

PREAMBLE BY THE CHAIRMAN

Dr. K.S. Dadhwal, Acting Director, CSWCRTI and Chairman of Institute Research Committee (IRC) welcomed the Heads of the Research Centres, Divisions and Scientists to the IRC Meeting of 2011. He appraised the house that as per the directives of the ICAR, this IRC meeting is being held earlier, and henceforth, the meeting will be conducted in the first half of every calendar year.

The Chairman informed the house about the major developments regarding the Institute. He stated that the Institute has submitted a proposal to the University Grants Commission (UGC) for its upgradation to the status of Deemed-to-be-University under De-novo category since the Institute is devoted to unique and emerging areas of knowledge in natural resource management and integrated watershed management not being pursued by existing and conventional institutions. The requisite processing fee of Rs. 15 lakhs has been paid by the Institute to the UGC. The Chairman stated that the work associated with the Deemed University status for the Institute may continue to be looked after by Dr. O.P. Chaturvedi, Head Plant Science Division. If the Institute is granted the status of Deemed-to-be-University, then the SFC/ EFC Memo of the Institute for the XII Five Year Plan shall have to be revised accordingly. The Chairman further informed the House that the Central Government has launched a 'Performance Monitoring and Evaluation System (PMES)' for all Government Departments. Under PMES, each department is required to prepare a Results Framework Document (RFD). RFD is a record for monitoring performance in a time frame of targets and performance indicators set by the Department. Its objective is to move the focus of the Department from process-orientation to results-orientation and provide a basis to evaluate Department's overall performance at the end of the year. Results Framework Document (RFD) of the Institute was prepared and submitted to the Council for which a workshop for RFD Nodal Officers was organized by the SMD at New Delhi of Officers-in-Charge, Project Monitoring and Evaluation Cell (PME Cell) of the ICAR Institutes. Officer-in-charge (PME Cell) of the Institute also attended the workshop. In future, all Research Centres / Divisions need to submit the required information for preparation of this very important document to the Institute Headquarters in a time bound fashion.

Under the leadership of DG, ICAR, a workshop on "Mountain Agriculture in Himalayan Region: Status, Constraints and Potentials" was organized during April 2-3, 2011 by the Institute in association with Himalayan Environment Studies and Conservation Organization (HESCO) at Dehradun. ICAR Institutes, SAUs, and NGOs located in the North-Western and North-Eastern Himalayan States participated in the workshop alongwith SMD of the ICAR. Twenty five salient recommendations pertaining to different fields were made for all-round agricultural development of the region. During the visit, the DG inaugurated the National Online Examination Centre of the Institute having a seating capacity of 100 candidates on April 2, 2011. An Indo-Canadian workshop on "Adaptive and Sustainable Solutions for Water Integrity, Safety, Securities and Supply" was organized jointly by IASWC and McGill University, Canada during 7-8 January, 2011 under ISTP Canada-India Partnership Development Activity Programme. The Institute organized the ICAR Zonal Sports Tournament (North Zone) during April 18-21, 2011 in which out of 24, 22 ICAR Institutes of North Zone participated with a total of 834 participants. A symposium for the Eastern Region of the country is to be organized by the Institute in collaboration with the Indian Association of Soil and Water Conservationists. The Research Centre, Koraput has already been assigned the task and Dr. M. Madhu, Head of the Research Centre may take the lead so that the symposium is held within six months.

The Chairman further informed the house that the good tradition of winning awards/recognitions by Institute's scientists continued during this year also. The Chairman himself was awarded with R.C. Chabba Smarak 'Himachal Shri Award' of the Himotkarsh Council of Literature and Public Service for the year 2010-11 in recognition of his outstanding contributions in the field of Agricultural Research during the Annual Function of the Himotkarsh

Council. Dr. V.N. Sharda, Ex-Director of the Institute was awarded 'Eminent Agricultural Engineer Award-2011' by the Institution of Engineers (India) for outstanding contributions in the field of Agricultural Engineering during XXIV National Convention of Agricultural Engineers. Dr. (Ms.) Sharmistha Pal, Scientist received Young Scientist Award from Indian Science Congress Association, in the section of Agriculture and Forestry Sciences, during 98th Indian Science Congress held at SRM University, Chennai (TN). The award was presented by Nobel laureate Dr. Venkata Raman Ramakrishnan. Institute also won the ICAR Trophy for 'Best Annual Report' for the year 2009-10 in the big ICAR Institutes category. The Chairman and the house congratulated the awardees for their excellent achievements. The Chairman wished that the scientists of the Institute may win many more awards in future and bring laurels to the Institute through their hard work by submitting well prepared applications on time.

The Chairman apprised the house that CSWCRTI Vision 2030 document was prepared and displayed during the Directors' Conference at ICAR HQ, New Delhi on July 15, 2011. The Vision document will serve as a guide for conducting research to face challenges emerging out of changing agricultural scenario. A bulletin entitled "Priority Classes for Erosion Control in Different States and Regions of India" by V.N. Sharda and D. Mandal has been published in July, 2011. A bulletin entitled '*Jalagam Prabandh Pariyojna ke Dwara Gramin Mahilao ka Shashaktikaran*' by Nirmala Sharhadi has also been published recently.

The Chairman informed the house that the Prime Minister during the Foundation Day of the Council laid stress on conservation of natural resources, maintenance of soil health, sustainable agriculture and integrated watershed development and management. The DG, ICAR has asserted that the ICAR should maintain its top position and continue to be the key player in Agricultural Research in India. Presently, the contribution of ICAR in Agricultural Research in India is 43% followed by the State Agricultural Universities (33%). Climate Resilient Agriculture, Dryland Agriculture, Organic Farming, Conservation Farming and Waste Management have been identified as the key issues which need to be dealt with by the Natural Resource Management (NRM) Division of the Council in the XII Plan. The Chairman informed that the DG, ICAR has stressed upon generation of data from projects. Project Monitoring and Evaluation System (PMES) is a very important component of research projects. All research projects should come to a logical conclusion and there should be a close interaction of the Principal Scientists and Senior Scientists with Scientists in the interest of scientific research.

The Chairman stated that an amount of Rs. 6 crores has been earmarked by the Council for development of tribal areas. The Research Centre, Koraput, which has been conducting research and extension activities in the tribal region of Odisha, and Dr. Harsh Mehta of Institute Headquarters may develop proposals for carrying out activities under Transfer of Technology programme of the Institute in tribal areas of Odisha and Uttarakhand, respectively. Financial support for the programme may be availed from the Councils' Tribal Area Development Fund.

The Chairman complimented Dr. B.L. Dhyani and Dr. M. Madhu for successfully accomplishing the task of preparation of 9 documentary films of the Institute Headquarters and its 8 Research Centres. The Chairman informed the house that the spade-work for reviewing of the progress and achievements of Institute by the QRT has already been done at the Council level and shortly, the QRT team would be visiting the Institute Headquarters. He advised that all should be ready for the visit of the team. He further added that Mid-Term Review of the Action Taken Report (ATR) on the recommendation of XXI Meeting of ICAR Regional Committee No. I is also going to be held shortly and the PME Cell of the Institute should update the ATR.

Concluding his address, the Chairman reiterated that all scientists should work in harmony and conduct quality research, strive to win awards and recognitions, and bring out research papers in esteemed research journals.

SALIENT RECOMMENDATIONS OF IRC MEETING – 2011

1. The best models for predicting runoff and erosion for different agro-ecological regions may be identified. A bulletin giving details of various models and highlighting their utility (region-wise) may be published by October 31, 2011 positively.
(Action: **Dr. P.R. Ojasvi and leaders at other Centres of the core project**)
2. Dr. D.R. Sena, Sr. Scientist should develop a sample data set in consultation with Er. K.P. Tripathi, Pr. Scientist for analyzing rainfall data and correlating it with production data by October 31, 2011 for the NPCC funded project on climate change. The developed data set may be sent to all Research Centres and Divisions to maintain uniformity of data analysis.
(Action: **Dr. D.R. Sena, Er. K.P. Tripathi and all Heads of Research Centres & Divisions**)
3. For analysis of microbial activity and carbon dioxide emission, the required chemicals i.e. Tri-phenyl Formazone (TPF) and Tri-phenyl Tetrazolium Chloride were purchased and distributed to all Research Centres. Therefore, either the respective Research Centres may do the analysis at their own level or the soil samples may be sent to Dr.(Ms.) Sharmistha Pal, Scientist, Research Centre, Chandigarh immediately after the collection of samples for computation of Soil Threat Index by December, 2011 positively.
(Action: **Dr. (Ms.) Sharmistha Pal and all Scientists/Heads of Research Centres/Divisions**)
4. The DG, ICAR has desired that a meeting of about 100-125 officers of the state departments that have undergone regular training course at our Institute and are presently holding key positions may be organized to discuss and develop a consensus regarding propagation of the theme of natural resource management (NRM) in general and our Institute's mandate in particular. The meeting may also be attended by the DG, ICAR along with members of SLNA which should be organized by September 30, 2011.
(Action : **Head, HRD&SS Division**)
5. OIC, ARIS Cell should seek information on status of access to online Journals from the Heads of all Research Centres. The information may be compiled by OIC, ARIS Cell by September 30, 2011 and further necessary action may be taken by him so that access to online Journals is available to all Research Centres.
(Action: **OIC, ARIS Cell**)
6. Dr. G.L. Bagdi, Sr. Scientist may modify the new project proposal entitled "Post-adoption behaviour of farmers towards soil and water conservation technologies of watershed management" as a core project as per recommendations of RAC. As a PI of the core project, he may also organize a workshop at Vasad Centre by inviting scientists from different Research Centres of the Institute and members from reputed NGOs during November, 2011 to finalize the various aspects of core project. The core project should be presented in the next RAC/IRC meeting.
(Action: **Dr. G.L. Bagdi, Sr. Scientist**)
7. The compiled list of equipments purchased at all Research Centres and Divisions during the last 5 years alongwith their details should be circulated by Dr. G.P. Juyal, Head, H&E Division to all Research Centres and Divisions by September 30, 2011 positively.
(Action : **Dr. G.P. Juyal, Head, H&E Division**)

8. The site of the concluded project entitled “Hydrological behaviour of small watersheds and sustainability of production systems” conducted at Sainji watershed should be maintained as a demonstration site by Dr. Ambrish Kumar, Sr. Scientist (Engg.). The Normalized Difference Vegetation Index (NDVI) of the project may be calculated for the watershed as a whole by Dr. O.P. Chaturvedi, Head, Plant Science Division by November 30, 2011.

(Action: Dr. O.P. Chaturvedi and Dr. Ambrish Kumar)

9. The sediment yield sampler developed under the concluded project entitled “Design development and testing of simple and low cost continuous mechanical sediment yield sampler” may be tested and made operational under field condition by Dr. Gopal Kumar, Scientist (Soils) by November 30, 2011, positively.

(Action: Dr. Gopal Kumar, Scientist)

10. Brochures of potential technologies already developed under various projects conducted at the Research Centre, Chandigarh may be brought out by Dr. Pratap Singh, Pr. Scientist (Agronomy) by October 31, 2011 for the benefit of farmers and various agencies.

(Action: Dr. Pratap Singh and Head of Chandigarh Centre)

11. 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 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 proposals should not be forwarded by the Head.

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

12. While submitting new project proposals by the scientists for consideration in the RAC/IRC, the availability of budget, equipments, manpower (scientific, technical etc.) and other resources (land etc.) related to the project(s) at the Research Centre/Division should be ensured by the Head of Research Centres/Divisions.

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

13. A workshop may be organized by Dr. D. Mandal, Sr. Scientist during September, 2011 on new research proposal entitled “Identification of environmentally sustainable landuse and management practices based on soil organic carbon management in different agro-ecological regions of India under different climate change scenarios” for consideration as a core project/or observational trial.

(Action: Dr. D. Mandal, Sr. Scientist)

14. Data of all ongoing and concluded projects may be entered into Project Information and Management System (PIMS) of ICAR, as per directives of the Council. Data of ongoing projects should be uploaded by 31st October, 2011 by the respective PIs. Soft/Scanned copies of RPF III of remaining concluded projects (if any) should be sent to PME Cell through E-mail by 31st October, 2011 for uploading the same into PIMS-ICAR website. Dr. N.M. Alam, Scientist (Agril. Stat.) is nominated as Nodal Officer of PIMS-ICAR for the Institute.

(Action: All Scientists and Heads of Research Centres and Divisions and Nodal Officer, PIMS-ICAR)

15. Result Framework Document (RFD) and Citizen Charter for XII Plan of all the Research Centres be prepared with due care and submitted to the Institute Headquarters by 15th

November, 2011. PME Cell should develop the RFD and Citizen Charter of the Institute and submit it to the DDG (NRM) in due time. Er. S.S. Shrimali, Sr. Scientist (CAA) should upload the Citizen Charter in Institute website after approval of the Competent Authority.

(Action: All Heads of Research Centres / Divisions, OIC, PME Cell and Er. S.S. Shrimali)

16. In continuation of the letter dated 26th May, 2011 received from the Director General, ICAR, few years meteorological data have already been computerized and forwarded to the Project Coordinator (Agro-met), CRIDA, Hyderabad by some of the Research Centres. It is decided that all the Heads of the Research Centres and Head, H&E Division should make all the efforts, including hiring services, to computerize the required data set since the establishment of meteorological observatory at Research Centre/Research Farm and forward it to the designated scientist of CRIDA with a copy to PME Cell.

(Action: All Heads of Research Centre, Head, H&E Division and OIC, PME Cell)

17. To workout the criteria for identification of landslide prone area and cumulative index for defining vulnerability of landslide areas, the portions of Dr. G.P. Juyal, Head, H&E Division and Dr. R.P. Yadav, Pr. Scientist (Soils) should be incorporated in the report and submitted the same by September 30, 2011.

(Action: Dr. G.P. Juyal and Dr. R.P. Yadav)

18. The Monthly Cabinet Reports should be prepared in bullet form highlighting the Salient Achievements in a quantifiable manner for onward transmission to the Council. Along with it, monthly highlights of research projects with photographs / tables etc. for publication in ICAR News / ICAR Reporter and DARE Report may be submitted regularly by all the Research Centres / Divisions.

(Action: All Heads of Research Centres and Divisions)

19. Patent search should be an integral part of the review of literature for any new project formulated from 2011-12 onwards at the Institute. It may also be included in the RPFs as an important IPR asset of the Institute. The following free patent search engines are available, which can be accessed for getting an update of the latest in respect of patenting and IPR issues:

<http://www.patentlawlinks.com>

<http://www.google.com>

<http://www.priorsmart.com>

<http://www.patentlens.net>

<http://www.freepatentsonline.com>

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

20. Each scientist must ensure to publish at least two research papers every year in reputed journals having high score as per NAAS ratings, with preferably one in International Journal. Publications should be made within three years after completion of a project. Head of Research Centres/Divisions should promote this culture and ensure quality publications in future. All the publications should invariably be routed through proper channel and approved by the Competent Authority.

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

21. A meeting must be held by the Heads of Research Centres/Divisions after receipt of proceedings of IRC meeting and Action Taken Report should be submitted within one month to the Director indicating what actions have been taken or will be taken in a time bound manner.

(Action : All Head of Research Centres and Divisions)

**ACTION TAKEN ON
“SALIENT RECOMMENDATIONS OF IRC MEETING – 2010”**

S.No.	Action Assigned	Action Taken Report
1.	<p>In most of the 9 model watersheds being operated under the MMA (NWDPR) scheme the physical and financial achievements under the different components are not upto the mark. Therefore, all activities under watershed development programme should be expedited and Rs. 40.0, 17.5, 9.0, 6.6, 15, 8.0 and 8.0 lakhs may be utilized by Research Centres, Agra, Chandigarh, Koraput, Kota, Udhagamandalam, Vasad and Headquarters Dehradun by 31st March, 2011, respectively. However, the budget utilization in respect of Research Centre, Datia was lowest among all Research Centres. Out of Rs. 48 lakhs only Rs. 3.6 lakhs have been utilized. It is far from satisfactory. Hence, Research Centre Datia should make vigorous efforts and ensure utilization of Rs. 15 lakhs more till 31st March, 2011. The progress of Research Centre, Bellary is also tardy. Serious efforts are required to catch up the activities as per schedule and utilize Rs. 7 lakhs by 31st March, 2011.</p> <p style="text-align: center;">(Action: PIs of Ashti/Jalalpur/Ramasagara/Kajiana/ Jigna/ Lachhaputra Ghati/Dhoti/ Ayalur/ Vejalpur-Rampura watersheds)</p>	<p>Action has been taken accordingly by all the PIs of MMA (NWDPR) watersheds. The progress of Agra, Bellary, Koraput, Kota, Udhagamandalam, Vasad Centres and Headquarters Dehradun are satisfactory. However, Datia Centre should make more efforts to utilize the budget as the year 2011-12 is the completing year of all the watersheds projects.</p>
2.	<p>A list of equipments purchased during the last 5 years along with details of their cost, manufacturers, functional status etc. may be prepared by Heads of Research Centres and Divisions and submitted to Head, H&E Division who is nominated as Nodal Officer to compile the list. Also, all the Heads of Research Centres / Divisions must ensure that all equipments procured under Research Projects are in working order for subsequent use. A separate log-book for each equipment must be maintained regularly.</p> <p style="text-align: center;">(Action: All Heads of Research Centres and Divisions and Head, H&E Division)</p>	<p>The list of equipments purchased during the last 5 years alongwith their details have been prepared by all Heads of Research Centres and Divisions and submitted to the Head, H&E Division and Nodal Officer. However, compiled list of equipments is yet to be submitted by the Head of H&E Division.</p>
3.	<p>Calibration and validation of all data sets for all models pertaining to the core project on development and validation of models should be completed. A workshop may be conducted in April, 2011 for presentation of results by all Centres. A comparative picture of the models tested should also be presented in the workshop. Entire results of the complete project should be presented in the next IRC meeting.</p> <p style="text-align: center;">(Action: Dr. P.R. Ojasvi and leaders at other Centres of the core project)</p>	<p>Workshop was not conducted in April, 2011 due to visit of Director General, ICAR at the Institute and Zonal Sports organized during April, 2011. Entire results (Centre-wise) have been presented by Dr. P.R. Ojasvi in the IRC meeting.</p>
4.	<p>For analysis of microbial activity and carbon dioxide emission, centralized purchase of chemicals i.e. Tri-phenyl Formazone (TPF) and Tri-phenyl Tetrazolium Chloride (TPTC) for all eight Research Centres may be done by Central Laboratory, Headquarters, Dehradun and the firm may be asked to supply the material directly to Research Centres. Data of remaining seven parameters of all ongoing projects must be submitted by all Research Centres / Divisions to Dr.(Ms.) Sharmistha Pal by Dec. 31, 2010 for computation of Soil Threat Index. This assignment must be completed before December, 2011.</p> <p style="text-align: center;">(Dr.(Ms.) Sharmistha Pal, Dr. D. Mandal and all scientists / Heads of Research Centres / Divisions)</p>	<p>Supply order of chemicals for analysis of microbial activity and carbon dioxide emission was placed after making market survey by a committee. The chemicals have been sent to all Research Centres for completing this assignment before December, 2011.</p>

S.No.	Action Assigned	Action Taken Report
5.	The Monthly Cabinet Reports should be prepared in bullet form highlighting the Salient Achievements in a quantifiable manner for onward transmission to the Council. Alongwith it, monthly highlights of research projects with photographs / tables etc. for publication in ICAR News / ICAR Reporter and DARE Report may be submitted regularly by all the Research Centres / Divisions. (Action: All Heads of Research Centres and Divisions)	Monthly Cabinet Reports by most of the Research Centres and Divisions are submitted regularly except Datia Centre. Generally, Agra Centre is not reporting the achievements in quantifiable manner while Chandigarh Centre is reporting as Nil. HRD&SS Division is reporting only the training aspects.
6.	Complete Annual Report of the Research Centres and Divisions must be submitted positively by February 28, 2011. Additional information pertaining to participation in workshops, training, publication etc. beyond February 28, 2011 may be submitted latest by March 31, 2011 as the compiled Annual Report of the Institute is to be put on the website by April 30, 2011 positively. (Action: All Heads of Research Centres and Divisions)	Annual Report by the Research Centres and Divisions was submitted in March, 2011 and Annual Report of the Institute was published within permissible time.
7.	Dr. G.P. Juyal, Head, H&E Division should contact the concerned authorities at Indian Institute of Remote Sensing for obtaining the necessary information / data of not only Ashti Watershed but of all other watersheds being developed under the MMA (NWDPR) Scheme and the progress in the matter may be reported by 30th April, 2011. (Action: Dr. G.P. Juyal, Head, H&E Division)	Dr. G.P. Juyal contacted the Director, IIRS, Dehradun, who desired that the data of remote sensing of remaining eight Research Centres be procured by the Institute and a technical staff such as JRF/SRF be attached to concerned scientist at IIRS.
8.	Data of all the ongoing and completed projects may be entered into Project Information and Management System (PIMS) of ICAR, as per the directives of the Council. Data of ongoing projects should be entered by 31st December, 2010. Soft copy / scanned copies of all completed / concluded projects since the beginning of the Centre / Divisions may be sent to RCM Unit, Dehradun by E-mail by 31st March, 2011 for uploading the same on the PIMS (ICAR) website. (Action: All Scientists and Heads of Research Centres and Divisions and OIC, RCM Unit)	Data entries of ongoing projects have been completed by the respective PIs except one project from H&E Division. For concluded projects, soft / scanned copy of RPF III have been submitted by the Research Centres and Divisions. However, it has been assigned to all the Heads of Research Centres/Divisions to send the RPF III of remaining concluded projects (if any) to PME Cell.
9.	A team consisting of Dr. G.P. Juyal, Dr. R.P. Yadav and Dr. D.V. Singh is constituted to workout the criteria for landslide prone area and to workout cumulative index for defining vulnerability of landslide areas. The report may be prepared and submitted by April 15, 2011 positively. (Action: Dr. G.P. Juyal, Dr. R.P. Yadav and Dr. D.V. Singh)	The report prepared by Dr. D.V. Singh on the given topic was submitted by Dr. G.P. Juyal, Head, H&E Division. It has been assigned by the IRC to Dr. G.P. Juyal and Dr. R.P. Yadav for submitting their portion also.
10.	A team consisting of Dr. P.R. Ojasvi, Dr. D. Mandal, Dr. N.M. Alam, Dr. M. Madhu and Dr. Charan Singh is constituted under the leadership of Dr. P.R. Ojasvi to formulate a new project on DSS for watershed planning. The team may procure already available softwares on watershed planning for basic information. The new project should be submitted by April 20, 2011 and presented in the next IRC meeting. (Action: Dr. P.R. Ojasvi, Dr. D. Mandal, Dr. N.M. Alam, Dr. M. Madhu and Dr. Charan Singh)	New project on Decision Support System for watershed planning was prepared and presented by Dr. P.R. Ojasvi in the IRC meeting-2011 and approved by the House.

S.No.	Action Assigned	Action Taken Report
11.	<p>A status paper may be prepared by Dr. G.L. Bagdi, Sr. Scientist (Agril. Extn.) on soil and water conservation technologies with respect to water harvesting structures, categorizing the different kinds of ITKs, and submitted by May 31, 2011. (Action: Dr. G.L. Bagdi)</p>	<p>Status paper on the assigned topic has been prepared and submitted by Dr. G.L. Bagdi, Sr. Scientist.</p>
12.	<p>Er. R.N. Adhikari should visit Headquarters, Dehradun in the first week of January, 2011 and discuss with Dr. G.P. Juyal to formulate a new project based on hydraulic flume for presentation in the next IRC meeting. (Action: Er. R.N. Adhikari and Dr. G.P. Juyal)</p>	<p>Er. R.N. Adhikari visited Headquarters, Dehradun and discussed with Dr. G.P. Juyal formulation of a new project on hydraulic flume. The formulated project has been approved as an observational trial for one year in the IRC meeting-2011.</p>
13.	<p>A trend analysis of meteorological data of Research Farm, Selakui may be done by Dr. N.M. Alam, Scientist (Agril. Stat.). A status paper on this aspect may be prepared by Feb. 28, 2011 and presented in a local seminar at Headquarters, Dehradun which will be replicated by other Research Centres. (Action : Dr. N.M. Alam, Scientist (Agril. Stat.))</p>	<p>Twenty two years data on monthly rainfall was compiled and normality of the data was checked. As the data failed to follow normal distribution, trend analysis was done using nonparametric statistics. However, it was found that there is no significant trend in rainfall of 22 years period.</p>
14.	<p>The DG (ICAR) has desired that a meeting of about 100-125 officers of the state departments that have undergone regular training course at our Institute and are presently holding key positions may be organized by 30th June, 2011 to discuss and develop a consensus regarding propagation of the theme of natural resource management (NRM) in general and our Institute's mandate in particular. The meeting may also be attended by the DG (ICAR) along with members of SLNA. (Action : Head, HRD&SS Division)</p>	<p>A list of trainees who have undergone regular training course during the last 10 years at the Institute is being compiled by the Head, HRD&SS Division. It has been assigned by the IRC to the Head of HRD&SS Division for organizing the meeting by September 30, 2011.</p>
15.	<p>Submission of Action Taken Report for the actions assigned in the Salient Recommendations and related projects in the IRC meetings proceedings is the responsibility of the persons concerned and should not wait for reminder letter from the Director or RCM Unit. A meeting must be held by the Heads of Research Centres/Divisions after receipt of proceedings of IRC meeting and Action Taken Report should be submitted within one month to the Director indicating what actions have been taken or will be taken in a time bound manner. (Action : All Head of Research Centres and Divisions)</p>	<p>Neither meeting was held nor Action Taken Report was submitted by the Head of Research Centres and Divisions within one month after receipt of proceedings of IRC meeting. Only Bellary Centre had conducted a meeting and submitted Action Taken Report during April, 2011. It has been reiterated in the IRC Meeting-2011 also.</p>
16.	<p>Each scientist must ensure to publish at least two research papers every year in reputed journals having high score as per NAAS ratings, with preferably one in International Journal. Publications should be made within five years after completion of a project. Head of Research Centres/Divisions should promote this culture and ensure quality publications in future. (Action: All Scientists / Heads of Research Centres and Divisions)</p>	<p>Scientists are being encouraged and motivated by the concerned Head of Research Centres / Divisions to publish quality publications in journals having high score as per NAAS ratings. It has been emphasized in the IRC meeting – 2011 to publish papers within three years after completion of a project.</p>

S.No.	Action Assigned	Action Taken Report
17.	Interaction meeting among leader and associates of the projects must be held regularly to discuss and share the knowledge and experiences and plan future course of work. Project sites should be visited by the multi-disciplinary team of scientists so that each scientist is well aware of the work being carried out under the project in other disciplines also. (Action: All Scientists / Heads of Research Centres and Divisions)	Interaction meeting among leader and associates of the projects are being held regularly at all Research Centres and Divisions. Project sites are visited by the multi-disciplinary team of scientists as reported by the Head of Research Centres & Divisions.
18.	Extension scientists should be vigilant and should keep a track of the development / changes occurring in the nearby villages i.e. changes in cropping pattern, landuse, farmers' preferences etc. The technologies developed by the Institute should be demonstrated in 5-6 villages adjacent to Research Farm of the Headquarters / Research Centres to improve visibility of the Institute activities in the field. They should also convince the state government agencies to replicate the technologies developed by the Institute at other locations in the state. (Action: Agricultural Extension Scientists at Headquarters and all Research Centres)	Actions regarding demonstration of technologies developed by the Institute are being taken up under the Transfer of Technology (ToT) programme being conducted at the Headquarters and Research Centres.
19.	All PIs of new projects should keep a track of financial aspects of the research projects in tune with PME (Project Monitoring & Evaluation) for Project Based Budgeting and Zero Based Budgeting in future. (Action: All PIs of new research projects)	All PIs of new projects are keeping track of financial aspects accordingly, as informed by the Head of Research Centres and Divisions.
20.	Scientists who do not have research projects as per norms fixed by the IRC must submit the requisite number of new projects proposals before April 15, 2011, positively for consideration by RAC/IRC. (Action: All Scientists / Heads of Research Centres / Divisions)	Scientists who do not have research projects as per norm fixed by the IRC had submitted new proposals for consideration of the IRC. Total 22 new project proposals were submitted.
21.	Predominant farmers' practices should be clearly defined in terms of fertilizers, seed rate and intercultural practices etc. while reporting the observations / results of the projects. (Action: All concerned scientists of Research Centres and Divisions)	All results of the projects are being prepared by the concerned scientists accordingly.

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 (P.I. – Dr. N.K. Sharma)

- 2.1 Resource conservation measures for arable lands
- 2.2 Resource conservation measures for non-arable lands

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

- 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. – Er. K.P. Tripathi)

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

P-5 PARTICIPATORY INTEGRATED WATERSHED MANAGEMENT (P.I. – Dr. O.P. Chaturvedi)

- 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. R.K. Avasthe)

- 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

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	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	To be continued (New Project)
2.	Decision Support System (DSS) for identifying best management practices in erosion risk area.	N.M. Alam D. Mandal Chayna Jana	PME Cell, Dehradun	2011-12	2012-13	To be concluded (New Project)
Comments: Leader of the project should have close interaction with the leader of project listed at Sl. No. 59 from the beginning itself to find ways and means to ensure the compatibility of outputs / software of both the projects. (Action: Dr. N.M. Alam and Dr. P.R. Ojasvi)						
3.	Landuse analysis by using remote sensing and GIS for resource conservation in shifting cultivated Eastern Ghats region of Orissa.	D. Barman H. Gowda M. Madhu B.S. Naik	Koraput	2010-11	2012-13	To be concluded
Comments: Dr. M. Madhu will replace Mr. P. Jakhar as second associate. Proper smoothening of data may be done before doing trend analysis. Two points data of industrialization, urbanization etc. should be compared. (Action: Dr. D. Barman)						
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	To be continued (New Project)
Comments: Best management practices to increase the level of carbon stock and improve soil quality should be followed. (Action: Dr. K. Rajan)						
5.	Delineation and characterization of Mahi ravines using remote sensing and GIS in terms of resource potential planning.	Gopal Kumar R.S. Kurothe V.C. Pande A.K. Vishwakarma	Vasad	2009-10	2012-13	To be concluded
Comments: Dr. R.S. Kurothe will replace Dr. D.R. Sena as first associate. (Action: Dr. Gopal Kumar)						

1.2 ON-SITE AND OFF-SITE EFFECTS OF EROSION

6.	Effectiveness of vegetative filter strips in preventing soil and nutrient losses.	B.K. Rao A.K. Vishwakarma V.C. Pande	Vasad	2010-11	2014-15	To be continued
----	---	--	-------	---------	---------	-----------------

1.3 SOIL EROSION PROCESSES AND MODELS

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Remarks
7.	Erosion-productivity relationships for evaluating vulnerability and resiliency of soils under different agro-climatic regions of India.	D. Mandal S. Patra N.K. Sharma P. Dogra	HRD&SS, Dehradun	2008-09	2014-15	To be continued (Core Project)
		S.K. Dubey A.K. Singh R.K. Dubey	Agra	2009-10		
		M. Prabhavathi S.L. Patil R.N. Adhikari	Bellary	2009-10		
		R.P. Yadav Pratap Singh A.K. Tiwari	Chandigarh	2009-10		
		H. Biswas Dev Narayan D.G. Durbude	Datia	2009-10		
		D. Barman P. Jakhar B.S. Naik	Koraput	2009-10		
		R.K. Singh B.K. Sethy	Kota	2009-10		
		D.V. Singh V.Selvi K. Kannan	Udhagamandalam	2009-10		
		Gopal Kumar R.S. Kurothe A.K. Vishwakarma	Vasad	2009-10		
Comments: Dr. D.G. Durbude will replace Dr. D.C. Sahoo as associate at Datia Centre. Two fertilizer treatments i.e. no application of manure and fertilizers and recommended dose of manures and fertilizers at each level of slope should be adopted by the leader at Research Centre, Chandigarh to segregate the impact of erosion on crop productivity.						(Action: Dr. R.P. Yadav)
8.	Assessment of soil organic carbon in transit under erosion processes: A source or sink for atmospheric CO ₂ .	M. Shankar D.R. Sena N.M. Alam	Soil Science & Agronomy, Dehradun	2011-12	2015-16	To be continued (New Project)
Comments: Initial carbon data from the control plot may be recorded.						(Action: Mr. M. Shankar)

P-2 CONSERVATION MEASURES FOR SUSTAINABLE PRODUCTION SYSTEMS

2.1 RESOURCE CONSERVATION MEASURES FOR ARABLE LANDS

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Remarks
9.	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	To be continued
10.	Evaluation of organic farming vis-à-vis inorganic farming for resource conservation and sustained productivity under prominent cropping system.	K.S. Dadhwal N.K. Sharma S. Patra	Soil Science & Agronomy, Dehradun	2008-09	2015-16	To be continued
11.	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	To be continued
12.	Integrated rain water management for enhancing rain water productivity in maize based cropping system.	Prabhat Kumar Ambrish Kumar Harsh Mehta	Soil Science & Agronomy, Dehradun	2010-11	2013-14	To be continued
Comments: Mr. Prabhat Kumar will replace Dr. M. Madhu as leader of project. Name of Dr. D. Mandal is deleted and Dr. Harsh Mehta is associated as second associate. (Action: Mr. Prabhat Kumar)						
13.	Evaluating productivity potential of <i>bhimal (Grewia optiva)</i> along with field crops.	Harsh Mehta K.S. Dadhwal	Plant Science, Dehradun	2005-06	2015-16	To be continued
14.	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	To be continued
15.	Canopy management in <i>Morus alba</i> for enhancing productivity and resource conservation.	Rajesh Kaushal Ambrish Kumar J. Jayaprakash Prabhat Kumar	Plant Science, Dehradun	2011-12	2016-17	To be continued (New Project)
16.	Yield maximization and resource conservation through integrated nutrient management and tillage combinations in the ravines of the Yamuna river.	P.K. Panda A.K. Singh S.K. Dubey	Agra	2011-12	2014-15	To be continued
Comments: Domain area of technology must be defined in RPF II. Runoff plot preparation should be expedited so that they are completed before initiation of next season. (Action: Dr. P.K. Panda)						

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Remarks
17.	Performance of Tamarind near S&WC structures with different mulches in vertisols of SAT region.	D. Ramajayam S.K. Srivastava M. Prabhavathi B. Mondal	Bellary	2011-12	2015-16	To be continued (New Project)
Comments: Suitable variety of Tamarind should be selected for the study in the locality/region. (Action: Dr. D. Ramajayam)						
18.	Conservation tillage for resource management and higher production from Shiwaliks.	R.P. Yadav Pratap Singh Pawan Sharma	Chandigarh	2009-10	2015-16	To be continued
19.	Adoption of potential and productivity of organic vis-à-vis conventional farming system under rainfed conditions of Shiwaliks region.	Pawan Sharma Pratap Singh R.P. Yadav	Chandigarh	2011-12	2015-16	To be continued (New Project)
Comments: Survey should be carried out by taking the sample of 50-60 homogenous / representative farmers. Data on runoff and soil loss should be recorded. (Action: Dr. Pawan Sharma)						
20.	<i>In situ</i> moisture conservation practices under aonla based agro-forestry system for sustainable production in red soils of Bundelkhand.	Dev Narayan H. Biswas	Datia	2010-11	2018-19	To be continued
21.	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 D.G. Durbude	Datia	2011-12	2014-15	To be continued
Comments: Dr. D.G. Durbude will replace Dr. D.C. Sahoo as second associate. As suggested by Agronomy scientists, keeping in view the real field situation and constraints faced by the farmers, strip cropping may be adopted in place of intercropping. Title of the project is modified accordingly. (Action: Dr. S.P. Tiwari)						
22.	Evaluating the different crop combinations for strip cropping in terms of soil, nutrient losses and their productivity in uplands of Eastern Ghats.	P. Jakhar B.S.Naik D. Barman	Koraput	2009-10	2013-14	To be continued
23.	Resource conservation by alley cropping in shifting cultivated degraded lands of Eastern Ghats.	H. Gowda P. Jakhar D. Barman	Koraput	2009-10	2013-14	To be continued
Comments: Competition effect due to shade on yield of crops may be recorded and analyzed. (Action: Mr. H. Gowda)						
24.	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	Kota	2011-12	2014-15	To be continued

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Remarks
25.	Techniques for establishment of tea on terrace riser in the Nilgiris.	O.P.S. Khola D.V. Singh V. Selvi	Udhagamandalam	2008-09	2012-13	To be concluded

2.2 RESOURCE CONSERVATION MEASURES FOR NON-ARABLE LANDS

26.	Fuelwood and fodder production from densified plantations on old riverbed land.	J. Jayaprakash Charan Singh B.N. Ghosh	Plant Science, Dehradun	1997-98	2012-13	To be concluded
27.	Evaluating the performance and developing techniques for enhancing growth and seed yield of <i>Jatropha curcas</i> in degraded lands of sub-humid Himalayas.	J. Jayaprakash D. Mandal	Plant Science Dehradun	2006-07	2015-16	To be continued
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	To be continued
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	To be continued
30.	Effect of degradation on conservation and production attributes of Sal forests in Uttarakhand.	O.P. Chaturvedi M. Shankar J. Jayaprakash J.M.S. Tomar Charan Singh	Plant Science, Dehradun	2010-11	2015-16	To be continued
Comments: Data of bulk density may be checked.					(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 Prabhat Kumar	Plant Science, Dehradun	2011-12	2015-16	To be continued (New Project)
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 Prabhat Kumar	Plant Science, Dehradun	2011-12	2020-21	To be continued (New Project)

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Remarks
33.	Peach based agri-horticulture land use system for degraded Shiwaliks.	Ram Prasad Pratap Singh R.P. Yadav S.L. Arya	Chandigarh	2008-09	2015-16	To be continued
34.	Developing SALT (Sloping Agricultural Land Technology) for resource conservation and economic upliftment in Shiwaliks.	Pankaj Panwar Ram Prasad V.K. Bhatt Pratap Singh Sharmistha Pal	Chandigarh	2010-11	2015-16	To be continued
35.	Resource budgeting in agro-forestry for livelihood security by modifying WANuLCAS model under Indian condition.	Pankaj Panwar Sharmistha Pal V.K. Bhatt Ram Prasad	Chandigarh	2011-12	2016-17	To be continued
36.	Evaluation of moisture conservation techniques for sustainable production of Tree Borne Oil Seeds (TBOS) in Bundelkhand.	M.N. Ramesha P.P. Adhikary	Datia	2010-11	2017-18	To be continued
37.	Bio-engineering measures for resource conservation and management in red sloppy lateritic soils of Orissa.	B.S. Naik P. Jakhar H. Gowda D. Barman	Koraput	2008-09	2014-15	To be continued
Comments: Project is extended for three years till 2014-15 due to late installation of gauging devices.						(Action: Er. B.S. Naik)
38.	Performance evaluation of different oil yielding grasses in shifting cultivated degraded lands of Orissa.	H. Gowda D. Barman M. Madhu	Koraput	2011-12	2014-15	To be continued
Comments: Name of Dr. M. Madhu is included as second associate.						(Action: Mr. H. Gowda)
39.	Evaluation of different under utilized fruit species with varying inter-space managements in Chambal ravines.	H.R. Meena A.K. Parandiyal Ashok Kumar	Kota	2006-07	2015-16	To be continued
Comments: Revised RPF I should be submitted for changing V-shpaed micro-catchment to half moon shaped catchment.						(Action: Mr. H.R. Meena)
40.	Evaluation of promising oilseed tree species under silvi-pastoral system for rehabilitation of Chambal ravines.	A.K. Parandiyal Ashok Kumar	Kota	2008-09	2015-16	To be continued
41.	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	To be continued
Comments: Title of the project is modified.						(Action: Dr. A.K. Parandiyal)

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Remarks
42.	Effect of shade trees on productivity and soil health in rejuvenated tea plantations in Nilgiris.	R. Ragupathy K. Rajan	Udhagamandalam	2011-12	2018-19	To be continued (New Project)
43.	Enhancing productivity of non-arable ravine lands by plantation of <i>A. sapota</i> with intercropping systems.	A.K. Vishwakarma B.K. Rao Gopal Kumar V.C. Pande	Vasad	2008-09	2022-23	To be continued

P-3 HYDROLOGICAL BEHAVIOUR OF WATERSHEDS FOR CONSERVATION PLANNING

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

44.	Hydrological evaluation of recommended forest trees in Himalayan foothills.	O.P. Chaturvedi Amrish Kumar Charan Singh B.N. Ghosh	Plant Science, Dehradun	2004-05	2018-19	To be continued
45.	Evaluation of hydrological behaviour and production potential of recommended landuse system / practices under different agro-ecological regions of India.	J.M.S. Tomar S. Patra, A.C. Rathore N.K. Sharma B.N. Ghosh M. Muruganandam	Plant Science, Dehradun	2011-12	2015-16	To be continued (Core Project)
		K.K. Sharma S.K. Dubey R.K. Dubey S. Kala	Agra			
		A. Raizada R.N. Adhikari S.L. Patil M. Prabhavati	Bellary			
		V.K. Bhatt Pankaj Panwar Pratap Singh Ram Prasad Sharmistha Pal	Chandigarh			

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Remarks
		D.G. Durbude M.N. Ramesha P.P. Adhikary Dev Narayan	Datia			
		B.S. Naik, H. Gowda P. Jakhar, D. Barman	Koraput			
		Shakir Ali A.K. Parandiyal R.K. Singh, H.R. Meena	Kota			
		V. Selvi, D.V. Singh K. Kannan	Udhagamandalam			
		B.K. Rao A.K. Vishwakarma Gopal Kumar	Vasad			
<p>Comments: Dr. K.K. Sharma will be the leader and name of Dr. A.K. Singh is deleted at Agra Centre. Name of Dr. A.K. Tiwari is deleted and Dr. Pankaj Panwar will be the first associate at Chandigarh Centre. Names of Dr. S.P. Tiwari and Dr. D.C. sahoo are deleted and Dr. D.G. Durbude will be the leader at Datia Centre. Name of Dr. R.S. Kurothe is deleted and Dr. B.K. Rao will be the leader at Vasad Centre. (Action: Dr. J.M.S. Tomar and leaders at all Research Centres)</p>						
46.	Hydrological response to micro-catchments under different land uses with vegetation manipulation.	V.K. Bhatt, A.K. Tiwari Pankaj Panwar	Chandigarh	2005-06	2012-13	To be concluded
<p>Comments: The treatments (removal of all vegetation every year) may be implemented in upper, middle and lower reaches of the three watersheds, with average thinning of 33%, 40% and 50% in WS₁, WS₂ and WS₃ watersheds, respectively. (Action: Dr. V.K. Bhatt)</p>						
47.	Analysis of climatic data for evolving drought indices towards planning sustainable cropping systems in Bundelkhand.	P.P. Adhikary M.N. Ramesha	Datia	2010-11	2014-15	To be continued
<p>Comments: Critical growth period of the concerned crops needs to be taken into account for the study. (Action: Dr. P.P. Adhikary)</p>						
48.	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	To be continued (New Project)
<p>Comments: Prior to introducing fisheries component under multiple use of water, adequate measures may be taken up for handling the species. (Action: Dr. S. Manivannan)</p>						

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Remarks
49.	Hydrological implication of sequential alternation of land use covers in a ravinous catchment.	R.S. Kurothe V.C. Pande Gopal Kumar A.K. Vishwakarma	Vasad	2004-05	2012-13	To be concluded
Comments: Name of Dr. D.R. Sena is deleted.						(Action: Dr. R.S. Kurothe)
50.	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	To be continued (National Bamboo Mission)
		A.K. Singh S.K. Dubey S. Kala	Agra			
		A.K. Parandiyal Shakir Ali	Kota			
Comments: Project is extended for three years till 2014-15 in order to collect the data on economic viability of bamboo plantations at different ravinous locations. The project will be carried out as an Institute project after withdrawal of financial support from NBM. (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

51.	Design and development of site specific artificial groundwater recharge filters.	Gopal Kumar B.K. Rao	Vasad	2009-10	2012-13	To be concluded
Comments: Dr. B.K. Rao will replace Dr. D.R. Sena as an associate.						(Action: Dr. Gopal Kumar)

3.3 WATER HARVESTING

52.	Integration of low cost water harvesting and micro irrigation for resource conservation and sustainable vegetable production in terraced lands in North Western Himalayas.	S. Patra G.P. Juyal A.C. Rathore	Hydrology & Engineering, Dehradun	2010-11	2012-13	To be concluded
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	To be continued (New Project)
54.	Estimation of water budget components for predominant land uses of south-eastern Rajasthan for conservation planning.	B.K. Sethy R.K. Singh H.R. Meena	Kota	2010-11	2015-16	To be continued

P-4 REHABILITATION OF AREAS AFFECTED BY MASS EROSION**4.1 REFINEMENT OF TECHNOLOGIES FOR TORRENT TRAINING, LANDSLIDE CONTROL AND MINESPOILS REHABILITATION**

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Remarks
55.	Evolving methodology for extraction of River Bed Material (RBM) from rivers for monitoring river morphology.	K.P. Tripathi G.P. Juyal	Hydrology & Engineering, Dehradun	2011-12	2013-14	To be continued (New Project)
Comments: To make the study more scientific, a control river should also be included in the study from which no river bed material is being extracted. (Action: Er. K.P. Tripathi)						
56.	Cost effective conservation measures for management of medium and deep ravinous lands.	B.K. Sethy A.K. Parandiyal Shakir Ali Ashok Kumar R.K. Singh	Kota	2004-05	2012-13	To be concluded
57.	Productive utilization of ravines through introduction of horticulture and improved planting materials.	A.K. Parandiyal B.K. Sethy H.R. Meena	Kota	2005-06	2013-14	To be continued
Comments: Initial biomass may be calculated. (Action: Dr. A.K. Parandiyal)						
58.	Field evaluation of design of trenches under different agro-climatic regions.	R.S. Kurothe V.C. Pande Gopal Kumar	Vasad	2011-12	2015-16	To be continued (Core Project)
		S. Kala A.K. Singh R.K. Dubey S.K. Dubey	Agra			
		A. Raizada R.N. Adhikari M. Prabhavathi	Bellary			

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Remarks
		A.K. Tiwari Pankaj Panwar V.K. Bhatt Sharmistha Pal	Chandigarh			
		D.G. Durbude P.P. Adhikary M.N. Ramesha S.P. Tiwari	Datia			
		B.S. Naik D. Barman H. Gowda M. Madhu	Koraput			
		B.K. Sethy Shakir Ali Ashok Kumar A.K. Parandiyal	Kota			
		S. Manivanan K. Kannan K. Rajan	Udhagamandalam			

Comments: Dr. D.G. Durbude will replace Dr. D.C. Sahoo as leader at Datia Centre. Names of Dr. M. Madhu, Dr. A.K. Parandiyal and Dr. K. Rajan are included as associates at Koraput, Kota and Udhagamandalam Centres, respectively. Name of Dr. D.R. Sena is deleted at Vasad Centre. As a control, 0% intensity of trenching should be a part of the study. (Action: Dr. R.S. Kurothe 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

59.	Development of a user friendly Decision Support System application for planning of watershed development project.	P.R. Ojasvi Charan Singh N.M. Alam Chayna Jana D. Mandal	Hydrology & Engineering, Dehradun	2011-12	2015-16	To be continued (New Project)
-----	---	--	-----------------------------------	---------	---------	----------------------------------

Comments: The study should cover a wide spectrum. Therefore, the output of project listed at Sl. No. 2 will be a part of this study. Since the ultimate aim is to develop user friendly software, leaders of both the projects should ensure that the outputs developed by them have the provision to be integrated into single software. (Action: Dr. P.R. Ojasvi and Dr. N.M. Alam)

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Remarks
60.	Resource conservation and management in Netrenahalli watershed, Chitradurga district, Karnataka.	R.N. Adhikari S.L. Patil A. Raizada M. Prabhavathi D. Ramajayam N. Loganandhan B.Mondal	Bellary	2008-09	2012-13	To be concluded TDET (MoRD)
Comments : Names of Dr. D. Ramajayam, Dr. N. Loganandhan and Dr. B. Mondal are included as associates. Project is extended for one year till 2012-13 as the funding agency has agreed to extend the project till 2012-13 to accomplish the remaining works. (Action: Er. R.N. Adhikari)						

5.4 FARMING SYSTEM APPROACH

61.	Enhancement of livelihood security through sustainable farming systems and related farm enterprises in North-West Himalayas.	B.L. Dhyani Ambrish Kumar D. Mandal	HRD&SS, Dehradun	2007-08	2012-13	To be concluded (NAIP Project)
Comments: Project is extended for one year till 2012-13 as the project has been extended by NAIP. (Action: Dr. B.L. Dhyani)						
62.	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	2013-14	To be continued (Core Project)
		P.K. Panda A.K. Singh R.B. Meena	Agra			
		S.L. Patil R.N. Adhikari, M. Prabhavathi	Bellary			
		S.L. Arya Pratap Singh Sharmistha Pal Ram Prasad	Chandigarh			
		Dev Narayan P.P. Adhikary M.N. Ramesha	Datia			

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Remarks
		P. Jakhar B.S. Naik D. Barman	Koraput			
		Ashok Kumar H.R. Meena B.K. Sethy	Kota			
		K. Kannan D.V. Singh V. Selvi	Udhagamandalam			
		V.C. Pande Gopal Kumar A.K. Vishwakarma	Vasad			

5.5 WATERSHED TECHNOLOGIES (STRATEGIC RESEARCH)

63.	Development of model watershed Iduhatti in the Nilgiris.	D.V. Singh V. Selvi P. Sundarambal R. Ragupathy K. Kannan	Udhagamandalam	2008-09	2012-13	To be concluded (HADP Funded)
-----	--	---	----------------	---------	---------	---

Comments: Project is extended for one year till 2012-13 for completing the remaining activities.

(Action: Dr. D.V. Singh)

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

6.1 RESOURCE ECONOMICS

64.	Relative performance of watershed development projects under different institutional structures in semi-arid Karnataka and Andhra Pradesh.	B. Mondal	Bellary	2008-09	2012-13	To be concluded
-----	--	-----------	---------	---------	---------	-----------------

Comments: Dr. B. Mondal will replace Dr. S.L. Patil as leader of project. Project is extended for one year till 2012-13 to study the existing institutional structures from top to taluka level in the states of Karnataka and Andhra Pradesh for implementation of watershed development projects in the states. (Action: Dr. B. Mondal)

6.3 COMMON PROPERTY RESOURCE MANAGEMENT

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Remarks
65.	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	2012-13	To be concluded (Core Project)
		B. Mondal R.N. Adhikari	Bellary			
		S.L. Arya V.K. Bhatt	Chandigarh			
		Om Prakash	Datia			
		Ashok Kumar Shakir Ali	Kota			
		P. Sundarambal	Udhagamandalam			
		V.C. Pande G.L. Bagdi	Vasad			

Comments: Dr. D.R. Sena will replace Er. C. Prakash at Dehradun. Name of Dr. B. Mondal is included as leader at Bellary Centre. Project is extended for one year till 2012-13 for analysis of data and compilation of results. (Action: Dr. Pradeep Dogra and leaders at Research Centres)

P-7 HUMAN RESOURCE DEVELOPMENT AND TECHNOLOGY TRANSFER

7.1 TRAINING METHODOLOGY, NEED ASSESSMENT, GENDER NEUTRALITY AND EVALUATION

66.	Capacity building programmes for watershed management in India: Assessment and impact analysis.	Bankey Bihari B.L. Dhyani Pradeep Dogra	HRD & SS, Dehradun	2008-09	2012-13	To be concluded (Core Project)
		N. Loganandhan	Bellary			
		S.L. Arya	Chandigarh			
		Om Prakash	Datia			
		Ashok Kumar	Kota			
		P. Sundarambal	Udhagamandalam			
		G.L. Bagdi, V.C. Pande	Vasad			

Comments: Dr. N. Loganandhan will replace Dr. A. Raizada as leader at Bellary Centre. Project is extended for one year till 2012-13 for analysis of data and compilation of results. (Action: Dr. Bankey Bihari and leaders at Research Centres)

NOTE : 1. Timely funding should be assured well in advance for those projects which are being externally funded.
2. Although the presentation mode this year was category wise, yet the listing has been done on the basis of identified programmes as done in previous years.
3. All RPFs i.e. RPF III for the projects concluded in 2011-12 and RPF II for 2011-12 of ongoing projects should be submitted by March 31, 2012 positively. RPF I for projects approved in IRC-2011 should be submitted by September 30, 2011 positively.

PROJECTS CONCLUDED IN 2011-12

S. No.	Programme No.	S. No. of IRC Meeting Proc. 2010	Title of the Project	Centre/Division
1.	1.3	5	Development of scalogram model based on soil parameters, landuse and topographic characteristics for estimation of sediment yield from small watersheds.	Chandigarh
2.	2.1	13	Resource conservation and sustainable crop production using bio-fertilizers and organics in degraded Shiwaliks.	Chandigarh
3.	2.1	21	Improvisation of terraces of farmers' fields in the Nilgiris.	Udhagamandalam
4.	2.1	22	Optimum tillage and organic manuring practices for crop production and resource conservation in the Nilgiris.	Udhagamandalam
Comments: Technical brochures should be brought out based on research findings of the project. (Action: Dr. O.P.S. Khola)				
5.	3.1	39	Assessment of impact of climate change on hydrology and crop production in the selected watersheds.	Hydrology & Engineering, Dehradun
6.	4.1	49	To study the performance of special types of spurs through laboratory studies (in hydraulic flume).	Hydrology & Engineering, Dehradun
Comments: The experimental runs may be carried out under live bed condition. (Action: Dr. G.P. Juyal)				
7.	5.4	53	Evaluation of fish based Integrated Farming Systems in foothills and mid-hills of Himalayas.	Hydrology & Engineering, Dehradun
Comments: Publications from the research findings of this project should be brought out. (Action: Mr. M. Muruganadam)				
8.	6.2	58	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.	HRD&SS, Dehradun

NEW PROJECTS APPROVED DURING IRC MEETING – 2011

S. No.	Prog. No.	S. No. of this proceedings	Title of the Project	Centre/Division
1.	1.1	1	Impacts of landuse changes on surface hydrology in Doon Valley through remote sensing and GIS approach.	Hydrology & Engineering, Dehradun
2.	1.1	2	Decision Support System (DSS) for identifying best management practices in erosion risk area.	PME Cell, Dehradun
3.	1.1	4	Effect of slope and land uses on soil carbon stock and soil quality in the Nilgiris.	Udhagamandalam
4.	1.3	8	Assessment of soil organic carbon in transit under erosion processes: A source or sink for atmospheric CO ₂ .	Soil Science & Agronomy, Dehradun
5.	2.1	15	Canopy management in <i>Morus alba</i> for enhancing productivity and resource conservation.	Plant Science, Dehradun
6.	2.1	17	Performance of Tamarind near S&WC structures with different mulches in vertisols of SAT region.	Bellary
7.	2.1	19	Adoption potential and productivity of organic vis-à-vis conventional farming system under rainfed conditions of Shiwaliks region.	Chandigarh
8.	2.2	31	Influence of aromatic grasses and tree management on soil moisture and health under silvo-aromatic grass systems on bouldery land of Doon Valley.	Plant Science, Dehradun
9.	2.2	32	Efficacy of different soil and water conservation measures on bamboo productivity and resource conservation in Himalayan foothills.	Plant Science, Dehradun
10.	2.2	42	Effect of shade trees on productivity and soil health in rejuvenated tea plantations in Nilgiris.	Udhagamandalam
11.	3.1	48	Enhancement in land productivity and livelihood security of small farmers of Nilgiris through multiple use of harvested water.	Udhagamandalam
12.	3.3	53	Conservation Bench Terrace (CBT) based integrated farming system in Himalayan foothills.	HRD&SS, Dehradun
13.	4.1	55	Evolving methodology for extraction of River Bed Material (RBM) from rivers for monitoring river morphology.	Hydrology & Engineering, Dehradun
14.	5.1	59	Development of a user friendly Decision Support System application for planning of watershed development project.	Hydrology & Engineering, Dehradun

OBSERVATIONAL TRIALS APPROVED

S. No.	Title of project	Leader & Associates	Centre/ Division
1.	Identification of environmentally sustainable landuse and management practices based on soil organic carbon management in different agro-ecological regions of India under different climate change scenarios.	D. Mandal S. Patra S.S. Shrimali N.M. Alam	HRD&SS, Dehradun
Comments: In principle, the project is approved as a core project from the year 2012-13. However, it may be firstly undertaken as an Observational Trial during the current year (2011-12) at Headquarters, Dehradun to know the scientific feasibility of the project. (Action: Dr. D. Mandal)			
2.	Effect of vegetative and mechanical measures on resource conservation in an indigenously developed hydraulic flume.	R.N. Adhikari M. Prabhavathi A. Raizada	Bellary
Comments: Comprehensive review of literature needs to be done. However, the proposal is approved as an Observation Trial for one year. Extensive data should be collected and presented in the next IRC meeting. (Action: Er. R.N. Adhikari)			
3.	Effect of in-situ rainwater harvesting and micro-site amendments for the establishment of fruit tree based agro-forestry system in saline-sodic vertisols.	D. Ramajayam M. Prabhavathi A. Raizada B. Mondal	Bellary
Comments: The proposal is approved as an Observational Trial for a period of two years. The study may be conducted by taking only tamarind in view of the shallow soil depth and water logging condition. The study should be supported by a comprehensive review of literature. (Action: Dr. D. Ramajayam)			

NEW PROPOSALS PRESENTED IN THE IRC-2011 BUT NOT APPROVED

S. No.	Title of project	Leader & Associates	Centre/ Division	Remarks of IRC
1.	Maximizing water use efficiency of wheat through sowing methods in Shiwalik region.	Pratap Singh Pawan Sharma A.K. Tiwari S.L. Arya	Chandigarh	Literature may be reviewed on the concerned aspect as studies on similar aspect have already been done in the Shiwalik region.
2.	Study of effect of short term green manuring and sowing time on soil fertility, erosion control and yield of maize in Shiwalik region.	Pratap Singh R.P. Yadav V.K. Bhatt	Chandigarh	Before undertaking development of new technology, the House was of the opinion that brochures of potential technologies already developed by Research Centre, Chandigarh based on concluded projects at the centre need to be brought out for the benefit of farmers.
3.	Assessment of training needs of farmers for NRM in changing climatic scenario.	Om Prakash	Datia	Extensive review of literature on climate change needs to be done with special reference to Bundelkhand region and presented in the next IRC meeting.
4.	Post-adoption behaviour of farmers towards soil and water conservation technologies of watershed management.	G.L. Bagdi	Vasad	This project may be developed as a core project and presented in the next IRC meeting.

DIVISION/CENTRE-WISE NUMBER OF ON-GOING PROJECTS**DIVISION / CENTRE-WISE SL. NO. OF PROJECTS**

S. No.	DIVISION/CENTRE	SL. NO. OF ON-GOING PROJECTS	TOTAL
1.	Dehradun		
	• Soil Science & Agronomy	8,9,10,11,12	05
	• Hydrology & Engineering	1,52,55,59	04
	• HRD & SS	7,53,61,66	04
	• Plant Science	13,14,15,26,27,28,29,30,31,32,44,45	12
	• PME Cell	2,62,65	03
2.	Agra	7,16,45,50,58,62	06
3.	Bellary	7,17,45,58,60,62,64,65,66	09
4.	Chandigarh	7,18,19,33,34,35,45,46,58,62,65,66	12
5.	Datia	7,20,21,36,45,47,58,62,65,66	10
6.	Koraput	3,7,22,23,37,38,45,58,62	09
7.	Kota	7,24,39,40,41,45,50,54,56,57,58,62,65,66	14
8.	Udhagamandalam	4,7,25,42,45,48,58,62,63,65,66	11
9.	Vasad	5,6,7,43,45,49,50,51,58,62,65,66	12
	Grand Total		111

DIVISION / CENTRE & PROGRAMME-WISE NUMBER OF PROJECTS

S. No.	DIVISION/CENTRE	P-1	P-2	P-3	P-4	P-5	P-6	P-7	Total
1.	Dehradun								
	♦ Soil Science & Agronomy	1	4	-	-	-	-	-	05
	♦ Hydrology & Engineering	1	-	1	1	1	-	-	04
	♦ HRD & SS	1	-	1	-	1	-	1	04
	♦ Plant Science	-	10	2	-	-	-	-	12
	♦ PME Cell	1	-	-	-	1	1	-	03
2.	Agra	1	1	2	1	1	-	-	06
3.	Bellary	1	1	1	1	2	2	1	09
4.	Chandigarh	1	5	2	1	1	1	1	12
5.	Datia	1	3	2	1	1	1	1	10
6.	Koraput	2	4	1	1	1	-	-	09
7.	Kota	1	4	3	3	1	1	1	14
8.	Udhagamandalam	2	2	2	1	2	1	1	11
9.	Vasad	3	1	4	1	1	1	1	12
	Grand Total	16	35	21	11	13	08	07	111

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	08	35	11	04	05	02	01	66

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 2011 is as follows:

S. No.	Name	Designation	Leader	Associate	Total	S. No. of projects to be concluded
Soil Science and Agronomy Division						
1.	Dr. K.S. Dadhwal	Acting Director & Head of Division	1(10)	1(13)	2	-
2.	Dr. N.K. Sharma	Pr. Scientist (Agro.)	1(11)	6(7,9,10,45,53,62)	7	-
3.	Dr. B.N. Ghosh	Sr. Scientist (Soils)	1(9)	5(14,26,28,44,45)	6	26
4.	Mr. M. Shankar	Scientist (Soils)	1(8)	1(30)	2	-
5.	Mr. Prabhat Kumar	Scientist (Soils)	1(12)	3(15,31,32)	4	-
Hydrology and Engineering Division						
6.	Dr. G.P. Juyal	Head of Division	-	2(52,55)	2	52
7.	Er. K.P. Tripathi	Pr. Scientist (Engg.)	1(55)	-	1	-
8.	Dr. P.R. Ojasvi	Pr. Scientist (Engg.)	1(59)	-	1	-
9.	Er. S.S. Shrimali	Sr. Scientist (Com.App.)	-	1(1)	1	-
10.	Dr. D.R. Sena	Sr. Scientist (Engg.)	-	2(8,65)	2	65
11.	Mr. M. Muruganandam	Scientist (SS) (Fisheries)	-	3(45,53,62)	3	-
12.	Er. S. Patra	Scientist (Engg.)	1(52)	4(7,10,45,62)	5	52
13.	Ms. Chayna Jana	Scientist (Ag. Stat.)	1(1)	2(2,59)	3	2
Human Resource Development and Social Science Division						
14.	Dr. R.K. Avasthe	Head of Division	-	-	-	-
15.	Dr. Charan Singh	Sr. Scientist (Forestry)	-	4(26,30,44,59)	4	26
16.	Dr. Bankey Bihari	Sr. Scientist (Ag. Extn.)	1(66)	1(65)	2	65,66
17.	Dr. Ambrish Kumar	Sr. Scientist (Engg.)	1(53)	6(11,12,15,32,44,61)	7	61
18.	Dr. D. Mandal	Sr. Scientist (Soils)	1(7)	7(1,2,11,27,29,59,61)	8	2,61
19.	Mr. Raj Kumar	Scientist (Forestry)	-	1(1)	1	-

(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
Plant Science Division						
20.	Dr. O.P. Chaturvedi	Head of Division	2(30,44)	-	2	-
21.	Dr. Harsh Mehta	Pr. Scientist (Pl. Breed.)	2(13,29)	1(12)	3	-
22.	Dr. J.M.S. Tomar	Sr. Scientist (Forestry)	2(31,45)	3(29,30,32)	5	-
23.	Dr. Rajesh Kaushal	Sr. Scientist (Forestry)	2(15,32)	1(31)	3	-
24.	Dr. A.C. Rathore	Scientist (SS) (Hort.)	2(14,28)	3(45,52,62)	5	52
25.	Dr. J. Jayaprakash	Scientist (Forestry)	2(26,27)	2(15,30)	4	26
Project Monitoring and Evaluation Cell						
26.	Dr. B.L. Dhyani	Pr. Scientist (Ag. Eco.)	1(61)	3(53,65,66)	4	61,65,66
27.	Dr. Pradeep Dogra	Sr. Scientist (Ag. Eco.)	2(62,65)	3(7,9,66)	5	65,66
28.	Dr. N.M. Alam	Scientist (Ag. Stat.)	1(2)	3(8,53,59)	4	2
Research Centre, Agra						
29.	Dr. S.K. Dubey	Head of Centre	1(7)	4(16,45,50,58)	5	-
30.	Dr. P.K. Panda	Sr. Scientist (Agro.)	2(16,62)	-	2	-
31.	Dr. A.K. Singh	Sr. Scientist (Engg.)	1(50)	4(7,16,58,62)	5	-
32.	Dr. K.K. Sharma	Sr. Scientist (Engg.)	1(45)	-	1	-
33.	Mr. R.K. Dubey	Scientist (SS) (Agro.)	-	3(7,45,58)	3	-
34.	Dr. (Ms.) S. Kala	Scientist (Forestry)	1(58)	2(45,50)	3	-
35.	Mr. R.B. Meena	Scientist (Soils)	-	1(62)	1	-
Research Centre, Bellary						
36.	Dr. A. Raizada	Head of Centre	2(45,58)	1(60)	3	60
37.	Er. R.N. Adhikari	Pr. Scientist (Engg.)	1(60)	5(7,45,58,62,65)	6	60,65
38.	Dr. S.L. Patil	Pr. Scientist (Agro.)	1(62)	3(7,45,60)	4	60
39.	Er. S.K. Srivastava	Scientist (Engg.)	-	1(17)	1	-
40.	Dr. D. Ramajayam	Scientist (Horticulture)	1(17)	1(60)	2	60
41.	Dr. N. Loganandhan	Scientist (Agril. Extn.)	1(66)	1(60)	2	60,66
42.	Dr. B. Mondal	Scientist (Agril. Eco.)	2(64,65)	2(17,60)	4	60,64,65
43.	Ms. M. Prabhavathi	Scientist (Soils)	1(7)	5(17,45,58,60,62)	6	60
Research Centre, Chandigarh						
44.	Dr. A.K. Tiwari	Head of Centre	1(58)	2(7,46)	3	46
45.	Dr.(Ms.) Pawan Sharma	Pr. Scientist (Soils)	1(19)	1(18)	2	-
46.	Dr. Pratap Singh	Pr. Scientist (Agro.)	-	7(7,18,19,33,34,45,62)	7	-
47.	Dr. R.P. Yadav	Pr. Scientist (Soils)	2(7,18)	2(19,33)	4	-
48.	Dr. (Ms.) S.L. Arya	Pr. Scientist (Ag. Eco.)	3(62,65,66)	1(33)	4	65,66
49.	Dr. V.K. Bhatt	Sr. Scientist (Engg.)	2(45,46)	4(34,35,58,65)	6	46,65
50.	Dr. Ram Prasad	Sr. Scientist (Hort.)	1(33)	4(34,35,45,62)	5	-
51.	Dr. Pankaj Panwar	Sr. Scientist (Forestry)	2(34,35)	3(45,46,58)	5	46
52.	Dr.(Ms.)Sharmistha Pal	Scientist (Soils)	-	5(34,35,45,58,62)	5	-

(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 Datia						
53.	Dr. S.P. Tiwari	Head of Centre	1(21)	1(58)	2	-
54.	Dr. Dev Narayan	Sr. Scientist (Agro.)	2(20,62)	3(7,21,45)	5	-
55.	Dr. Om Prakash	Sr. Scientist (Ag. Extn.)	2(65,66)	-	2	65,66
56.	Dr. D.G. Durbude	Sr. Scientist (Engg.)	2(45,58)	2(7,21)	4	-
57.	Dr. H. Biswas	Scientist (Soils)	1(7)	1(20)	2	-
58.	Dr. P.P. Adhikary	Scientist (Soils)	1(47)	4(36,45,58,62)	5	-
59.	Dr. M.N. Ramesha	Scientist (Forestry)	1(36)	4(45,47,58,62)	5	-
Research Centre, Koraput						
60.	Dr. M. Madhu	Head of Centre	-	3(3,38,58)	3	3
61.	Er. B.S. Naik	Scientist (Engg.)	3(37,45,58)	4(3,7,22,62)	7	3
62.	Mr. H. Gowda	Scientist (Forestry)	2(23,38)	4(3,37,45,58)	6	3
63.	Mr. P. Jakhar	Scientist (Agro.)	2(22,62)	4(7,23,37,45)	6	-
64.	Dr. D. Barman	Scientist (Soils)	2(3,7)	7(22,23,37,38,45,58,62)	9	3
Research Centre, Kota						
65.	Dr. R.K. Singh	Head of Centre	2(7,24)	4(41,45,54,56)	6	56
66.	Dr. A.K. Parandiyal	Sr. Scientist (Forestry)	4(40,41,50,57)	4(39,45,56,58)	8	56
67.	Dr. Ashok Kumar	Sr. Scientist (Ag. Eco.)	3(62,65,66)	4(39,40,56,58)	7	56,65,66
68.	Dr. Shakir Ali	Sr. Scientist (Engg.)	1(45)	4(50,56,58,65)	5	56,65
69.	Er. B.K. Sethy	Scientist (SS) (Engg.)	3(54,56,58)	3(7,57,62)	6	56
70.	Mr. H.R. Meena	Scientist (Hort.)	1(39)	5(24,45,54,57,62)	6	-
Research Centre, Udhagamandalam						
71.	Dr. O.P.S. Khola	Head of Centre	1(25)	2(4,48)	3	25
72.	Dr. D.V. Singh	Sr. Scientist (Soil Fer.)	2(7,63)	3(25,45,62)	5	25,63
73.	Dr.(Ms.) P.Sundarambal	Sr. Scientist (Ag. Extn.)	2(65,66)	1(63)	3	63,65,66
74.	Dr. K. Kannan	Sr. Scientist (Agro.)	1(62)	4(7,45,58,63)	5	63
75.	Dr. S. Manivannan	Sr. Scientist (Engg.)	2(48,58)	-	2	-
76.	Dr. R. Ragupathy	Scientist (SS) (Forestry)	1(42)	2(4,63)	3	63
77.	Er. (Ms.) V. Selvi	Scientist (SS) (Engg.)	1(45)	4(7,25,62,63)	5	25,63
78.	Dr. K. Rajan	Scientist (Soils)	1(4)	3(42,48,58)	4	-
Research Centre, Vasad						
79.	Dr. R.S. Kurothe	Head of the Centre	2(49,58)	2(5,7)	4	5,49
80.	Dr. G.L. Bagdi	Sr. Scientist (Ag. Extn.)	1(66)	1(65)	2	65,66
81.	Dr. V.C. Pande	Sr. Scientist (Ag.Eco.)	2(62,65)	7(5,6,43,49,50,58,66)	9	5,49,65,66
82.	Dr. A.K. Vishwakarma	Sr. Scientist (Agro.)	1(43)	6(5,6,7,45,49,62)	7	5,49
83.	Dr. B.K. Rao	Sr. Scientist (Engg.)	3(6,45,50)	2(43,51)	5	51
84.	Dr. Gopal Kumar	Scientist (Soils)	3(5,7,51)	6(43,45,49,50,58,62)	9	5,49,51

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

LIST OF PARTICIPANTS

1.	Dr. K.S. Dadhwal	Acting Director	Chairman
CSWCRTI, DEHRADUN			
2.	Dr. G.P. Juyal	Head (H&E Division)	Member
3.	Dr. O.P. Chaturvedi	Head (Plant Science Division)	Member
4.	Dr. R.K. Avasthe	Head (HRD&SS Division)	Member
5.	Er. K.P. Tripathi	Principal Scientist (Engg.)	
6.	Er. Chandra Prakash	Principal Scientist (Engg.) & OIC, PME Cell (upto 30.07.2011)	Member Secretary (upto 30.07.2011)
7.	Dr. B.L. Dhyani	Principal Scientist (Agril.Eco.) & OIC, PME Cell (w.e.f. 30.07.2011)	Member Secretary (w.e.f. 30.07.2011)
8.	Dr. N.K. Sharma	Principal Scientist (Agro.)	
9.	Dr. P.R. Ojasvi	Principal Scientist (Engg.)	
10.	Dr. Harsh Mehta	Principal Scientist (Plant Breeding)	
11.	Er. S.S. Shrimali	Senior Scientist (CAA)	
12.	Dr. Charan Singh	Senior Scientist (Forestry)	
13.	Dr. Bankey Bihari	Senior Scientist (Ag. Extn.)	
14.	Dr. Pradeep Dogra	Senior Scientist (Ag. Eco.)	Rapporteur
15.	Dr. B.N. Ghosh	Senior Scientist (Soils)	
16.	Dr. Ambrish Kumar	Senior Scientist (Engg.)	
17.	Dr. D. Mandal	Senior Scientist (Soils)	
18.	Dr. J.M.S. Tomar	Senior Scientist (Forestry)	
19.	Dr. Rajesh Kaushal	Sr. Scientist (Forestry)	
20.	Mr. M. Muruganandam	Scientist (SS) (Fisheries)	
21.	Dr. A.C. Rathore	Scientist (SS) (Hort.)	
22.	Dr. J. Jayaprakash	Scientist (Forestry)	
23.	Er. S. Patra	Scientist (Engg.)	
24.	Dr. N.M. Alam	Scientist (Ag. Stat.)	Rapporteur
25.	Ms. Chayna Jana	Scientist (Ag. Stat.)	
26.	Mr. M. Sankar	Scientist (Soils)	
27.	Mr. Raj Kumar	Scientist (Forestry)	
28.	Mr. Prabhat Kumar	Scientist (Soils)	
29.	Dr.(Ms.)Sangeeta N.Sharma	Technical Officer (T-9)	Rapporteur
30.	Mr. Nirmal Kumar	Technical Officer (T-7-8)	Rapporteur
31.	Mr. S.K. Sinha	Technical Officer (T-5)	Rapporteur
RESEARCH CENTRE, AGRA			
32.	Dr. S.K. Dubey	Head of the Centre	Member
33.	Dr. P.K. Panda	Senior Scientist (Agro.)	
34.	Dr. A.K. Singh	Senior Scientist (Engg.)	
35.	Dr. (Ms.) S. Kala	Scientist (Forestry)	
36.	Mr. R.B. Meena	Scientist (Soils)	
RESEARCH CENTRE, BELLARY			
37.	Dr. A. Raizada	Head of the Centre	Member
38.	Er. R.N. Adhikari	Principal Scientist (Engg.)	
39.	Dr. D. Ramajayam	Scientist (Horti.)	
40.	Ms. M. Prabhavathi	Scientist (Soils)	

RESEARCH CENTRE, CHANDIGARH			
41.	Dr. A.K. Tiwari	Head of the Centre	Member
42.	Dr. (Ms.) Pawan Sharma	Principal Scientist (Soils)	
43.	Dr. (Ms.) S.L. Arya	Principal Scientist (Agril. Eco.)	
44.	Dr. Pratap Singh	Principal Scientist (Agronomy)	
45.	Dr. R.P. Yadav	Principal Scientist (Soils)	
46.	Dr. V.K. Bhatt	Senior Scientist (Engg.)	
47.	Dr. Ram Prasad	Senior Scientist (Horti.)	
48.	Dr.(Ms.) Sharmistha Pal	Scientist (Soils)	
RESEARCH CENTRE, DATIA			
49.	Dr. S.P. Tiwari	Head of the Centre	Member
50.	Dr. Dev Narayan	Senior Scientist (Agro.)	
51.	Dr. Om Prakash	Senior Scientist (Agril. Extension)	
52.	Dr. D.G. Durbude	Senior Scientist (Engg.)	
53.	Dr. P.P. Adhikary	Scientist (Soils)	
54.	Dr. M.N. Ramesha	Scientist (Forestry)	
RESEARCH CENTRE, KORAPUT			
55.	Dr. M. Madhu	Head of the Centre	Member
56.	Er. B.S. Naik	Scientist (Engg.)	
57.	Mr. P. Jakhar	Scientist (Agro.)	
58.	Dr. D. Barman	Scientist (Soils)	
RESEARCH CENTRE, KOTA			
59.	Dr. R.K. Singh	Head of the Centre	Member
60.	Dr. Ashok Kumar	Senior Scientist (Ag. Eco.)	
61.	Dr. A.K. Parandiyal	Senior Scientist (Forestry)	
62.	Er. B.K. Sethy	Scientist (SS) (Engg.)	
RESEARCH CENTRE, UDHAGAMANDALAM			
63.	Dr. O.P.S. Khola	Head of the Centre	Member
64.	Dr. D.V. Singh	Senior Scientist (Soils)	
65.	Dr. K. Kannan	Senior Scientist (Agro.)	
66.	Dr. S. Manivannan	Senior Scientist (Engg.)	
67.	Dr. R. Ragupathy	Scientist (SS) (Foerstry)	
68.	Dr. K. Rajan	Scientist (Soils)	
RESEARCH CENTRE, VASAD			
69.	Dr. R.S. Kurothe	Head of the Centre	Member
70.	Dr. V.C. Pande	Senior Scientist (Agril. Eco.)	
71.	Dr. A.K. Vishwakarma	Senior Scientist (Agro.)	

PROFORMA FOR SUBMITTING PAPERS/ABSTRACTS FOR PUBLICATION / PRESENTATION

Senior author must fill in this proforma completely and also ensure that the first page of the paper contains a foot-note as under:

“Authorized for publication/presentation by the Director as contribution No. _____ from Central Soil and Water Conservation Research and Training Institute, Dehradun (Uttarakhand) India vide letter No. _____ dated _____.

To be filled in by the Senior Author

1.	Title of paper / abstract	
2.	Name's of the authors	
3.	Research Project File No. or title of the project or source of data reported in the paper.	
4.	Name of leader & associates of the project / assignment mentioned in Item No. 3.	
5 (a)	Certified that the authors are as per RPF record or contribution in preparing the paper/abstract.	
(b)	Reasons for omission and / or addition of any name(s) in reference to Item No.4 may be elucidated.	
6.	Certified that the RPF I, all RPFs II & RPF III have been submitted to the Director.	
7 (a)	Certified that above paper/abstract is based on the bonafide research investigations / compilation carried out at the Headquarters / Research Centre and are based on scrutinized data recorded in permanent register of the Institute.	
(b)	Certified that results presented in the paper have been reported in the RPFs. If yes, mention the years of RPFs.	
(c)	If no, then give the reasons thereof.	

8.	Whether a seminar on the paper has been delivered at the Headquarters / Research Centre level ? If yes, give the recommendations and suggestions made for improvement of the paper and enclose the proceedings of the seminar.	
9 (a)	Certified that no proprietary or trade mark product marketed by a particular firm is recommended in the paper.	
(b)	Are there any Intellectual Property Rights issues related to this paper in favour of the Institute? If yes, please elucidate.	
10.	Certified that the enclosed paper has not been published or communicated for publication elsewhere.	
11.	Name of the journal and its address or the title and dates of conference to whom the paper/abstract is to be sent for publication / presentation.	

We the authors are solely responsible for any dispute arising in future related to publication/presentation of this paper / abstract.

Signature with full name
of Co-authors
with date

Signature with full name
of Senior Author
with date

To be filled in by the Head of Research Centre / Division

It is certified that the paper / abstract is based on the bonafide research conducted at the Research Centre/Headquarters, all up-to-date RPFs have been submitted for the related project and data register is being maintained at the Research Centre / Division.

Paper / abstract is recommended for publication / presentation.

Signature of Head of Research Centre/ Division

Note:

- (i) Only one copy of the paper/abstract may be submitted for office record. The paper/abstract approved by the Competent Authority will be sent by the senior author to the concerned journal/conference.
- (ii) If the paper / abstract is based on research work done in an Institute other than CSWCRTI, then approval of Competent Authority of the other Institute must be enclosed before getting it approved by the Competent Authority of CSWCRTI.
- (iii) All items of the proforma must be properly addressed and correctly filled-up in suitable words.