in the Nilgiris.	K. Rajan O.P.S. Khola R. Ragupathy	Udhagamandalam	2011-12	2015-16	The Nilgiris district	To be continued
Comments: Progress is very good. Critical review of data should be done. Large number of factors influence carbon need to be observed and correlated for coming to a conclusion. (Action: Dr. K. Rajan)							

1.2 ON-SITE AND OFF-SITE EFFECTS OF EROSION

5.	Effectiveness of vegetative filter strips in preventing soil and nutrient losses.	B.K. Rao V.C. Pande	Vasad	2010-11	2014-15	Research Farm	To be continued
Comments: Progress is very good. Reasons for variation of yield should be given. Rainfall condition may be reported which is essential for runoff and soil loss in a study. Name of Dr. A.K. Vishwakarma is deleted. (Action: Dr. B.K. Rao)							

1.3 SOIL EROSION PROCESSES AND MODELS

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
6.	Erosion-productivity relationships for evaluating vulnerability and resiliency of soils under different agro-climatic regions of India.	D. Mandal S. Patra N.K. Sharma Pradeep Dogra	Soil Science & Agronomy, Dehradun	2008-09	2014-15	Research Farm of Headquarters and all Research Centres	To be continued (**Core Project**)
		S.K. Dubey A.K. Singh	Agra	2009-10			
		H. Biswas S.L. Patil	Bellary	2009-10			
		R.P. Yadav Sathiya K. A.K. Tiwari	Chandigarh	2009-10			
		Dev Narayan S.P. Tiwari	Datia	2009-10			
		P.P. Adhikary M. Madhu	Koraput	2009-10			
		R.K. Singh Kuldeep Kumar	Kota	2009-10			
		K. Kannan D. Dinesh	Udhagamandalam	2009-10			
		Gopal Kumar R.S. Kurothe	Vasad	2009-10			

Comments: Progress is very good. Uniform pattern of data/result must be maintained and presented. CCPI should also send the data to PI in uniform format. All efficiencies may be calculated. Carbon balance may be calculated, if possible. Data may be correlated with rainfall. Soil loss data of Kota and potassium data of Udhagamandalam Centre may be checked. Methodology for soil moisture data may be examined. Kota, Udhagamandalam and Vasad Centres should report timely and consistencely to PI. Names of Er. R.N. Adhikari, Dr. Pratap Singh, Dr. D.G. Durbude, Er. B.S. Naik, Dr. B.K. Sethy and Dr. A.K. Vishwakarma are deleted from Bellary, Chandigarh, Datia, Koraput, Kota & Vasad Centres, respectively. Dr. H. Biswas will replace Ms. M. Prabhavathi as leader at Bellary Centre. Names of Dr. Sathiya K. and Dr. Kuldeep Kumar are included as first associate at Chandigarh and Kota Centres, respectively. Dr. M. Madhu will replace Mr. P. Jakhar as first associate at Koraput Centre. Name of Er. V. Selvi is deleted and Dr. K. Kannan will be the leader at Udhagamandalam Centre.

(Action: Dr. D. Mandal and leaders at all Research Centres)

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
7.	Assessment of soil organic carbon in transit under erosion processes: A source or sink for atmospheric CO_2.	Rajiv Ranjan D.R. Sena N.M. Alam	Soil Science & Agronomy, Dehradun	2011-12	2015-16	Research Farm	To be continued
Comments: Progress is good. Gauging devices should be installed at the earliest. Dr. Rajiv Ranjan will replace Mr. M. Sankar as leader of the project. (Action: Dr. Rajiv Ranjan)							
8.	The assessment of soil erosion through re-distribution analysis of ^{137}Cs fallout in humid subtropical region of India.	D. Mandal S.S. Shrimali N.M. Alam	Soil Science & Agronomy, Dehradun	2011-12	2014-15	Research Farm	To be continued (**BARC Project**)
Comments: Progress is very good. Proper license and radio-active detection equipment may be ensured. A certificate may be obtained from BARC. This may be a network project. (Action: Dr. D. Mandal)							
9.	Application of dynamic simulation models to establish erosion-productivity relationships and soil organic carbon sequestration potential for a future changing climate.	P.K. Mishra D.R. Sena D. Mandal S. Patra	Hydrology & Engineering, Derhadun	2013-14	2014-15	Headquarters	To be continued **(Collaborative project on Indo-Austria Scientific-Technological Co-operation) (New Project)**
10.	Effect of vegetative and mechanical measures on resource conservation in an indigenously developed hydraulic flume.	H. Biswas S.K. Srivastava A. Raizada	Bellary	2012-13	2014-15	Research Farm	To be continued
Comments: Progress is good. Mr. K.K. Reddy, T-7-8 may be trained by Er. R.N. Adhikari before his retirement for hydraulic flume. Names of Er. R.N. Adhikari and Ms. M. Prabhavathi are deleted. Name of Dr. H. Biswas is included as leader and Er. S.K. Srivastava is shifted from leader to first associate of the project. (Action: Er. S.K. Srivastava / Dr. H.S. Biswas / Er. R.N. Adhikari / Mr. K.K. Reddy)							

P-2 CONSERVATION MEASURES FOR SUSTAINABLE PRODUCTION SYSTEMS

2.1 RESOURCE CONSERVATION MEASURES FOR ARABLE LANDS

11.	Yield maximization and resource conservation through organic input management.	B.N. Ghosh N.K. Sharma Pradeep Dogra	Soil Science & Agronomy, Dehradun	2007-08	2014-15	Research Farm	To be continued
Comments: Progress is very good. Soil Quality Index (SQI) for Doon valley may be re-checked. (Action: Dr. B.N. Ghosh)							

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
12.	Evaluation of organic farming vis-à-vis inorganic farming for resource conservation and sustained productivity under prominent cropping system.	B.N. Ghosh Ramanjeet Singh S. Patra	Soil Science & Agronomy, Dehradun	2008-09	2015-16	Research Farm	To be continued
Comments: Progress is very good. Treatment T-1 (involving green manuring) may be explained in better way by discussing with the scientists of Soil Science. Dr. B.N. Ghosh will replace Dr. K.S. Dadhwal as leader of project. Dr. Ramanjeet Singh will replace Dr. N.K. Sharma as first associate. (Action: Dr. B.N. Ghosh)							
13.	Impact of maize based intercropping on resource conservation and productivity.	N.K. Sharma D. Mandal Ambrish Kumar	Soil Science & Agronomy, Dehradun	2008-09	2013-14	Research Farm	To be concluded
Comments : Progress is very good. Energy and water use efficiency may be calculated. (Action: Dr. N.K. Sharma)							
14.	Integrated rain water management for enhancing rain water productivity in maize based cropping system.	Rajiv Ranjan Ambrish Kumar Harsh Mehta	Soil Science & Agronomy, Dehradun	2010-11	2015-16	Research Farm	To be continued
Comments: Progress is very good. All efficiencies may be estimated. Runoff harvested water may be utilized for wheat crop. Project is extended for two years till 2015-16. (Action: Dr. Rajiv Ranjan)							
15.	Evaluating productivity potential of *bhimal* (*Grewia optiva*) along with field crops.	Harsh Mehta Rajiv Ranjan	Plant Science, Dehradun	2005-06	2015-16	Almas, Ranigaon, Sabhawala & Selakui villages	To be continued
Comments: Progress is very good. Comparison may be done among three rainfed locations except irrigated location of Sabhawala. Sabhawala can be compared with rainfed Selakui. Dr. Rajiv Ranjan will replace Dr. K.S. Dadhwal as first associate. (Action: Dr. Harsh Mehta)							
16.	Productivity enhancement in fruit and flower based two tier horticulture systems through integrated nutrient management and mulching.	A.C. Rathore B.N. Ghosh	Plant Science, Dehradun	2008-09	2015-16	Research Farm	To be continued
Comments: Progress is very good. Presentation is not upto the mark. In depth analysis of collected data is required to come to a logical conclusion. (Action: Dr. A.C. Rathore)							
17.	Yield maximization and resource conservation through integrated nutrient management and crop diversification in the ravines of the Yamuna river.	S.K. Dubey Dileep Kumar A.K. Singh	Agra	2011-12	2014-15	Research Farm	To be continued
Comments: Project could not be initiated. 'Tillage combinations' has been replaced by 'crop diversification' in the title. Name of Dr. Dileep Kumar is included as first associate of the project. (Action: Dr. S.K. Dubey)							

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
18.	Performance of Tamarind near S&WC structures with different mulches in vertisols of SAT region.	A. Raizada S.K. Srivastava H. Biswas	Bellary	2011-12	2015-16	Research Farm	To be continued
Comments : Progress is very good. Uniform sample size (number of plants) may be taken in each treatment to get statistically sound results. Names of Ms. M. Prabhavathi and Dr. B. Mondal are deleted. Name of Dr. H. Biswas is included as second associate. (Action: Dr. A. Raizada)							
19.	Evaluating the effect of organic amendments on resource conservation and productivity of rainfed semi-arid vertisols.	H. Biswas S.L. Patil Suresh Kumar	Bellary	2013-14	2017-18	Research Farm	To be continued **(New Project)**
Comment: A core project may be developed. Dr. H. Biswas will replace Ms. M. Prabhavathi as leader of project. Name of Mr. Suresh Kumar is included as second associate. (Action: Dr. H. Biswas)							
20.	Conservation tillage for resource management and higher production from Shiwaliks.	R.P. Yadav Sathiya K. Pawan Sharma	Chandigarh	2009-10	2015-16	Research Farm	To be continued
Comments: Progress is very good. Physical properties may be studied and presented. Supplemental irrigation may be mentioned in those treatments where very high yields are obtained. Proper reasoning in difference of runoff and soil moisture may be given. Dr. Sathiya K. will replace Dr. Pratap Singh as first associate. (Action: Dr. R.P. Yadav)							
21.	Adaptation potential and productivity of organic vis-à-vis conventional farming system under rainfed conditions of Shiwaliks region.	Pawan Sharma Sathiya K. R.P. Yadav	Chandigarh	2011-12	2015-16	Research Farm	To be continued
Comments: Progress is very good. Plant population may be reported in place of plant percentage germination. Terminology should be taken care in appropriate way. If life saving/supplemental irrigation is given, it should be mentioned in presentation as well as in RPPs. Dr. Sathiya K. will replace Dr. Pratap Singh as first associate. (Action: Dr. Pawan Sharma)							
22.	*In situ* moisture conservation practices under aonla based agro-forestry system for sustainable production in red soils of Bundelkhand.	Dev Narayan Prabhat Kumar	Datia	2010-11	2018-19	Research Farm	To be continued
Comments: Progress is very good. While calculating economics, the area under treatments should be deducted for final calculation. Names of Dr. D.G. Durbude and Dr. M.N. Ramesha are deleted. (Action: Dr. Dev Narayan)							
23.	Developing strip cropping system for sloppy uplands: A measure to cope up with monsoon vagaries and resource conservation in Bundelkhand region.	S.P. Tiwari Dev Narayan Om Prakash	Datia	2011-12	2014-15	Jigna Watershed	To be continued
Comments: Progress is very good. It is a responsibility of the leader to make complete presentation of project in the IRC. Name of Dr. D.G. Durbude is deleted. The scientist of Engineering discipline will be included as second associate if joins the Centre. (Action: Dr. S.P. Tiwari)							

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
24.	Evaluating the different crop combinations for strip cropping in terms of soil, nutrient losses and their productivity in uplands of Eastern Ghats.	P.P. Adhikary	Koraput	2009-10	2013-14	Research Farm	To be concluded
Comments: Progress is very good. All efficiencies (energy, water use, nutrients, economics, carbon balance) may be calculated. Brochure may be published. Names of Mr. P. Jakhar and Er. B.S. Naik are deleted and Dr. P.P. Adhikary will be the leader of project. (Action: Dr. P.P. Adhikary)							
25.	Resource conservation by alley cropping in shifting cultivated degraded lands of Eastern Ghats.	P.P. Adhikary	Koraput	2009-10	2013-14	Research Farm	To be concluded
Comments: Progress is very good. All efficiencies may be calculated. Names of Mr. H. Gowda and Mr. P. Jakhar are deleted and Dr. P.P. Adhikary will be the leader of project. (Action: Dr. P.P. Adhikary)							
26.	Impact assessment of soil and water conservation measures and land use changes on sustainability of soil health under watershed development projects.	R.K. Singh H.R. Meena Ashok Kumar	Kota	2011-12	2014-15	Dhoti Watershed	To be continued
Comments: Progress is very good. Farmers' practice should be specified. Name of Dr. B.K. Sethy is deleted. (Action: Dr. R.K. Singh)							

2.2 RESOURCE CONSERVATION MEASURES FOR NON-ARABLE LANDS

27.	Evaluating the performance and developing techniques for enhancing growth and seed yield of Jatropha curcas in degraded lands of sub-humid Himalayas.	J. Jayaprakash D. Mandal	Plant Science Dehradun	2006-07	2015-16	Research Farm	To be continued
Comments: Progress is very good. Moisture data may be recorded every month for scientific interpretation. (Action: Dr. J. Jayaprakash)							
28.	Enhancement of guava productivity through canopy management and mulching in rainfed bouldery riverbed lands.	A.C. Rathore B.N. Ghosh	Plant Science, Dehradun	2008-09	2015-16	Research Farm	To be continued
Comments: Progress is very good. Equivalent yield may be reported and presented. (Action: Dr. A.C. Rathore)							
29.	Evaluation of traditional minor millet based agro-forestry systems under recommended agri-silvicultural practices of North-Western Himalayas.	Harsh Mehta J.M.S. Tomar D. Mandal	Plant Science, Dehradun	2009-10	2018-19	Research Farm	To be continued
Comments: Progress is very good. Yield data of both seasons (*rabi* and *kharif*) crops may be reported in equivalent yield alongwith runoff and soil loss. (Action: Dr. Harsh Mehta)							

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
30.	Effect of degradation on conservation and production attributes of Sal forests in Uttarakhand.	O.P. Chaturvedi J. Jayaprakash J.M.S. Tomar Charan Singh D.V. Singh	Plant Science, Dehradun	2010-11	2015-16	Rudrapur, Langha & Kalyanpur	To be continued
Comments: Progress is very good. Standard unit of data may be used. (Action: Dr. O.P. Chaturvedi)							
31.	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 Rajiv Ranjan	Plant Science, Dehradun	2011-12	2015-16	Research Farm	To be continued
Comments: Progress is very good. (Action: Dr. J.M.S. Tomar)							
32.	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	2020-21	Near Mednipur Forest Nursery	To be continued
Comments: Progress is very good. (Action: Dr. Rajesh Kaushal)							
33.	Canopy management in *Morus alba* for enhancing productivity and resource conservation.	Rajesh Kaushal Ambrish Kumar J. Jayaprakash Rajiv Ranjan	Plant Science, Dehradun	2011-12	2016-17	Research Farm	To be continued
Comments: Progress is very good. Pollarding, coppicing and lopping are the treatments and grasses are not the part of study. These may be removed uniformly and biomass may be recorded. Project is shifted from P-2.1. (Action: Dr. Rajesh Kaushal)							
34.	Development and characterization of quality planting material of important MPT's for degraded lands of North-West Himalayas.	Raj Kumar Harsh Mehta	Plant Science, Dehradun	2012-13	2019-20	Research Farm	To be continued
Comments: Progress is very good. (Action: Dr. Raj Kumar)							
35.	Peach based agri-horticulture land use system for degraded Shiwaliks.	Ram Prasad Sathiya K. R.P. Yadav S.L. Arya	Chandigarh	2008-09	2015-16	Research Farm	To be continued
Comments: Progress is very good. Dr. Sathiya K. will replace Dr. Pratap Singh as first associate. (Action: Dr. Ram Prasad)							

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
36.	Developing SALT (Sloping Agricultural Land Technology) for resource conservation and economic upliftment in Shiwaliks.	Pankaj Panwar Ram Prasad V.K. Bhatt Sathiya K. Sharmistha Pal	Chandigarh	2010-11	2015-16	Research Farm	To be continued
Comments: Progress is very good. Dr. Sathiya K. will replace Dr. Pratap Singh as third associate. (Action: Dr. Pankaj Panwar)							
37.	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	2016-17	Research Farm	To be continued
Comments: Progress is very good. Soil temperature data may be collected at 2 P.M. (Action: Dr.Pankaj Panwar)							
38.	Evaluation of moisture conservation techniques for sustainable production of Tree Borne Oil Seeds (TBOS) in Bundelkhand.	Prabhat Kumar	Datia	2010-11	2017-18	Research Farm	To be continued
Comments: Progress is very good. Life saving irrigation with tree guard for Mahua and Neem may be given for improving their survival. Name of Dr. M.N. Ramesha is deleted and Mr. Prabhat Kumar will be the leader of project. (Action: Mr. Prabhat Kumar)							
39.	Bio-engineering measures for resource conservation and management in red sloppy lateritic soils of Orissa.	D.C. Sahoo P.P. Adhikary	Koraput	2008-09	2014-15	Research Farm	To be continued
Comments: Progress is very good. Runoff recording devices may be checked. Names of Er. B.S. Naik, Mr. P. Jakhar and Mr. H. Gowda are deleted. Name of Dr. D.C. Sahoo is included as leader of the project. (Action: Dr. D.C. Sahoo)							
40.	Performance evaluation of different oil yielding grasses in shifting cultivated degraded lands of Orissa.	P.P. Adhikary M. Madhu	Koraput	2011-12	2014-15	Lachhaputra Ghati Watershed & Research Farm	To be continued
Comments: Progress is very good. Name of Mr. H. Gowda is deleted and Dr. P.P. Adhikary will be the leader of project. (Action: Dr. P.P. Adhikary)							
41.	Evaluation of different under utilized fruit species with varying inter-space managements in Chambal ravines.	H.R. Meena A.K. Parandiyal Ashok Kumar G.L. Meena	Kota	2006-07	2015-16	Research Farm	To be continued
Comments: Progress is very good. Efficiencies estimation yield results may be calculated in ratio of actual to potential yield. (Action: Mr. H.R. Meena)							

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
42.	Evaluation of promising oilseed tree species under silvi-pastoral system for rehabilitation of Chambal ravines.	A.K. Parandiyal Ashok Kumar G.L. Meena	Kota	2008-09	2015-16	Research Farm	To be continued
Comments: Progress is very good. (Action: Dr. A.K. Parandiyal)							
43.	Evaluation of carbon sequestration potential of different tree based production systems in South-eastern Rajasthan.	A.K. Parandiyal R.K. Singh	Kota	2011-12	2015-16	Research Farm & Sahabad Range Forest	To be continued
Comments: Progress is very good. (Action: Dr. A.K. Parandiyal)							
44.	Effect of shade trees on productivity and soil health in rejuvenated tea plantations in Nilgiris.	R. Ragupathy K. Rajan	Udhagamandalam	2011-12	2018-19	Research Farm	To be continued
Comments: Progress is very good. (Action: Dr. R. Ragupathy)							
45.	Enhancing productivity of ravine lands by plantation of *A. sapota* with intercropping systems.	B.K. Rao Gopal Kumar V.C. Pande	Vasad	2008-09	2022-23	Research Farm	To be continued
Comments: Progress is very good. Name of Dr. A.K. Vishwakarma is deleted and Dr. B.K. Rao will be the leader of project. (Action: Dr. B.K. Rao)							

P-3 HYDROLOGICAL BEHAVIOUR OF WATERSHEDS FOR CONSERVATION PLANNING

3.1 RAINFALL, RUNOFF, VEGETATION, SOIL CHARACTERISTICS AND MANAGEMENT PRACTICES

46.	Standardization of runoff and peak flow parameters for different soil and water conservation structures under Indian condition.	D.R. Sena Chayna Jana	Hydrology & Engineering, Dehradun	2012-13	2013-14	Headquarters	To be concluded
Comments: Progress is very good. (Action: Dr. D.R. Sena)							
47.	Hydrological evaluation of recommended forest grasses in Himalayan foothills.	O.P. Chaturvedi Ambrish Kumar Charan Singh B.N. Ghosh	Plant Science, Dehradun	2004-05	2018-19	Research Farm	To be continued
Comments: Progress is very good. Soil moisture data may be recorded on monthly basis. (Action: Dr. O.P. Chaturvedi)							

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
48.	Evaluation of hydrological behaviour and production potential of recommended landuse system / practices under different agro-ecological regions of India.	J.M.S. Tomar Uday Mandal A.C. Rathore Ramanjeet Singh B.N. Ghosh M. Muruganandam	Plant Science, Dehradun	2011-12	2015-16	Ashti Watershed	To be continued **(Core Project)**
		K.K. Sharma S.K. Dubey S. Kala Dileep Kumar	Agra			Garhi Udairaj, Fatehabad	
		V.K. Bhatt Pankaj Panwar Sathiya K. Ram Prasad Sharmistha Pal	Chandigarh			Janoli Village, Panchkula	
		Shakir Ali A.K. Parandiyal R.K. Singh, H.R. Meena	Kota			Dhoti Watershed	
		K. Kannan	Udhagamandalam			Iduhatti Watershed	
		B.K. Rao Gopal Kumar	Vasad			Vejalpur-Rampura Watershed	
Comments: Progress is very good. Measurement device has not been installed property at Kota Centre as advised by the Director. Recommended package of practices may be adopted. Er. Uday Mandal and Dr. Ramanjeet Singh will replace Er. K.P. Tripathi and Dr. N.K. Sharma as first and third associates at Headquarters, respectively. Name of Dr. Dileep Kumar is included as third associate at Agra Centre. Dr. Sathiya K. will replace Dr. Pratap Singh as second associate at Chandigarh Centre. Name of Er. V. Selvi is deleted and Dr. K. Kannan will be the leader at Udhagamandalam Centre. Name of Dr. A.K. Vishwakarma is deleted from Vasad Centre. (Action: Dr. J.M. S. Tomar and leaders at other Research Centres)							
49.	Enhancement in land productivity and livelihood security of small farmers of Nilgiris through multiple use of harvested water.	S. Manivannan O.P.S. Khola K. Rajan	Udhagamandalam	2011-12	2014-15	Research Farm	To be continued
Comments: Progress is very good. (Action: Dr. S. Manivannan)							

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
50.	Hydrological implication of sequential alternation of land use covers in a ravinous catchment.	R.S. Kurothe V.C. Pande Gopal Kumar	Vasad	2004-05	2015-16	Research Farm	To be continued
Comments: Progress is very good. Name of Dr. A.K. Vishwakarma is deleted. (Action: Dr. R.S. Kurothe)							
51.	Hydrologic and economic evaluation of Bamboo plantations in gullied lands under major ravines of India.	B.K. Rao Gopal Kumar V.C. Pande	Vasad	2008-09	2014-15	Research Farm & Khorwad Village, Anand	To be continued
		A.K. Singh S.K. Dubey S. Kala	Agra			Manikpura, Bah, Agra	
		A.K. Parandiyal Shakir Ali	Kota			Research Farm & Kakronda Village, Kota	
Comments: Progress is very good. (Action: Dr. B.K. Rao/Dr. A.K. Singh/Dr. A.K. Parandiyal)							

3.2 EFFECT OF CONSERVATION MEASURES AND LANDUSE ON GROUND WATER RECHARGE

52.	Design and development of site specific artificial groundwater recharge filters.	Gopal Kumar B.K. Rao	Vasad	2009-10	2013-14	Research Centre Laboratory	To be concluded
Comments: Progress is very good. The instrument may be put in public domain with the approval of Competent Authority through OIC, ITMU. (Action: Dr. Gopal Kumar)							

3.3 WATER HARVESTING

53.	Conservation Bench Terrace (CBT) based integrated farming system in Himalayan foothills.	Ambrish Kumar N.K. Sharma B.L. Dhyani M. Muruganandam N.M. Alam	HRD&SS, Dehradun	2011-12	2015-16	Research Farm	To be continued
Comments : Progress is very good. Zero tillage may also be adopted in *rabi* crop. (Action: Dr. Ambrish Kumar)							
54.	Water budgeting of a ravinous watershed pond for optimum crop planning under semi-arid region.	K.K. Sharma S.K. Dubey Dileep Kumar	Agra	2012-13	2015-16	Research Farm	To be continued
Comments: Progress is very good. Capacity of the pond before and after renovation may be mentioned. Name of Dr. Dileep Kumar is included as second associate. (Action: Dr. K.K. Sharma)							

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
55.	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	2015-16	Research Farm	To be continued
Comments: Progress is very good. Standard units of runoff and soil loss may be adopted. Dr. G.L. Meena will replace Dr. B.K. Sethy as leader of project. (Action: Dr. G.L. Meena)							

P-4 REHABILITATION OF AREAS AFFECTED BY MASS EROSION

4.1 REFINEMENT OF TECHNOLOGIES FOR TORRENT TRAINING, LANDSLIDE CONTROL AND MINESPOILS REHABILITATION

56.	Evolving methodology for extraction of River Bed Material (RBM) from rivers for monitoring river morphology.	G.P. Juyal	Hydrology & Engineering, Dehradun	2011-12	2013-14	Haldwani, Uttarakhand	To be concluded
Comments: Progress is excellent. A policy paper must come out from the project. Name of Er. K.P. Tripathi is deleted and Dr. G.P. Juyal will be the leader of project. (Action: Dr. G.P. Juyal)							
57.	Cost effective conservation measures for management of medium and deep ravinous lands.	Shakir Ali A.K. Parandiyal Ashok Kumar R.K. Singh	Kota	2004-05	2014-15	Research Farm	To be continued
Comments: Progress is very good. Name of Dr. B.K. Sethy is deleted and Dr. Shakir Ali will be the leader of project. (Action: Dr. Shakir Ali)							
58.	Productive utilization of ravines through introduction of horticulture and improved planting materials.	A.K. Parandiyal H.R. Meena	Kota	2005-06	2013-14	Research Farm	To be concluded
Comments: Progress is excellent. The technology may be published as a Bulletin/Brochure for farmers. Name of Dr. B.K. Sethy is deleted. (Action: Dr. A.K. Parandiyal)							
59.	Prototype field study on application of potentially important jute geo-textiles for hill slope stabilization.	S. Manivannan O.P.S. Khola K. Kannan K. Rajan	Udhagamandalam	2013-14	2015-16	Research Farm	To be continued **(National Jute Board, Kolkata) (New Project)**

S. No.	Title of the Project	Leader and Associates	Centre /Division	Start	Completion	Location of Project	Remarks
60.	Field evaluation of design of trenches under different agro-climatic regions.	R.S. Kurothe V.C. Pande Gopal Kumar	Vasad	2011-12	2015-16	Research Farm	To be continued **(Core Project)**
		S. Kala, A.K. Singh R.B. Meena	Agra			Research Farm	
		A.K. Tiwari Pankaj Panwar V.K. Bhatt Sharmistha Pal	Chandigarh			Research Farm	
		S.P. Tiwari	Datia			Research Farm	
		M. Madhu P.P. Adhikary	Koraput			Research Farm	
		Shakir Ali Ashok Kumar A.K. Parandiyal	Kota			Dhoti Watershed	
		S. Manivanan K. Kannan K. Rajan	Udhagamandalam			Research Farm	
Comments: Progress is very good. Project is deleted at Bellary Centre as it is difficult to manage private lands of farmers for the study and land is not available in forest area. A written justification should be submitted by the Head of Bellary Centre for record. Calibration may be done by T-test and comparison may be presented in next IRC meeting. Names of Dr. D.G. Duburde and Dr. M.N. Ramesha are deleted from Datia Centre and Dr. S.P. Tiwari will be the leader at Datia. Names of Mr. H. Gowda and Er. B.S. Naik are deleted from Koraput Centre. Name of Dr. B.K. Sethy is deleted and Dr. Shakir Ali will be the leader at Kota. (Action: Dr. R.S. Kurothe, Dr. A. Raizada and leaders at other Research Centres)							

P-5 PARTICIPATORY INTEGRATED WATERSHED MANAGEMENT

5.1 METHODOLOGIES FOR DEVELOPMENT OF WATERSHEDS AND DECISION SUPPORT SYSTEMS FOR INTERVENTIONS

61.	Development of a user friendly Decision Support System application for planning of watershed development project.	P.R. Ojasvi P.K. Mishra Charan Singh N.K. Sharma D.V. Singh	Hydrology & Engineering, Dehradun	2011-12	2015-16	Almas, Distt. Tehri Garhwal	To be continued
Comments: Progress is very good. Name of Er. K.P. Tripathi is deleted. (Action: Dr. P.R. Ojasvi)							

S. No.	Title of the Project	Leader and Associates	Centre /Division	Start	Completion	Location of Project	Remarks
62.	Developing methodological framework for delineating and characterization of Chambal and Yammuna ravines.	G.L. Meena R.K. Singh	Kota	2013-14	2015-16	Chambal Valley in Kota region	To be continued **(New Project)**
		R.B. Meena K.K. Sharma S.K. Dubey	Agra			Riparian area of Yamuna river	
Comments: A workshop may be organized at Kota Centre and Dr. P.R. Ojasvi and Dr. D.R. Sena may also be invited. (Action: Dr. G.L. Meena)							

5.4 FARMING SYSTEM APPROACH

63.	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 M. Muruganandam S. Patra	PME Cell, Dehradun	2009-10	2016-17	Asthi Watershed	To be continued (**Core Project**)
		A.K. Singh, R.B. Meena Dileep Kumar	Agra			Jalalpur Watershed	
		S.L. Patil, H. Biswas S.K. Srivastava, Suresh Kumar	Bellary			Ramasagara Watershed	
		S.L. Arya, Sathiya K. Sharmistha Pal, Ram Prasad	Chandigarh			Janoli Village, Panchkula	
		Dev Narayan, Prabhat Kumar	Datia			Jigna Watershed	
		M. Madhu	Koraput			Lachhaputra Ghati Watershed	
		Ashok Kumar, H.R. Meena	Kota			Dhoti Watershed	
		K. Kannan, D. Dinesh	Udhaga-mandalam			Ayalur Watershed	
		V.C. Pande Gopal Kumar	Vasad			Vejalpura-Rampura Watershed	
Comments: Progress is very good. A single index may be formulated for measuring success/failure of an IFS. Project is extended for three years till 2016-17. Name of Dr. Dileep Kumar is included as second associate at Agra Centre. Names of Er. R.N. Adhikari, Ms. M. Prabhavathi and Dr. B. Mondal are deleted and names of Dr. H. Biswas, Er. S.K. Srivastava and Mr. Suresh Kumar are included as first, second and third associates, respectively at Bellary Centre. Dr. Sathiya K. will replace Dr. Pratap Singh as first associate at Chandigarh Centre. Dr. M. Madhu will replace Mr. P. Jakhar as leader at Koraput Centre. Names of Dr. M.N. Ramesha, Er. B.S. Naik, Dr. B.K. Sethy, Er. V. Selvi and Dr. A.K. Vishwakarma are deleted from Datia, Koraput, Kota, Udhagamandalam and Vasad Centres, respectively. (Action: Dr. Pradeep Dogra and leaders at Research Centres)							

P-6 SOCIO-ECONOMIC ANALYSIS AND POLICY DEVELOPMENT FOR WATERSHED MANAGEMENT

6.3 COMMON PROPERTY RESOURCE MANAGEMENT

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
64.	Evaluation of institutional arrangements and impact of community based water storage structures in different agro-climatic zones of India	Pradeep Dogra Bankey Bihari B.L. Dhyani D.R. Sena	PME Cell, Dehradun	2008-09	2013-14	Uttarakhand	To be concluded **(Core Project)**
		S.L. Arya V.K. Bhatt	Chandigarh			Panchkula, Haryana	
		Om Prakash	Datia			Datia district	
		Ashok Kumar Shakir Ali	Kota			Udaipur & Kota district	
		P. Sundarambal	Udhagamandalam			Pudukottai, Sivagangai & Villupuram districts	
		V.C. Pande G.L. Bagdi	Vasad			Ahmedabad & Jamnagar districts	
Comments: Progress is very good. A workshop may be organized to develop a common format for pooling of results of cooperating centres. A bulletin may be prepared on the generated information. As the CCPI at Bellary Centre (Dr. B. Mondal) has left the Institute and before leaving the Institute, he has achieved the planned targets and submitted the RPF III hence, the project is closed at Bellary Centre. (Action: Dr. Pradeep Dogra and leaders at Research Centres)							

P-7 HUMAN RESOURCE DEVELOPMENT AND TECHNOLOGY TRANSER

7.3 PARTICIPATORY APPROACHES, DISSEMINATION OF TECHNOLOGY AND ADOPTION

65.	Role of soil and water conservation technologies for climate resilient agriculture in Himalayan ecosystem – An action research.	D.V. Singh P.K. Mishra S. Patra Charan Singh Ramanjeet Singh	HRD&SS, Dehradun (Collaborative Project with HARC)	2013-14	2017-18	Uttarkashi district of Uttarakhand	To be continued (**New Project**)
Comments: Project may be taken-up under ToT programme. (Action: Dr. D.V. Singh)							

S. No.	Title of the Project	Leader and Associates	Centre/ Division	Start	Completion	Location of Project	Remarks
66.	Post-adoption behaviour of farmers towards soil and water conservation technologies of watershed management.	G.L. Bagdi R.S. Kurothe	Vasad	2012-13	2014-15	Navamota, Rebari, Sarnal, Antisar & Vejalpur-Rampura Watersheds	To be continued (**Core Project**)
		A.K. Singh R.B. Meena	Agra			Jalalpur & Agra Watersheds	
		S.L. Patil S.K. Srivastava M.N. Ramesha	Bellary			Watersheds of Karnataka & Andhra Pradesh	
		S.L. Arya A.K. Tiwari R.P. Yadav	Chandigarh			Kajiana, Mandhala, Johranpur & Aganpur-Bhagwasi Watersheds	
		Om Prakash	Datia			Bajni & Jigna Watersheds	
		Bankey Bihari Ambrish Kumar	HRD&SS, Dehradun			IVLP sites, Raipur and Sabhawala Watersheds	
		Ashok Kumar Shakir Ali Kuldeep Kumar	Kota			Chhajawa & Badakhera Watersheds	
		P. Sundarambal S. Manivanan D. Dinesh	Udhagamandalam			The Nilgiris, Coimbatore & Erode districts	
Comments: Progress is very good. Proceedings of workshop held on this project may be sent to all concerned. Critical gaps in adoption and reasons for non-adoption of soil and water conservation technologies by the farmers may be identified and presented. Only relevant technologies may be taken for the study. Crop varieties under cultivation may be evaluated. Name of Dr. N. Loganandhan is deleted and Dr. S.L. Patil will be the leader at Bellary Centre. Names of Dr. M.N. Ramesha and Dr. Kuldeep Kumar are included as second associates at Bellary and Kota Centres, respectively. Names of Dr. D.G. Durbude and Dr. R.K. Awasthe are deleted at Datia Centre and Headquarters, Dehradun, respectively. (Action: Dr. G.L. Bagdi and leaders at Research Centres and Headquarters)							
67.	Ensuring sustainable agricultural development and livelihood security in lower Shiwalik range of Uttarakhand.	Ramanjeet Singh	Soil Science & Agronomy, Dehradun Lead Centre: IARI, New Delhi	2013-14	2015-16	Haridwar District, Uttarakhand	To be continued **(DST Funded)** (**New Project**)

NEW PROJECTS APPROVED DURING IRC MEETING – 2013

S. No .	Prog. No.	S. No. of this proc.	Title of the Project	Centre/Division
1.	1.3	9	Application of dynamic simulation models to establish erosion-productivity relationships and soil organic carbon sequestration potential for a future changing climate.	H&E, Derhadun
2.	2.1	19	Evaluating the effect of organic amendments on resource conservation and productivity of rainfed semi-arid vertisols.	Bellary
3.	4.1	59	Prototype field study on application of potentially important jute geo-textiles for hill slope stabilization.	Udhagamandalam
4.	5.1	62	Developing methodological framework for delineating and characterization of Chambal and Yammuna ravines.	Kota / Agra
5.	7.3	65	Role of soil and water conservation technologies for climate resilient agriculture in Himalayan ecosystem – An action research.	HRD&SS, Dehradun
6.	7.3	67	Ensuring sustainable agricultural development and livelihood security in lower Shiwalik range of Uttarakhand.	SS&A, Dehradun

STATUS OF NUMBER OF PROJECTS

No. of projects in 2012-13	Projects concluded	New projects added in 2013-14	Total no. of projects in 2013-14
(A)	(B)	(C)	(A-B+C)
61	Nil	06	67

OBSERVATIONAL TRIALS APPROVED FOR 2013-14

S. No.	Title of project	Leader & Associates	Centre/ Division
1.	Evaluation of permeable spurs for controlling stream bank erosion – A laboratory flume study.	G.P. Juyal S. Patra	H&E, Dehradun
Comments: The study may be conducted as an Observation Trial for one year and presented in the next IRC meeting. (Action: Dr. G.P. Juyal)			
2.	Lithic mulching for resource conservation and crop productivity enhancement in gravelly soil regions of India.	D.V. Singh Ambrish Kumar	HRD&SS, Dehradun
Comments: The study may be conducted as an Observation Trial for one more year and presented in the next IRC meeting. (Action: Dr. D.V. Singh)			
3.	Design and evaluation of HDPE sheet embedded gabion checkdams for water harvesting in north-west Himalayas.	Ambrish Kumar Rajiv Ranjan Rajesh Kaushal	HRD&SS, Dehradun
Comments: Cushioning material of 2-3 types may be used to identify the best option for seepage control. Project may be carried out as an Observational Trial for one year and presented in the next IRC meeting. (Action: Dr. Ambrish Kumar)			

NEW PROJECT PROPOSALS SUBMITTED FOR CONSIDERATION IN THE RAC/IRC MEETING-2013

S. No.	Res. Prog.	Title of Project	Duration	Leader & Associates	Location of project	Remarks of the RAC	Remarks of IRC
Agra							
1	2.1	Impact of soil and moisture conservation practices on physicochemical and biological properties of alluvial soils under Yamuna ravine.	2013-14 to 2016-17	R.B. Meena Dileep Kumar K.K. Sharma	Research Farm	Similar types of studies have been conducted and being conducted at Agra and other Centres; clarify how this study is different from others. **Not Agreed**	**Not considered** by the IRC due to Not Agreed by the RAC.
2	1.1	Delineation and characterization of available natural resources of Yamuna ravines using RS/GIS for planning and rehabilitation.	2013-14 to 2017-18	S K Dubey K.K. Sharma A.K. Singh R.B. Meena S. Kala	Riparian area of Yamuna river in Agra District	**Agreed** Since outside organization, *i.e* RSACUP, Lucknow is collaborating in this project, objectives to be addressed by RSACUP, financial liabilities and MoU/agreement should be formalized before presentation of the project in the IRC-2013.	This project is **combined** with the project of **Kota Centre** listed at **S.No.62** in the ongoing projects of this proceedings with the revised title and investigators.
3	2.2	Integration and evaluation of potential genotypes of *Balanites aegyptiaca*, L., for development of suitable silvipasture models for ravinous lands.	2013-14 to 2017-18	S. Kala Dileep Kumar S.K. Dubey	Research Farm	**Agreed**	**Not Presented** by the leader in the IRC meeting.
4	2.2	Quantification of carrying capacity of degraded lands for grazing (goat/sheep) in term of soil erosion and nutrient loss. (Collaborative Project with CIRG, Makhdoom, IGFRI, Jhansi, NRCAF, Jhansi, CSWRI, Avikanagar, CAZRI, Jodhpur)	2013-14 to 2018-19	S K Dubey K.K. Sharma A.K. Singh R.B. Meena S. Kala Dileep Kumar Scientists of Datia & Kota Centres	All Collaborative Centres	**Agreed** This project should be combined with project no. 13.	**Not Presented** by the leader in the IRC meeting.

Bellary							
5	6.1	Risk and uncertainties in small farms: An empirical study in semi-arid Deccan.	2013-14 to 2017-18	B. Mondal N.Loganandhan A. Raizada	Semi-arid Deccan region of India	**Agreed** Clearly define uncertainties	**Not Approved** by the IRC this year and may be discussed in the next IRC meeting if proposed by the leader of project.
Chandigarh							
6	2.2	Enhancing water conservation and soil quality through nanomaterials in different land uses of degraded Shivalik.	2013-14 to 2017-18	Sharmistha Pal Pankaj Panwar A.K. Tiwari	Research Farm	Needs extensive review on efficacy of nano-materials in SWC. In IIT Kanpur, research work on nano-technology is being conducted, so IIT Kanpur may be consulted in this regards. **Not Agreed**	**Not considered** by the IRC due to Not Agreed by the RAC.
7	1.1	GIS based risk assessment of soil quality degradation and recommendation for soil resource management using spatial decision support system.	2013-14 to 2017-18	Sharmistha Pal Pankaj Panwar V.K. Bhatt Chayna Jana	Panchkula district, Haryana	DSS based projects are already being conducted at the Institute. This needs to be extended at the national level by considering it as a core project. **Not Agreed**	**Not considered** by the IRC due to Not Agreed by the RAC.
Dehradun							
8	3.3	Exploration of subsurface water sources and its utilization for crop production in north-western Himalayas.	2013-14 to 2016-17	S. Patra P.K. Mishra Raj Kumar	North-western Himalayas	**Agreed** Title needs to be modified to address recharge zones of the natural spring rather than simply identifying the source points. Wadia Institute of Himalayan Geology, Dehradun and HESCO(NGO) may be contacted for technical information.	**Not Approved** by the IRC as Institute project. Possibilities may be explored by the leader of project for external funding.

9	4.1	Evaluation of permeable spurs for controlling stream bank erosion - A laboratory flume study.	2013-14 to 2014-15	G.P. Juyal S. Patra	Hydraulic flume, H&E Division	**Agreed**	**Approved** as an **Observational Trial** for the year 2013-14.
10	2.1	Evaluation of diversified rainfed cropping systems in the context of changing climate scenario of north-western Himalayan region of India.	2013-14 to 2017-18	Ramanjeet Singh D. Mandal D.R. Sena Suresh Kumar	Research Farm, Selakui	Methodology defined is not clearly addressing the given objectives; extensive review is required in this regard. **Not agreed**	**Not considered** by the IRC due to Not Agreed by the RAC.
11	2.1	Study the effects of climate change on different rainfed cropping systems for enhancing resource use efficiency in north-western Himalayan region of India.	2013-14 to 2017-18	Ramanjeet Singh D. Mandal D.R. Sena Suresh Kumar N.M. Alam	Research Farm, Selakui	This is routine type study similar to experiments of crop planning under contingent weather conditions. Extensive review is needed. **Not agreed**	**Not considered** by the IRC due to Not Agreed by the RAC.
12	6.1	Linking adoption of soil and water conservation technologies and its impact with farm economic efficiency in the north-western Himalayan region.	2013-14 to 2015-16	Suresh Kumar B.L. Dhyani	North-west Himalayas in Uttarakhand	**Agreed**	Approved as an Observational Trial for the year 2013-14. However, it is deferred for one year due to transfer of Leader from Headquarters to Bellary Centre for recasting it as per new socio-economic setting.
13	5.3	Assessment of impact of grazing by small ruminants on natural resources and surrounding environment of pasture/rangelands located in different agro-climatic regions. **(Collaborative project)**	2013-14 to 2017-18	R.C. Jakhmola	At different states of the Country.	Needs to be combined with project no. 4	**Not Presented** by the leader in the IRC meeting.
14	3.3	Design and evaluation of HDPE sheet embedded gabion checkdams for water harvesting in north-west Himalayas.	2013-14 to 2015-16	Ambrish Kumar Rajeev Ranjan Rajesh Kaushal	Himalayan foothills in Dehradun district	**Agreed** ➢ Perenniality needs to be assessed and ➢ Make some arrangement for taping the subsurface water.	**Approved** as an **Observational Trial** for the year 2013-14.

15	7.3	Role of soil and water conservation technologies for climate resilient agriculture in Himalayan ecosystem – An action research. **(Collaborative project with HARC)**	2013-14 to 2017-18	D.V. Singh R.K. Avasthe S. Patra Charan Singh Ramanjeet Singh P.K. Mishra	Uttarkashi district of Uttarakhand	**Agreed** Since a non-govt. organization (HARC) is collaborating in this project, objectives to be addressed by HARC needs to be clearly specified and other necessities; financial liabilities and MoU/agreement should also be formalized before presentation of the project in the IRC-2013.	**Approved** by the IRC and listed at S.No. 65 in the ongoing projects of this proceedings.
Kota							
16	5.1	Developing and evaluating a methodological framework for delineation and characterization of gullied and ravine lands along the river Chambal.	2013-14 to 2016-17	G.L. Meena R.K. Singh B.K. Sethy A.K. Parandiyal	Chambal valley in Kota region	**Agreed** Project may be formulated in collaboration with NBSSLUP.	**Approved** by the IRC and **combining** with the **Agra Centre** listed at S.No.62 in the ongoing projects of this proceedings.
Udhagamandalam							
17	2.1	Conservation tillage and cover crops for enhancing productivity and soil health in intensive irrigated farming system in the hilly areas.	2013-14 to 2016-17	K. Kannan D. Dinesh	Research Farm	The project is not befitting with the mandates of the Institute. **Not Agreed**	**Not considered** by the IRC due to Not Agreed by the RAC.
Vasad							
18	2.1	Decision support system on resource based crop nutrient management for sustainable agricultural production and environmental security.	2013-14 to 2014-15	A.K. Vishwakarma Gopal Kumar B.K. Rao R.S. Kurothe	Computer based programming	**Agreed**	**Not Presented** by the leader in the IRC meeting.

DIVISION/CENTRE-WISE NUMBER OF ON-GOING PROJECTS

A. SL. NO. OF PROJECTS AT DIFFERENT LOCATIONS

S. No.	DIVISION/CENTRE	SL. NO. OF ON-GOING PROJECTS	TOTAL
1.	Dehradun		
	➢ Hydrology & Engineering	1,9,46,56,61	**05**
	➢ Plant Science	15,16,27,28,29,30,31,32,33,34,47,48	**12**
	➢ Soil Science & Agronomy	2,6,7,8,11,12,13,14,67	**09**
	➢ HRD & SS	53,65,66	**03**
	➢ PME Cell	63,64	**02**
2.	Agra	6,17,48,51,54,60,62,63,66	**09**
3.	Bellary	6,10,18,19,63,66	**06**
4.	Chandigarh	6,20,21,35,36,37,48,60,63,64,66	**11**
5.	Datia	6,22,23,38,60,63,64,66	**08**
6.	Koraput	3,6,24,25,39,40,60,63	**08**
7.	Kota	6,26,41,42,43,48,51,55,57,58,60,62,63,64,66	**15**
8.	Udhagamandalam	4,6,44,48,49,59,60,63,64,66	**10**
9.	Vasad	5,6,45,48,50,51,52,60,63,64,66	**11**
		Total	**109**

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	P-7	Total
1.	**Dehradun**								
	➢ Hydrology & Engineering	2	-	1	1	1	-	-	**05**
	➢ Plant Science	-	10	2	-	-	-	-	**12**
	➢ Soil Science & Agronomy	4	4	-	-	-	-	1	**09**
	➢ HRD & SS	-	-	1	-	-	-	2	**03**
	➢ PME Cell	-	-	-	-	1	1	-	**02**
2.	Agra	1	1	3	1	2	-	1	**09**
3.	Bellary	2	2	-	-	1	-	1	**06**
4.	Chandigarh	1	5	1	1	1	1	1	**11**
5.	Datia	1	3	-	1	1	1	1	**08**
6.	Koraput	2	4	-	1	1	-	-	**08**
7.	Kota	1	4	3	3	2	1	1	**15**
8.	Udhagamandalam	2	1	2	2	1	1	1	**10**
9.	Vasad	2	1	4	1	1	1	1	**11**
	Total	**18**	**35**	**17**	**11**	**12**	**06**	**10**	**109**

C. TOTAL NUMBER OF PROJECTS IN DIFFERENT RESEARCH PROGRAMMES

Research Programmes	P-1	P-2	P-3	P-4	P-5	P-6	P-7	Total
Total No. of Projects	**10**	**35**	**10**	**05**	**03**	**01**	**03**	**67**

NUMBER OF PROJECTS WITH INDIVIDUAL SCIENTIST

In the Staff Research Council Meeting of 1995, certain norms regarding **MAXIMUM** number of projects that any scientist of CSWCRTI may hold, were decided as mentioned below:

A. Leadership in one project with association in other four projects (1+4)

or

B. Leadership in two projects with association in other two projects (2+2)

or

C. Leadership in three projects without association in any other project (3+0)

In the Staff Research Council Meeting of 2000, certain norms regarding **MINIMUM** number of projects that any scientist of CSWCRTI may hold, were decided as mentioned below:

A. Leadership in one project with association in other one project (1+1)

or

B. Association in two projects (0+2).

The number of projects with each individual scientist of the Institute, after the IRC Meeting of 2013 is as follows:

S. No.	Name	Designation	Leader	Associate	Total	S. No. of projects to be concluded
1.	Dr. P.K. Mishra	Director	1(9)	2(61,65)	3	-
Hydrology and Engineering Division						
2.	Dr. G.P. Juyal	Head of Division	1(56)	-	1	56
3.	Dr. P.R. Ojasvi	Pr. Scientist (Engg.)	1(61)	-	1	-
4.	Er. S.S. Shrimali	Sr. Scientist (Com.App.)	-	3(1,2,8)	3	1,2
5.	Dr. D.R. Sena	Sr. Scientist (Engg.)	1(46)	3(7,9,64)	4	46,64
6.	Mr. M. Muruganandam	Sr. Scientist (Fisheries)	-	3(48,53,63)	3	-
7.	Er. S. Patra	Scientist (Engg.)	-	5(6,9,12,63,65)	5	-
8.	Ms. Chayna Jana	Scientist (Ag. Stat.)	1(1)	2(2,46)	3	1,2,46
9.	Er. Uday Mandal	Scientist (Engg.)	-	1(48)	1	-
Plant Science Division						
10.	Dr. O.P. Chaturvedi	Head of Division	2(30,47)	-	2	-
11.	Dr. Harsh Mehta	Pr. Scientist (Pl. Breed.)	2(15,29)	2(14,34)	4	-
12.	Dr. J.M.S. Tomar	Sr. Scientist (Forestry)	2(31,48)	3(29,30,32)	5	-
13.	Dr. Rajesh Kaushal	Sr. Scientist (Forestry)	2(32,33)	1(31)	3	-
14.	Dr. A.C. Rathore	Scientist (SS) (Hort.)	2(16,28)	2(48,63)	4	-
15.	Dr. J. Jayaprakash	Scientist (Forestry)	1(27)	2(30,33)	3	-
16.	Dr. Raj Kumar	Scientist (Forestry)	1(34)	1(1)	2	1
Soil Science and Agronomy Division						
17.	Dr. N.K. Sharma	Head of Division	1(13)	5(6,11,53,61,63)	6	13
18.	Dr. B.N. Ghosh	Pr. Scientist (Soils)	2(11,12)	4(16,28,47,48)	6	-
19.	Dr. D. Mandal	Sr. Scientist (Soils)	2(6,8)	6(1,2,9,13,27,29)	8	1,2,13
20.	Mr. M. Shankar	Scientist (Soils)	On study leave			
21.	Dr. N.M. Alam	Scientist (Ag. Stat.)	1(2)	3(7,8,53)	4	2
22.	Dr. Rajiv Ranjan	Scientist (Soils)	2(7,14)	3(15,31,33)	5	-
23.	Dr. Ramanjeet Singh	Scientist (Agro.)	1(67)	3(12,48,65)	4	-

(Figures in parenthesis are serial number of on-going projects listed in these proceedings).

S. No.	Name	Designation	Leader	Associate	Total	S. No. of projects to be concluded
Human Resource Development and Social Science Division						
24.	Dr. Ramesh Jakhmola	I/c Head of Division	-	-	-	-
25.	Dr. Charan Singh	Pr. Scientist (Forestry)	-	4(30,47,61,65)	4	-
26.	Dr. Bankey Bihari	Pr. Scientist (Ag. Extn.)	1(66)	1(64)	2	64
27.	Dr. Ambrish Kumar	Pr. Scientist (Engg.)	1(53)	6(13,14,32,33,47,66)	7	13
28.	Dr. D.V. Singh	Pr. Scientist (Soils)	1(65)	3(30,32,61)	4	-
Prioritization, Monitoring and Evaluation Cell						
29.	Dr. B.L. Dhyani	Pr. Scientist (Ag. Eco.)	-	2(53,64)	2	64
30.	Dr. Pradeep Dogra	Pr. Scientist (Ag. Eco.)	2(63,64)	2(6,11)	4	64
Research Centre, Agra						
31.	Dr. S.K. Dubey	Head of Centre	2(6,17)	4(48,51,54,62)	6	-
32.	Dr. A.K. Singh	Sr. Scientist (Engg.)	3(51,63, 66)	3(6,17,60)	6	-
33.	Dr. K.K. Sharma	Sr. Scientist (Engg.)	2(48,54)	1(62)	3	-
34.	Mr. R.K. Dubey	Scientist (SS) (Agro.)	On study leave			
35.	Dr. (Ms.) S. Kala	Scientist (Forestry)	1(60)	2(48,51)	3	-
36.	Mr. R.B. Meena	Scientist (Soils)	1(62)	3(60,63,66)	4	-
37.	Dr. Dileep Kumar	Scientist (Agro.)	-	4(17,48,54,63)	4	-
Research Centre, Bellary						
38.	Dr. A. Raizada	Head of Centre	1(18)	1(10)	2	-
39.	Dr. S.L. Patil	Pr. Scientist (Agro.)	2(63,66)	2(6,19)	4	-
40.	Dr. H. Biswas	Sr. Scientist (Soils)	3(6,10,19)	2(18,63)	5	-
41.	Er. S.K. Srivastava	Scientist (Engg.)	-	4(10,18,63,66)	4	-
42.	Dr. M.N. Ramesha	Scientist (Forestry)	-	1(66)	1	-
43.	Ms. M. Prabhavathi	Scientist (Soils)	On study leave			
44.	Mr. Suresh Kumar	Scientist (Ag. Eco.)	-	2(19,63)	2	-
Research Centre, Chandigarh						
45.	Dr. A.K. Tiwari	Head of Centre	1(60)	2(6,66)	3	-
46.	Dr.(Ms.) Pawan Sharma	Pr. Scientist (Soils)	1(21)	1(20)	2	-
47.	Dr. R.P. Yadav	Pr. Scientist (Soils)	2(6,20)	3(21,35,66)	5	-
48.	Dr. (Ms.) S.L. Arya	Pr. Scientist (Ag. Eco.)	3(63,64, 66)	1(35)	4	64
49.	Dr. V.K. Bhatt	Pr. Scientist (Engg.)	1(48)	4(36,37,60,64)	5	64
50.	Dr. Ram Prasad	Sr. Scientist (Horti.)	1(35)	4(36,37,48,63)	5	-
51.	Dr. Pankaj Panwar	Sr. Scientist (Forestry)	2(36,37)	2(48,60)	4	-
52.	Dr.(Ms.)Sharmistha Pal	Scientist (Soils)	-	5(36,37,48,60,63)	5	-
53.	Dr. Sathiya K.	Scientist (Agro.)	-	7(6,20,21,35,36,48, 63)	7	-
Research Centre Datia						
54.	Dr. S.P. Tiwari	Head of Centre	2(23,60)	1(6)	3	-
55.	Dr. Dev Narayan	Sr. Scientist (Agro.)	3(6,22,63)	1(23)	4	-
56.	Dr. Om Prakash	Sr. Scientist (Ag. Extn.)	2(64,66)	1(23)	3	64
57.	Mr. Prabhat Kumar	Scientist (Soils)	1(38)	2(22,63)	3	-

(Figures in parenthesis are serial number of on-going projects listed in these proceedings).

S. No.	Name	Designation	Leader	Associate	Total	S. No. of projects to be concluded
Research Centre, Koraput						
58.	Dr. M. Madhu	Head of Centre	2(60,63)	3(3,6,40)	5	3
59.	Dr. D.C. Sahoo	Sr. Scientist (Engg.)	1(39)	-	1	-
60.	Er. B.S. Naik	Scientist (S.S.) (Engg.)	On study leave			
61.	Mr. H. Gowda	Scientist (Forestry)	On study leave			
62.	Mr. P. Jakhar	Scientist (Agro.)	On study leave			
63.	Dr. P.P. Adhikary	Scientist (Soils)	5(3,6,24,25,40)	2(39,60)	7	3,24,25
Research Centre, Kota						
64.	Dr. R.K. Singh	Head of Centre	2(6,26)	5(43,48,55,57,62)	7	-
65.	Dr. A.K. Parandiyal	Pr. Scientist (Forestry)	4(42,43,51,58)	4(41,48,57,60)	8	58
66.	Dr. Ashok Kumar	Pr. Scientist (Ag. Eco.)	3(63,64,66)	5(26,41,42,57, 60)	8	64
67.	Dr. Shakir Ali	Sr. Scientist (Engg.)	3(48,57,60)	3(51,64,66)	6	64
68.	Mr. H.R. Meena	Scientist (Hort.)	1(41)	5(26,48,55,58,63)	6	58
69.	Dr. G.L. Meena	Scientist (Soils)	2(55,62)	2(41,42)	4	-
70.	Dr. Kuldeep Kumar	Scientist (Agro.)	-	2(6,66)	2	-
Research Centre, Udhagamandalam						
71.	Dr. O.P.S. Khola	Head of Centre	-	3(4,49,59)	3	-
72.	Dr.(Ms.) P.Sundarambal	Sr. Scientist (Ag. Extn.)	2(64,66)	-	2	64
73.	Dr. K. Kannan	Sr. Scientist (Agro.)	3(6,48,63)	2(59,60)	5	-
74.	Dr. S. Manivannan	Sr. Scientist (Engg.)	3(49,59,60)	1(66)	4	-
75.	Dr. R. Ragupathy	Scientist (SS) (Forestry)	1(44)	1(4)	2	-
76.	Er. (Ms.) V. Selvi	Scientist (SS) (Engg.)	On study leave			
77.	Dr. K. Rajan	Scientist (Soils)	1(4)	4(44,49,59,60)	5	-
78.	Dr. D. Dinesh	Scientist (Soils)	-	3(6,63,66)	3	-
Research Centre, Vasad						
79.	Dr. R.S. Kurothe	Head of the Centre	2(50,60)	2(6,66)	4	-
80.	Dr. G.L. Bagdi	Pr. Scientist (Ag. Extn.)	1(66)	1(64)	2	64
81.	Dr. V.C. Pande	Sr. Scientist (Ag.Eco.)	2(63,64)	5(5,45,50,51,60)	7	64
82.	Dr. B.K. Rao	Sr. Scientist (Engg.)	4(5,45,48,51)	1(52)	5	52
83.	Dr. Gopal Kumar	Scientist (Soils)	2(6,52)	6(45,48,50,51, 60,63)	8	52

(Figures in parenthesis are serial number of on-going projects listed in these proceedings).

LIST OF PARTICIPANTS

S.No.	Name	Designation	Participation in IRC as
1.	Dr. P.K. Mishra	Director	Chairman
CSWCRTI, DEHRADUN			
2.	Dr. G.P. Juyal	Head (H&E Division)	Member & PI: P-3
3.	Dr. O.P. Chaturvedi	Head (Plant Science Division)	Member & PI: P-2.2
4.	Dr. R.K. Avasthe	Head (HRD&SS Division)	Member & PI: P-7
5.	Dr. N.K. Sharma	I/c Head (SS&A Division)	Member & PI: P-2.1
6.	Er. K.P. Tripathi	Principal Scientist (Engg.)	PI: P-4
7.	Dr. Ramesh Jakhmola	Principal Scientist (Ani. Nutrition)	
8.	Dr. B.L. Dhyani	Principal Scientist (Agril.Eco.) & OIC, PME Cell	Member Secretary, IRC
9.	Dr. P.R. Ojasvi	Principal Scientist (Engg.)	PI: P-1
10.	Dr. Harsh Mehta	Principal Scientist (Plant Breeding)	OIC, ITMU
11.	Dr. Charan Singh	Principal Scientist (Forestry)	
12.	Dr. Bankey Bihari	Principal Scientist (Ag. Extn.)	
13.	Dr. Pradeep Dogra	Principal Scientist (Ag. Eco.)	PI: P-6 & Rapporteur
14.	Dr. B.N. Ghosh	Principal Scientist (Soils)	
15.	Dr. Ambrish Kumar	Principal Scientist (Engg.)	Member Secretary, RAC
16.	Dr. D.V. Singh	Principal Scientist (Soils)	
17.	Er. S.S. Shrimali	Senior Scientist (CAA)	
18.	Dr. D.R. Sena	Senior Scientist (Engg.)	PI: P-5
19.	Dr. D. Mandal	Senior Scientist (Soils)	
20.	Dr. J.M.S. Tomar	Senior Scientist (Forestry)	
21.	Dr. Rajesh Kaushal	Senior Scientist (Forestry)	
22.	Dr. M. Muruganandam	Senior Scientist (Fisheries)	
23.	Dr. A.C. Rathore	Scientist (SS) (Hort.)	
24.	Dr. J. Jayaprakash	Scientist (Forestry)	
25.	Er. S. Patra	Scientist (Engg.)	
26.	Dr. N.M. Alam	Scientist (Ag. Stat.)	
27.	Ms. Chayna Jana	Scientist (Ag. Stat.)	
28.	Dr. Raj Kumar	Scientist (Forestry)	
29.	Dr. Ramanjeet Singh	Scientist (Agro.)	
30.	Mr. Suresh Kumar	Scientist (Ag. Eco.)	Rapporteur
31.	Dr. Sathiya. K.	Scientist (Agro.)	
32.	Dr.(Mrs.) Sangeeta N. Sharma	Technical Officer (T-9)	Rapporteur
33.	Mr. Nirmal Kumar	Technical Officer (T-9)	Rapporteur
34.	Mr. S.K. Sinha	Technical Officer (T-6)	Rapporteur
RESEARCH CENTRE, AGRA			
35.	Dr. S.K. Dubey	Head of the Centre	Member
36.	Dr. A.K. Singh	Senior Scientist (Engg.)	
37.	Dr. K.K. Sharma	Senior Scientist (Engg.)	
38.	Dr. (Ms.) S. Kala	Scientist (Forestry)	
39.	Mr. R.B. Meena	Scientist (Soils)	
40.	Dr. Dileep Kumar	Scientist (Agro.)	
RESEARCH CENTRE, BELLARY			
41.	Dr. A. Raizada	Head of the Centre	Member
42.	Er. R.N. Adhikari	Principal Scientist (Engg.)	
43.	Dr. N. Loganandhan	Scientist (S.S.) (Ag. Extn.)	
44.	Dr. B. Mondal	Scientist (Ag. Eco.)	
45.	Ms. M. Prabhavathi	Scientist (Soils)	

RESEARCH CENTRE, CHANDIGARH			
46.	Dr. (Ms.) Pawan Sharma	I/c Head of the Centre	Member
47.	Dr. (Ms.) S.L. Arya	Principal Scientist (Agril. Eco.)	
48.	Dr. Pratap Singh	Principal Scientist (Agronomy)	
49.	Dr. R.P. Yadav	Principal Scientists (Soils)	
50.	Dr. V.K. Bhatt	Principal Scientist (Engg.)	
51.	Dr. Ram Prasad	Senior Scientist (Horti.)	
52.	Dr. Pankaj Panwar	Senior Scientist (Forestry)	
53.	Dr.(Ms.) Sharmistha Pal	Scientist (Soils)	
RESEARCH CENTRE, DATIA			
54.	Dr. S.P. Tiwari	Head of the Centre	Member
55.	Dr. Dev Narayan	Senior Scientist (Agro.)	
56.	Dr. Om Prakash	Senior Scientist (Agril. Extension)	
57.	Dr. M.N. Ramesha	Scientist (Forestry)	
58.	Mr. Prabhat Kumar	Scientist (Soils)	
RESEARCH CENTRE, KORAPUT			
59.	Dr. M. Madhu	Head of the Centre	Member
60.	Mr. P. Jakhar	Scientist (Agro.)	
61.	Dr. P.P. Adhikary	Scientist (Soils)	
RESEARCH CENTRE, KOTA			
62.	Dr. R.K. Singh	Head of the Centre	Member
63.	Dr. A.K. Parandiyal	Principal Scientist (Forestry)	
64.	Dr. Ashok Kumar	Principal Scientist (Ag. Eco.)	
65.	Dr. B.K. Sethy	Scientist (SS) (Engg.)	
66.	Mr. H.R. Meena	Scientist (Hort.)	
67.	Dr. G.L. Meena	Scientist (Soils)	
68.	Dr. Kuldeep Kumar	Scientist (Agronomy)	
RESEARCH CENTRE, UDHAGAMANDALAM			
69.	Dr. O.P.S. Khola	Head of the Centre	Member
70.	Dr. P. Sundarambal	Senior Scientist (Ag. Extn.)	
71.	Dr. K. Kannan	Senior Scientist (Agro.)	
72.	Dr. S. Manivannan	Senior Scientist (Engg.)	
73.	Er.(Ms.) V. Selvi	Scientist (SS) (Engg.)	
74.	Dr. R. Ragupathy	Scientist (SS) (Forestry)	
75.	Dr. K. Rajan	Scientist (Soils)	
76.	Dr. D. Dinesh	Scientist (Soils)	
RESEARCH CENTRE, VASAD			
77.	Dr. R.S. Kurothe	Head of the Centre	Member
78.	Dr. G.L. Bagdi	Principal Scientist (Ag. Extn.)	
79.	Dr. V.C. Pande	Senior Scientist (Ag. Eco.)	
80.	Dr. A.K. Vishwakarma	Senior Scientist (Agro.)	
81.	Dr. B.K. Rao	Senior Scientist (Engg.)	
82.	Dr. Gopal Kumar	Scientist (Soils)	