PREAMBLE BY THE CHAIRMAN

Dr. P.K. Mishra, Director, CSWCRTI and Chairman of Institute Research Committee (IRC) welcomed the Heads of the Research Centres and Divisions, and Scientists to the IRC Meeting of 2012. He expressed his view that IRC Meeting is a good opportunity for chalking out future activities, such as new projects to be initiated (or on-going projects to be concluded), as well as other R&D activities of the Institute. He opined that since ours is a public funded Institute; we should be judicious in the use of its resources, which should ultimately lead to fulfilling the mandate and objectives of the Institute. Therefore, in addition to undertaking research, transferring research outputs to the farmers field (in tune with ICAR's slogan of "Farmer First") is a very important activity of the Institute and the country which will convert research output into outcome and create impact. We in ICAR find solutions to problems and provide them to planning/implementation organizations of the governments. For direct involvement in planning process, we need to know our domain of each technology, its clients and likely benefits to them, benefit-cost ratio, environmental impacts, etc. before passing on to the planners and policy makers. Our ongoing and new research endeavours need to be seen in light of this. Only research of very high level can be of academic nature, and the rest should cater to tackling problems of regional and national interest.

The Chairman appreciated the feedbacks he had received from the scientists as they will help in smoothening the functioning of our Institute, which has done tremendous work since its establishment, but has not received the recognition it should have got. He advised that there is a need to prepare policy papers based on our works done to get national recognition. The Chairman informed the house that the Institute will be imparting technology specific trainings for the 52 technologies that it has generated. It will be more of skill development than general training. He further stated that we are also designing software for conservation planning as our Institute's product. Further, each scientist should strive for quality publications in international journals and should have atleast two such publications every year, for which the official procedure to approve research papers for publication has been simplified. Name of the scientists must be included as authors as per their contribution.

Informing the house about the recent major activities of the Institute, the Chairman congratulated the PME Cell for successfully organizing the XXII Meeting of Regional Committee No. I at CSKHPKV, Palampur. He stressed that it must be ensured by all Heads of Research Centres that they attend the Regional Committee Meeting of their respective Region as the Director General (ICAR) takes a very serious view towards non-attendance by any Head of an ICAR institute. He informed the house that the Institute website has improved significantly, which has been much appreciated even outside the Institute. The website can even have priced publications for downloading in a mode that does not allow copying or would be expensive to copy. He opined that the trainings organized by the Institute should be comfortable for the trainees, for which good amount of funds should be obtained from the sponsors. Consultancies involving large amount of funds and time should be taken in a research mode to derive research benefits from the investment. Further, new proposals and consultancies should be taken up by a scientist as per the present workload and his/her own capability. Before formulating a proposal, a scientist should scrutinize the website and annual reports of other NRM institutes for avoiding

duplication or reinforcing the present research with the research work being done elsewhere. A good review of recent literatures giving list of papers should be included along with the new proposal. Before submitting the proposal, the PI should ensure availability of fund, equipments, land, manpower, etc. for the proposed project. Recommend variety of crop of the region should be used for research purpose. A tentative annual estimate is a must for new and ongoing projects.

Modelling for understanding the real world system is very important. Therefore, data collection from experiments should be in a mode or format that can be used for modelling. For this, a proforma has been prepared for data collection which will be circulated shortly. Since data collection is an important component of research, the collected data should be submitted along with the RPF for its acceptance. However, the data usage will be protected for the scientists who have collected the data.

Concluding his address, the Chairman finally urged all to positively contribute to the deliberations for strengthening the research activities of the Institute. Considering the limitation of manpower at various levels, a practical approach has to be taken for initiating new projects at the Institute/Centres in 2012-13. However, projects will be revisited after the XII Plan programme of the Institute is approved. Externally funded projects are always welcome.

RECOMMENDATIONS OF RAC – 2012

1. RAC observed that information on soil erosion due to grazing of goat/sheep is insufficient at the national level. RAC stressed that CSWCRTI should make an endeavor in collaboration with IGFRI, Jhansi, CIRG, Makhdoom and other Institute/organizations working on similar research/extension programmes to formulate a network project with the objectives to quantify the carrying capacity of land towards grazing by goat/ sheep in terms of soil degradation, moisture retention and over all local environment.

2. RAC enunciated that deteriorating quality of groundwater in different parts of the country is a national issue which should be addressed in research projects of the Institute. RAC emphasized that new project proposals based on laboratory and field studies should be formulated to assess the sediment trap behavior of different synthetic materials in conjunction with recharge filters.

3. RAC appreciated that a number of technologies developed by the Institute are immensely useful for management of land & water in both arable & non-arable lands. RAC recommended that efforts should be made by the scientists of the Institute for disseminating these technologies in collaboration with SAUs, KVKs and other line departments of States/UTs for making the production system resilient to climate change. Besides, the linkages and inter-operationability between Institute and concerned departments needs to be strengthened.

4. RAC opined that horticulture based farming system could not be popularized in ravine affected areas in absence of market linkage/fruit processing units. RAC recommended that CSWCRTI should explore the feasibility to collaborate with CIPHET, Ludhiana towards establishing fruit processing units in such degraded areas so that the farmers can get remunerative price of their horticulture based product.

SALIENT RECOMMENDATIONS OF IRC MEETING – 2012

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

16. Complete Annual Report of the Research Centres/Divisions must be submitted as per the latest Annual Report pattern giving all captions (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)

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 and Divisions)

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)

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)

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)

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)

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)

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)

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)

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 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 and Divisions)

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)

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)

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 and Divisions)

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 and Divisions)

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 and All Scientists/Heads of Research Centres and Divisions)

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 and Divisions)

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 Research Centres and Divisions)

34. Standard and uniformly accepted scientific terminology of respective discipline may be adopted by all the scientists.

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

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)

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)

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 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 Research Centres and Divisions)

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 Research Centres and Divisions)

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 and Divisions)

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)

ACTION TAKEN ON "SALIENT RECOMMENDATIONS OF IRC MEETING – 2011"

S.No.	Action Assigned	Action Taken Report
1.	The best models for predicting runoff and erosion for different agro-ecological regions may be identified. A bulletin giving detail 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)**	The region-wise models were validated in the core project however, publication of bulletin is still pending. The action is again assigned to Dr. P.R. Ojasvi and his team.
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)**	The assigned job has not been done by Dr. D.R. Sena, Sr. Scientist and Co-PI of NPCC project. The IRC has again assigned these actions to Dr. D.R. Sena.
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)**	As reported by the Head, Research Centre, Chandigarh, the required soil samples from Research Centres Agra, Datia, Koraput and Udhagamandalam have been received. Data of Research Centres Chandigarh, Bellary, Kota and SS&A Division have already been analyzed. Vasad Centre has tested the data for microbial activity and sent the data for CO_2 emission to Chandigarh. However, Soil Threat Index is yet to the computed by Dr.(Ms.) Sharmistha Pal.
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)**	As reported by the Head, HRD&SS Division, a workshop for two days was planned during November, 2011 and invitations to 93 officials of different state governments were sent. However, only two responses were received by the HRD&SS Division hence, the proposed workshop could not be held. Action is again assigned to complete it by December, 2012.
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)**	The assigned work has been done by OIC (AKMU).

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)**	The workshop to finalize the various aspects of core project was organized at Headquarters, Dehradun during June 15-16, 2012. The core project was presented in IRC meeting and approved by the House.
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)**	The compiled list of equipments purchased during 2006-07 to 2010-11 at all Research Centres and Divisions was circulated by Dr. G.P. Juyal to all Research Centres and Divisions.
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)**	The NDVI has been calculated and results submitted by Dr. O.P. Chaturvedi.
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)**	Lab testing was done by Dr. Gopal Kumar. Observing operational limitation in existing setup, a modified sampler was designed, developed and tested for which the patent has been filed. Planning is being done to use it in field condition during coming *kharif* season.
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)**	Brochure of potential technology on organic farming had been printed and the draft of in-situ moisture conservation technique is completed and will be submitted for approval.
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)**	All Heads of Research Centres and Divisions have intimated that the norms fixed by the IRC regarding number of research projects with individual scientist are being followed.

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)**	As informed by all Heads of Research Centres and Divisions, the availability of budget, equipments and other resources related to the projects are being ensured while submitting new proposals for consideration of RAC/IRC.
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)**	Workshop was held during Sept., 2011. In principle, the project was agreed as a core project from the year 2012-13. However, it was approved for undertaking as an Observational Trial during 2011-12 at Headquarters Dehradun to know the scientific feasibility of the project.
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)**	So far, 229 projects (77 ongoing and 152 concluded projects) have been uploaded into PIMS-ICAR. RPF III of all the 152 concluded projects and RPF I of 65 projects have been uploaded by the Nodal Officer and PIs of the ongoing projects, respectively.
15.	Result Framework Document (RFD) and Citizens' 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 Citizens' 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)**	RFD & Citizens' Charter documents of the Institute were developed and submitted to DDG (NRM) within stipulated time. It will be uploaded on Institute website only after approval of ICAR.
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)**	All Research Centres have sent their meteorological data to CRIDA with a copy to 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)**	The portions of Dr. G.P. Juyal and Dr. R.P. Yadav have been incorporated in the report and submitted.
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)**	Monthly Cabinet Reports by most of the Research Centres and Divisions are being submitted regularly except Plant Science Division and Research Centre, Datia. Generally, Research Centre, Chandigarh is not reporting the major achievements. HRD&SS Division is reporting normally the training aspects.
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)**	As intimated by all Heads of Research Centres and Divisions, the recommendations regarding Patent search and IPR issues have already been initiated by the scientists 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)**	Scientists are being encouraged by their respective Heads of Research Centres/ Divisions to publish at least two research papers every year in reputed Journals having high score as per NAAS ratings.
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)**	As per recommendations of IRC, the Action Taken Report was submitted only by Agra and Datia Centres.

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. 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. 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. 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	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: Data on temporal changes may be analyzed. (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	PME Cell, Dehradun	2011-12	2013-14	Headquarters	To be concluded
Comments: Project is extended for one year till 2013-14 as multi-objective optimization techniques need to be applied for identifying best management practice. Name of Er. S.S. Shrimali is included as second associate of the project. (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 H. Gowda B.S. Naik	Koraput	2010-11	2013-14	Koraput district	To be concluded
Comments: Dr. P.P. Adhikary will replace Dr. D. Barman as leader of the project and Dr. M. Madhu will be first associate. Secondary data may be used which can be obtained from NRSA. Project is extended for one year till 2013-14. (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

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 A.K. Vishwakarma V.C. Pande	Vasad	2010-11	2014-15	Research Farm	To be continued
Comments: A grass plot may be parallely added having complete vegetative cover. From the plot a strip of 10 m may be cut every year to see the effect on runoff and soil loss for finding the optimum width size that gives the required effect. Yield may be given as cotton equivalent yield. (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			
		M. Prabhavathi S.L. Patil R.N. Adhikari	Bellary	2009-10			
		R.P. Yadav Pratap Singh A.K. Tiwari	Chandigarh	2009-10			
		Dev Narayan D.G. Durbude S.P. Tiwari	Datia	2009-10			
		P.P. Adhikary P. Jakhar B.S. Naik	Koraput	2009-10			
		R.K. Singh B.K. Sethy	Kota	2009-10			
		V.Selvi K. Kannan D. Dinesh	Udhagamandalam	2009-10			
		Gopal Kumar R.S. Kurothe A.K. Vishwakarma	Vasad	2009-10			
Comments: Names of Mr. R.K. Dubey, Dr. H. Biswas and Dr. D.V. Singh are deleted from Research Centres Agra, Datia and Udhagamandalam, respectively and Dr. Dev Narayan and Er. V. Selvi will be the leader at Datia and Udhagamandalam Centres, respectively. Dr. P.P. Adhikary will replace Dr. D. Barman as leader at Koraput Centre. Names of Dr. S.P. Tiwari and Dr. D. Dinesh are included as second associate at Datia and Udhagamandalam Centres, respectively. The agronomy scientist who will join at the Agra Centre in near future will be the second associate. Common terminology, methodology, treatments and unit for data may be followed by all Centres. There must be one plot with no fertilizer at all locations. Uniform data set format including weather data, soil moisture and root biomass may be provided to all Centres by the PI of core project. (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.	M. Sankar D.R. Sena N.M. Alam	Soil Science & Agronomy, Dehradun	2011-12	2015-16	Research Farm	To be continued
Comments: Mr. Rajiv Ranjan will execute this project as leader during the absence of Mr. M. Sankar, leader of the project. (Action: Mr. Rajiv Ranjan and Mr. M. Sankar)							
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	2013-14	Research Farm	To be concluded (**BARC Project**) **(New Project)**
9.	Effect of vegetative and mechanical measures on resource conservation in an indigenously developed hydraulic flume.	S.K. Srivastava R.N. Adhikari M. Prabhavathi A. Raizada	Bellary	2012-13	2014-15	Research Farm	To be continued **(New Project)**
Comments: Nutrient loss may be estimated. Project may be run with different slopes ranging from 0.1% and 1 to 5% with two different discharges i.e. under clear water condition and live bed condition. (Action: Er. S.K. Srivastava)							

P-2 CONSERVATION MEASURES FOR SUSTAINABLE PRODUCTION SYSTEMS

2.1 RESOURCE CONSERVATION MEASURES FOR ARABLE LANDS

10.	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
11.	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	Research Farm	To be continued
Comments: Economics may be worked out. (Action: Leader of the project)							
12.	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
13.	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	2013-14	Research Farm	To be concluded
Comments: Mr. Rajiv Ranjan will replace Mr. Prabhat Kumar as leader of project. Pan-evaporation data may be correlated with open pan-evaporation recorded on daily basis. (Action: Mr. Rajiv Ranjan)							

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
14.	Evaluating productivity potential of *bhimal* (*Grewia optiva*) along with field crops.	Harsh Mehta K.S. Dadhwal	Plant Science, Dehradun	2005-06	2015-16	Almas, Ranigaon, Sabhawala & Selakui villages	To be continued
Comments: Impact of climatic variability of locations on different *Grewia* provinces and crop yield may be studied. (Action: Dr. Harsh Mehta)							
15.	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: Reason for yield data in best and worst treatments may be supported by research data. Economic analysis may also be done. (Action: Dr. A.C. Rathore)							
16.	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: Mr. Rajiv Ranjan will replace Mr. Prabhat Kumar as third associate of the project. (Action: Dr. Rajesh Kaushal)							
17.	Yield maximization and resource conservation through integrated nutrient management and tillage combinations in the ravines of the Yamuna river.	S.K. Dubey A.K. Singh	Agra	2011-12	2014-15	Research Farm	To be continued
Comments: Name of Dr. P.K. Panda is deleted due to transfer. Dr. S.K. Dubey will be the leader of the project and the Agronomist joining the Centre will be the first associate. (Action: Dr. S.K. Dubey)							
18.	Performance of Tamarind near S&WC structures with different mulches in vertisols of SAT region.	A. Raizada S.K. Srivastava M. Prabhavathi B. Mondal	Bellary	2011-12	2015-16	Research Farm	To be continued
Comments : Due to transfer of Dr. D. Ramajayam, his name is deleted and the project may be conducted by Dr. A. Raizada as leader till a Horticulture scientist is posted to the Centre. (Action: Dr. A. Raizada)							
19.	Conservation tillage for resource management and higher production from Shiwaliks.	R.P. Yadav Pratap Singh Pawan Sharma	Chandigarh	2009-10	2015-16	Research Farm	To be continued
Comments: Weedicide can be applied in conservation tillage. (Action: Dr. R.P. Yadav)							
20.	Adaptation 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	Research Farm	To be continued

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
21.	*In situ* moisture conservation practices under aonla based agro-forestry system for sustainable production in red soils of Bundelkhand.	Dev Narayan Prabhat Kumar M.N. Ramesha D.G. Durbude	Datia	2010-11	2018-19	Research Farm	To be continued
Comments: Name of Dr. H. Biswas is deleted and names of Mr. Prabhat Kumar, Dr. M.N. Ramesha and Dr. D.G. Durbude are included as first, second and third associate, respectively. (Action: Dr. Dev Narayan)							
22.	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 Om Prakash	Datia	2011-12	2014-15	Jigna Watershed	To be continued
Comments: Name of Dr. Om Prakash is included as third associate who will be responsible to convince farmers for cooperating in the project which is to be conducted outside the Research Farm. Data on perception of the farmers about the technology and its adoption need to be recorded and presented. (Action: Dr. S.P. Tiwari and Dr. Om Prakash)							
23.	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 P.P. Adhikary	Koraput	2009-10	2013-14	Research Farm	To be concluded
Comments: Dr. P.P. Adhikary will replace Dr. D. Barman as second associate. Zinc deficiency in soil needs to be checked and corrected on test basis for uniform application to all treatments. (Action: Mr. P. Jakhar)							
24.	Resource conservation by alley cropping in shifting cultivated degraded lands of Eastern Ghats.	H. Gowda P. Jakhar P.P. Adhikary	Koraput	2009-10	2013-14	Research Farm	To be concluded
Comments: Dr. P.P. Adhikary will replace Dr. D. Barman as second associate. Statistical analysis may be done in a proper way using Split Plot Design. Gliricidia cutting frequency and biomass data need to be presented. Gliricidia and subabul chemical composition need to be examined for the study. (Action: Mr. H. Gowda)							
25.	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 B.K. Sethy Ashok Kumar	Kota	2011-12	2014-15	Dhoti Watershed	To be continued
Comments: Names of Er. B.K. Sethy and Dr. Ashok Kumar are included as second and third associate, respectively. (Action: Dr. R.K. Singh)							

2.2 RESOURCE CONSERVATION MEASURES FOR NON-ARABLE LANDS

26.	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

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
27.	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
28.	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
29.	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: Name of Mr. M. Sankar is deleted and Dr. D.V. Singh is associated with the project as fourth associate. (Action: Dr. O.P. Chaturvedi)							
30.	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: Mr. Rajiv Ranjan will replace Mr. Prabhat Kumar as second associate of the project. (Action: Dr. J.M.S. Tomar)							
31.	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: Dr. D.V. Singh will replace Mr. Prabhat Kumar as third associate of the project. (Action: Dr. Rajesh Kaushal)							
32.	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 **(New Project)**
Comments: *Bauhinia variegata* and *Celtis australis* tree species may be selected for the study and application of tissue culture technique be utilized. (Action: Mr. Raj Kumar)							
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	Research Farm	To be continued

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
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	Research Farm	To be continued
Comments: Bhabhar may be planted in place of existing grass species and *Melia composita* may be planted in place of Poplar. *Til, Kulthi* and Safflower may be used as crops. (Action: Dr. Pankaj Panwar)							
35.	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: The word 'modifying' is replaced by 'applying' in the title of the project. (Action: Dr.Pankaj Panwar)							
36.	Evaluation of moisture conservation techniques for sustainable production of Tree Borne Oil Seeds (TBOS) in Bundelkhand.	M.N. Ramesha Prabhat Kumar	Datia	2010-11	2017-18	Research Farm	To be continued
Comments: Mr. Prabhat Kumar will replace Dr. P.P. Adhikary as an associate. (Action: Dr. M.N. Ramesha)							
37.	Bio-engineering measures for resource conservation and management in red sloppy lateritic soils of Orissa.	B.S. Naik P. Jakhar H. Gowda P.P. Adhikary	Koraput	2008-09	2014-15	Research Farm	To be continued
Comments: Dr. P.P. Adhikary will replace Dr. D. Barman as third associate. (Action: Er. B.S. Naik)							
38.	Performance evaluation of different oil yielding grasses in shifting cultivated degraded lands of Orissa.	H. Gowda P.P. Adhikary M. Madhu	Koraput	2011-12	2014-15	Lachhaputra Ghati Watershed & Research Farm	To be continued
Comments: Dr. P.P. Adhikary will replace Dr. D. Barman as first 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 G.L. Meena	Kota	2006-07	2015-16	Research Farm	To be continued
Comments: Name of Dr. G.L. Meena is included as third associate. (Action: Mr. H.R. Meena)							

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
40.	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: Name of Dr. G.L. Meena is included as second associate. (Action: Dr. A.K. Parandiyal)							
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	Research Farm & Sahabad Range Forest	To be continued
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	Research Farm	To be continued
Comments: Dr. K. Kannan will assist for agronomical aspects in the project. (Action: Dr. K. Kannan and Dr. R. Ragupathy)							
43.	Enhancing productivity of ravine lands by plantation of *A. sapota* with intercropping systems.	A.K. Vishwakarma B.K. Rao Gopal Kumar V.C. Pande	Vasad	2008-09	2022-23	Research Farm	To be continued
Comments: Title of the project has been modified by removing the word 'Non-arable'. (Action: Dr. A.K. Vishwakarma)							

P-3 HYDROLOGICAL BEHAVIOUR OF WATERSHEDS FOR CONSERVATION PLANNING

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

44.	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 **(New Project)**
Comments: The methodology may be tested in single landuse plots/watersheds on the basis of daily data of paired rainfall-runoff in different agro-ecological regions. The leader will provide data format to all the Heads of Research Centres for collection by the partner. The methodology may be refined (if required). The methodology may be applied on the pooled data set for computation of refined curve numbers. (Action: Dr. D.R. Sena)							
45.	Hydrological evaluation of recommended forest trees 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: As per the report submitted by the Committee constituted for evaluation of this project for its continuation, the Committee found that growth of plantation and shaping of plots were not satisfactory. Due to poor establishment of plants and stunted growth, the variations in hydrological behavior of different tree species cannot be studied. Hence, the project be modified for forest grasses. (Action: Dr. O.P. Chaturvedi)							

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
46.	Evaluation of hydrological behaviour and production potential of recommended landuse system / practices under different agro-ecological regions of India.	J.M.S. Tomar K.P. Tripathi A.C. Rathore N.K. Sharma 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	Agra			Garhi Udairaj, Fatehabad	
		V.K. Bhatt Pankaj Panwar Pratap Singh Ram Prasad Sharmistha Pal	Chandigarh			Janoli Village, Panchkula	
		Shakir Ali A.K. Parandiyal R.K. Singh, H.R. Meena	Kota			Dhoti Watershed	
		V. Selvi, K. Kannan	Udhagamandalam			Iduhatti Watershed	
		B.K. Rao A.K. Vishwakarma Gopal Kumar	Vasad			Vejalpur-Rampura Watershed	
Comments: Er. K.P. Tripathi will replace Er. S. Patra as first associate at Dehradun due to no contribution by Er. S. Patra as indicated by PI of core project in the IRC meeting. As per detailed discussion held in the IRC, names of Bellary, Datia and Koraput Centres are deleted from the project and written justification should be submitted by the Heads of these Research Centres for record. The Agronomist joining the Agra Centre will be the third associate. Name of Dr. D.V. Singh is deleted at Udhagamandalam Centre. (Action: Dr. J.M. S. Tomar, Leaders at other Research Centres and Heads of Bellary, Datia and Koraput Centres)							
47.	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

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
48.	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	2015-16	Research Farm	To be continued
Comments: Due to scanty runoff producing rainfall events in the past two years, sufficient runoff data was not generated. Hence, the project is extended for three years till the year 2015-16. (Action: Dr. R.S. Kurothe)							
49.	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: A policy paper of 2-3 pages may be prepared on the technology developed from this project and posted on the Institute's website. The same may be sent to the concerned officers of National Bamboo Mission and other agencies. A workshop on bamboo cultivation in ravine area may be organized. Technology specific training modules may be prepared and trainings may be organized accordingly. (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

50.	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: Project is extended for one year till 2013-14 for collecting more data and improving the set-up of project in consultation with experts of the field. (Action: Dr. Gopal Kumar)							

3.3 WATER HARVESTING

51.	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
52.	Water budgeting of a ravinous watershed pond for optimum crop planning under semi-arid region.	K.K. Sharma S.K. Dubey	Agra	2012-13	2015-16	Research Farm	To be continued **(New Project)**
Comments: The Agronomist joining the Centre will be the second associate. (Action: Dr. K.K. Sharma)							

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
53.	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	Research Farm	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

54.	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	Haldwani, Uttarakhand	To be concluded
Comments: A policy paper from the project may be brought out. (Action: Er. K.P. Tripathi)							
55.	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	2014-15	Research Farm	To be continued
Comments: Project is extended for two years till 2014-15 for getting economic yield. (Action: Er. B.K. Sethy)							
56.	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	Research Farm	To be concluded
Comments: Data of initial biomass yield must be calculated. (Action: Dr. A.K. Parandiyal)							
57.	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. Raizada R.N. Adhikari M. Prabhavathi	Bellary			Netranahalli Watershed	
		A.K. Tiwari Pankaj Panwar V.K. Bhatt Sharmistha Pal	Chandigarh			Research Farm	

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
		D.G. Durbude M.N. Ramesha S.P. Tiwari	Datia			Research Farm	
		M. Madhu H. Gowda P.P. Adhikary B.S. Naik	Koraput			Research Farm	
		B.K. Sethy Shakir Ali Ashok Kumar A.K. Parandiyal	Kota			Dhoti Watershed	
		S. Manivanan K. Kannan, K. Rajan	Udhagamandalam			Research Farm	
Comments: Names of Mr. R.K. Dubey and Dr. S.K. Dubey are deleted and Mr. R.B. Meena will be second associate at Agra Centre. Name of Dr. P.P. Adhikary is deleted at Datia Centre. Name of Dr. D. Barman is deleted and name of Dr. P.P. Adhikary is included as second associate at Koraput Centre. Er. B.S. Naik is shifted from leader to third associate and Dr. M. Madhu will be the leader at Koraput Centre. (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

58.	Development of a user friendly Decision Support System application for planning of watershed development project.	P.R. Ojasvi P.K. Mishra K.P. Tripathi Charan Singh N.K. Sharma D.V. Singh	Hydrology & Engineering, Dehradun	2011-12	2015-16	Almas, Distt. Tehri Garhwal	To be continued
Comments: As proposed by the leader of project, the House has approved the names of Dr. P.K. Mishra, Er. K.P. Tripathi, Dr. N.K. Sharma and Dr. D.V. Singh as first, second, fourth and fifth associates, respectively. Names of Dr. N.M. Alam, Ms. Chayna Jana and Dr. D. Mandal are deleted from the project. (Action: Dr. P.R. Ojasvi)							

5.4 FARMING SYSTEM APPROACH

S. No.	Title of the Project	Leader and Associates	Centre /Division	Start	Completion	Location of Project	Remarks
59.	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	Asthi Watershed	To be concluded (**Core Project**)
		A.K. Singh R.B. Meena	Agra			Jalalpur Watershed	
		S.L. Patil R.N. Adhikari M. Prabhavathi B. Mondal	Bellary			Ramasagara Watershed	
		S.L. Arya Pratap Singh Sharmistha Pal Ram Prasad	Chandigarh			Janoli Village, Panchkula	
		Dev Narayan Prabhat Kumar M.N. Ramesha	Datia			Jigna Watershed	
		P. Jakhar B.S. Naik	Koraput			Lachhaputra Ghati Watershed	
		Ashok Kumar H.R. Meena, B.K. Sethy	Kota			Dhoti Watershed	
		K. Kannan, D. Dinesh V. Selvi	Udhaga-mandalam			Ayalur Watershed	
		V.C. Pande Gopal Kumar A.K. Vishwakarma	Vasad			Vejalpura-Rampura Watershed	

Comments: Mr. Prabhat Kumar will replace Dr. P.P. Adhikary and Dr. D. Dinesh will replace Dr. D.V. Singh at Datia and Udhagamandalam Centres, respectively. Name of Dr. B. Mondal is included as third associate at Bellary Centre and name of Dr. D. Barman is deleted at Koraput Centre. At Agra Centre, name of Dr. P.K. Panda is deleted and Dr. A.K. Singh will be the leader. Horticutlure / agroforestry may be included as a production activity, where ever feasible / profitable, in the IFS plan despite no returns in the initial 3-4 years. Probability of failure of an optimal IFS plan due to external factors (beyond control of anyone) may be worked out over the period of the project. PI of the project should hold a workshop of all the cooperating Centres PI's to explain about the procedure adopted in development of IFS. The workshop may be organized at any of the Centre of the Institute before next IRC meeting.

(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
60.	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)**
		B. Mondal N. Loganandhan R.N. Adhikari	Bellary			Karnataka & Andhra Pradesh	
		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: Name of Dr. N. Loganandhan is included as first associate at Bellary Centre. Project is extended for one year till 2013-14 to address the remaining objectives. Technical and social reasons for deterioration of a CPWR structure may be brought out leading to policy prescriptions. Possibility of using a CPWR structure for fishery may be explored from its engineering details in consultation with the fishery scientist of the Institute. (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

61.	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**) **(New Project)**

S. No.	Title of the Project	Leader and Associates	Centre/Division	Start	Completion	Location of Project	Remarks
		A.K. Singh R.B. Meena	Agra			Jalapur & Agra Watersheds	
		N. Loganandhan S.L. Patil S.K. Srivastava	Bellary			Watersheds of Karnataka & Andhra Pradesh	
		S.L. Arya A.K. Tiwari R.P. Yadav	Chandigarh			Kajiana, Mandhala, Johranpur and Aganpur-Bhagwasi Watersheds	
		Om Prakash D.G. Durbude	Datia			Bajni & Jigna Watersheds	
		Bankey Bihari Ambrish Kumar R.K. Avasthe	HRD&SS, Dehradun			IVLP, Raipur and Sabhawala Watersheds	
		Ashok Kumar Shakir Ali	Kota			Chhajawa & Badakhera Watersheds	
		P. Sundarambal S. Manivanan D. Dinesh	Udhagamandalam			The Nilgiris, Coimbatore & Erode districts	
Comments: Technology specific research may be done based on soil and water conservation technologies developed by the Institute or others. Status of structures functioning / not-functioning may also be brought out. Methodology and indicators be standardized before going to real field data collection. A concept note to this effect may be sent to the Headquarters within two months. The study may be conducted by taking two comparable watersheds. One adopted by our Institute atleast 5 years before and another control i.e. non-adopted watershed within close vicinity of adopted watershed. The Agronomy scientist will be the second associate at Kota Centre who will join at the Centre in near future. (Action: Dr. G.L. Bagdi and leaders at Research Centres and Headquarters)							

NOTE : 1. 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.

2. All RPFs i.e. RPF III for the projects concluded in 2012-13 and RPF II for 2012-13 of ongoing projects should be submitted by March 31, 2013 positively. RPF I for projects approved in IRC-2012 should be submitted by September 15, 2012 positively with a soft copy on e-mail Id rcmunit09@gmail.com.

PROJECTS CONCLUDED IN 2012-13

S. No.	Prog. No.	S. No. of IRC Meeting Proc. 2011	Title of the Project	Leader & Associates	Centre/ Division	Year of start	Location of project
1.	1.1	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	Ravine area of Mahi river
Comments: The ravine area figures estimated from the study be compared with the figures of the past as well as with the data set generated by other agencies for Mahi ravine. (Action: Dr. Gopal Kumar)							
2.	2.1	25	Techniques for establishment of tea on terrace riser in the Nilgiris.	O.P.S. Khola V. Selvi	Udhaga-mandalam	2008-09	Research Farm
Comments: Plant survival data should be reported in RPF III. Collection of yield data of tea may be continued. (Action: Dr. O.P.S. Khola)							
3.	2.2	26	Fuelwood and fodder production from densified plantations on old riverbed land.	J. Jayaprakash Charan Singh B.N. Ghosh	Plant Science, Dehradun	1997-98	Research Farm
Comments: Economics of the treatments may be calculated and presented in next IRC meeting. (Action: Dr. J. Jayaprakash)							
4.	3.1	46	Hydrological response to micro-catchments under different land uses with vegetation manipulation.	V.K. Bhatt A.K. Tiwari Pankaj Panwar	Chandigarh	2005-06	Research Farm
Comments: Past data (1970 to 1990) may be retrieved and utilized for establishing correlation/ regression between runoff and vegetation cover for achieving the desired results. Runoff measurement and collection of vegetation coverage data may be continued. (Action: Dr. V.K. Bhatt)							
5.	3.1	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	Meteorological data base of Bundelkhand region
Comments: Dr. P.P. Adhikary should keep on working in the remaining period of this project till March, 2013 to end the project to a logical conclusion and RPF III may be submitted accordingly. (Action: Dr. P.P. Adhikary)							
6.	3.3	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	Ashti watershed
7.	5.1	60	Resource conservation and management in Netrenahalli watershed, Chitradurga district, Karnataka.	R.N. Adhikari S.L. Patil , A. Raizada M. Prabhavathi N. Loganandhan B.Mondal	Bellary	2008-09	Netrenahalli watershed
Comments: Structures may be maintained for conducting visits of dignitaries and trainees. (Action: Er. R.N. Adhikari)							

S. No.	Prog. No.	S. No. of IRC Meeting Proc. 2011	Title of the Project	Leader & Associates	Centre/ Division	Year of start	Location of project
8.	5.4	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	Hadiagaon and Jamnikhal
Comments: Due to non-availability of funds from the funding agency (NAIP), the project was concluded in the year 2011-12. (Action: Dr. B.L. Dhyani)							
9.	5.5	63.	Development of model watershed Iduhatti in the Nilgiris.	V. Selvi P. Sundarambal R. Ragupathy K. Kannan	Udhaga-mandalam	2008-09	Idhuhatti Watershed
Comments: Committed works may be completed and monitoring of project may be continued. (Action: Er. V. Selvi)							
10.	6.1	64	Relative performance of watershed development projects under different institutional structures in semi-arid Karnataka and Andhra Pradesh.	B. Mondal	Bellary	2008-09	Watersheds of Karnataka and Andhra Pradesh
Comments: Capacity building aspects of Andhra Pradesh and Karnataka states may be studied. Complete structural differences of the two states may be analysed. Comparison of equity aspect between NGOs and State Government may also be done. (Action: Dr. B. Mondal)							
11.	7.1	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	Iksharigad, Dubredgad, Kaligad watersheds
				N. Loganandhan	Bellary		Watersheds of Karnataka and Andhra Pradesh
				S.L. Arya	Chandigarh		Sabilpur and Sultanpur villages, Mansali and Chaknaryal watersheds
				Om Prakash	Datia		NWDPRA watersheds, Datia
				Ashok Kumar	Kota		Sizawaha, Dagarwaha, Nagipur Tandwa and Budhanpur watersheds
				P. Sundarambal	Udhaga-mandalm		Edayansathu, Gummidigampatty, Elavampatti and Sevoor Watersheds, Vellore
				G.L. Bagdi V.C. Pande	Vasad		Mahi-Anas-Kali-1, Katholia, Dethli and Naniboru watersheds
Comments: Cumulative index of constraints may be developed. Name of the responding officers interviewed for the study may be listed. Make a comparison of 3-10 days training programmes organized by CSWCRTI and other Institutes. Innovative approach may be found out to mitigate the constraints or provide the alternatives so that desired result may be achieved. (Action: Dr. Bankey Bihari and leaders at Research Centres)							

NEW PROJECTS APPROVED DURING IRC MEETING – 2012

S. No .	Prog. No.	S. No. of this proceedings	Title of the Project	Centre/Division
1.	1.3	8	The assessment of soil erosion through re-distribution analysis of ^{137}Cs fallout in humid subtropical region of India.	Soil Science & Agronomy, Dehradun
2.	1.3	9	Effect of vegetative and mechanical measures on resource conservation in an indigenously developed hydraulic flume.	Bellary
3.	2.2	32	Development and characterization of quality planting material of important MPT's for degraded lands of North-West Himalayas.	Plant Science, Dehradun
4.	3.1	44	Standardization of runoff and peak flow parameters for different soil and water conservation structures under Indian conditions.	H&E, Dehradun
5.	3.3	52	Water budgeting of a ravinous watershed pond for optimum crop planning under semi-arid region.	Agra
6.	7.3	61	Post-adoption behaviour of farmers towards soil and water conservation technologies of watershed management.	Vasad, Agra, Bellary, Chandigarh, Datia, HRD&SS, Dehradun, Kota, Udhgamandalam

STATUS OF NUMBER OF PROJECTS

No. of projects in 2011-12	Projects concluded in 2012-13	New projects added in 2012-13	Total No. of projects in 2012-13
(A)	(B)	(C)	(A-B+C)
66	11	06	61

OBSERVATIONAL TRIALS APPROVED

S. No.	Title of project	Leader & Associates	Centre/ Division
1.	Lithic mulching for resource conservation and crop productivity enhancement in gravelly soil regions of India.	D.V. Singh R.K. Avasthe Ambrish Kumar	HRD&SS, Dehradun
Comments: The proposal is approved as an Observational Trial for one year without runoff and soil loss recording devices. Moisture conservation data may be recorded. Literature may be reviewed and presented in the next IRC meeting. (Action: Dr. D.V. Singh)			
2.	Evaluating the effect of organic amendments on resource conservation and productivity of rainfed semi-arid vertisols.	M. Prabhavathi S.L. Patil	Bellary
Comments: The study is approved as an Observational Trial for a period of two years. Treatments may be modified as discussed. (Action: Ms. M. Prabhavathi)			

NEW PROPOSALS PRESENTED IN THE IRC-2012 BUT NOT APPROVED

S. No.	Title of project	Leader & Associates	Centre/ Division	Remarks of IRC
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	SS&A, Dehradun	The objectives related to this project may be addressed in the NICRA project.
2.	Assessment of training needs of farmers for NRM in changing climatic scenario.	Om Prakash	Datia	This project may be a part of climate change project and review of literature may be done and be submitted to Dr. D.R. Sena.
3.	Assessment of secondary and micro-nutrients losses under sloping and terraced lands of the Nilgiris.	D. Dinesh K. Kannan	Udhagamandalam	Micro-nutrient data may be collected from ongoing erosion productivity relationship project at the Centre alongwith farmers' field and status may be 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	6,7,8,10,11,12,13	**07**
	• Hydrology & Engineering	1,44,54,58	**04**
	• Plant Science	14,15,16,26,27,28,29,30,31,32,45,46	**12**
	• HRD & SS	51,61	**02**
	• PME Cell	2,59,60	**03**
2.	Agra	6,17,46,49,52,57,59,61	**08**
3.	Bellary	6,9,18,57,59,60,61	**07**
4.	Chandigarh	6,19,20,33,34,35,46,57,59,60,61	**11**
5.	Datia	6,21,22,36,57,59,60,61	**08**
6.	Koraput	3,6,23,24,37,38,57,59	**08**
7.	Kota	6,25,39,40,41,46,49,53,55,56,57,59,60,61	**14**
8.	Udhagamandalam	4,6,42,46,47,57,59,60,61	**09**
9.	Vasad	5,6,43,46,48,49,50,57,59,60,61	**11**
	Grand Total		**104**

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	3	4	-	-	-	-	-	**07**
	♦ Hydrology & Engineering	1	-	1	1	1	-	-	**04**
	♦ Plant Science	-	10	2	-	-	-	-	**12**
	♦ HRD & SS	-	-	1	-	-	-	1	**02**
	♦ PME Cell	1	-	-	-	1	1	-	**03**
2.	Agra	1	1	3	1	1	-	1	**08**
3.	Bellary	2	1	-	1	1	1	1	**07**
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	1	1	1	**14**
8.	Udhagamandalam	2	1	2	1	1	1	1	**09**
9.	Vasad	2	1	4	1	1	1	1	**11**
	Grand Total	**17**	**34**	**17**	**11**	**10**	**07**	**08**	**104**

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	**09**	**34**	**10**	**04**	**02**	**01**	**01**	**61**

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 2012 is as follows:

S. No.	Name	Designation	Leader	Associate	Total	S. No. of projects to be concluded
1.	Dr. P.K. Mishra	Director	-	1(58)	1	-
Soil Science and Agronomy Division						
2.	Dr. K.S. Dadhwal	Head of Division	1(11)	1(14)	2	-
3.	Dr. N.K. Sharma	Pr. Scientist (Agro.)	1(12)	7(6,10,11,46,51,58, 59)	8	12,59
4.	Dr. B.N. Ghosh	Sr. Scientist (Soils)	1(10)	4(15,27,45,46)	5	-
5.	Dr. D. Mandal	Sr. Scientist (Soils)	2(6,8)	5(1,2,12,26,28)	7	1,2,8,12
6.	Mr. M. Shankar	Scientist (Soils)	1(7)	-	1	-
7.	Mr. Rajiv Ranjan	Scientist (Soils)	1(13)	2(16,30)	3	13
Hydrology and Engineering Division						
8.	Dr. G.P. Juyal	Head of Division	-	1(54)	1	54
9.	Er. K.P. Tripathi	Pr. Scientist (Engg.)	1(54)	2(46,58)	3	54
10.	Dr. P.R. Ojasvi	Pr. Scientist (Engg.)	1(58)	-	1	-
11.	Er. S.S. Shrimali	Sr. Scientist (Com.App.)	-	3(1,2,8)	3	1,2,8
12.	Dr. D.R. Sena	Sr. Scientist (Engg.)	1(44)	2(7,60)	3	44,60
13.	Mr. M. Muruganandam	Sr. Scientist (Fisheries)	-	3(46,51,59)	3	59
14.	Er. S. Patra	Scientist (Engg.)	-	3(6,11,59)	3	59
15.	Ms. Chayna Jana	Scientist (Ag. Stat.)	1(1)	2(2,44)	3	1,2,44
Human Resource Development and Social Science Division						
16.	Dr. R.K. Avasthe	Head of Division	-	1(61)	1	-
17.	Dr. Charan Singh	Sr. Scientist (Forestry)	-	3(29,45,58)	3	-
18.	Dr. Bankey Bihari	Sr. Scientist (Ag. Extn.)	1(61)	1(60)	2	60
19.	Dr. Ambrish Kumar	Sr. Scientist (Engg.)	1(51)	6(12,13,16,31,45,61)	7	12,13
20.	Dr. D.V. Singh	Sr. Scientist (Soils)	-	3(29,31,58)	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
Plant Science Division						
21.	Dr. O.P. Chaturvedi	Head of Division	2(29,45)	-	2	-
22.	Dr. Harsh Mehta	Pr. Scientist (Pl. Breed.)	2(14,28)	2(13,32)	4	13
23.	Dr. J.M.S. Tomar	Sr. Scientist (Forestry)	2(30,46)	3(28,29,31)	5	-
24.	Dr. Rajesh Kaushal	Sr. Scientist (Forestry)	2(16,31)	1(30)	3	-
25.	Dr. A.C. Rathore	Scientist (SS) (Hort.)	2(15,27)	2(46,59)	4	59
26.	Dr. J. Jayaprakash	Scientist (Forestry)	1(26)	2(16,29)	3	-
27.	Mr. Raj Kumar	Scientist (Forestry)	1(32)	1(1)	2	1
Project Monitoring and Evaluation Cell						
28.	Dr. B.L. Dhyani	Pr. Scientist (Ag. Eco.)	-	2(51,60)	2	60
29.	Dr. Pradeep Dogra	Sr. Scientist (Ag. Eco.)	2(59,60)	2(6,10)	4	59,60
30.	Dr. N.M. Alam	Scientist (Ag. Stat.)	1(2)	3(7,8,51)	4	2,8
Research Centre, Agra						
31.	Dr. S.K. Dubey	Head of Centre	2(6,17)	3(46,49,52)	5	-
32.	Dr. A.K. Singh	Sr. Scientist (Engg.)	3(49,59,61)	3(6,17,57)	6	59
33.	Dr. K.K. Sharma	Sr. Scientist (Engg.)	2(46,52)	-	2	-
34.	Mr. R.K. Dubey	Scientist (SS) (Agro.)	On study leave			
35.	Dr. (Ms.) S. Kala	Scientist (Forestry)	1(57)	2(46,49)	3	-
36.	Mr. R.B. Meena	Scientist (Soils)	-	3(57,59,61)	3	59
Research Centre, Bellary						
37.	Dr. A. Raizada	Head of Centre	2(18,57)	1(9)	3	-
38.	Er. R.N. Adhikari	Pr. Scientist (Engg.)	-	5(6,9,57,59,60)	5	59,60
39.	Dr. S.L. Patil	Pr. Scientist (Agro.)	1(59)	2(6,61)	3	59
40.	Dr. N. Loganandhan	Scientist (SS) (Ag. Extn.)	1(61)	1(60)	2	60
41.	Er. S.K. Srivastava	Scientist (Engg.)	1(9)	2(18,61)	3	-
42.	Dr. B. Mondal	Scientist (Agril. Eco.)	1(60)	2(18,59)	3	59,60
43.	Ms. M. Prabhavathi	Scientist (Soils)	1(6)	4(9,18,57,59)	5	59
Research Centre, Chandigarh						
44.	Dr. A.K. Tiwari	Head of Centre	1(57)	2(6,61)	3	-
45.	Dr.(Ms.) Pawan Sharma	Pr. Scientist (Soils)	1(20)	1(19)	2	-
46.	Dr. Pratap Singh	Pr. Scientist (Agro.)	-	7(6,19,20,33,34,46, 59)	7	59
47.	Dr. R.P. Yadav	Pr. Scientist (Soils)	2(6,19)	3(20,33,61)	5	-
48.	Dr. (Ms.) S.L. Arya	Pr. Scientist (Ag. Eco.)	3(59,60,61)	1(33)	4	59,60
49.	Dr. V.K. Bhatt	Sr. Scientist (Engg.)	1(46)	4(34,35,57,60)	5	60
50.	Dr. Ram Prasad	Sr. Scientist (Horti.)	1(33)	4(34,35,46,59)	5	59
51.	Dr. Pankaj Panwar	Sr. Scientist (Forestry)	2(34,35)	2(46,57)	4	-
52.	Dr.(Ms.)Sharmistha Pal	Scientist (Soils)	-	5(34,35,46,57,59)	5	59

(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(22)	2(6,57)	3	-
54.	Dr. Dev Narayan	Sr. Scientist (Agro.)	3(6,21,59)	1(22)	4	59
55.	Dr. Om Prakash	Sr. Scientist (Ag. Extn.)	2(60,61)	1(22)	3	60
56.	Dr. D.G. Durbude	Sr. Scientist (Engg.)	1(57)	4(6,21,22,61)	5	-
57.	Dr. M.N. Ramesha	Scientist (Forestry)	1(36)	3(21,57,59)	4	59
58.	Mr. Prabhat Kumar	Scientist (Soils)	-	3(21,36,59)	3	59
Research Centre, Koraput						
59.	Dr. M. Madhu	Head of Centre	1(57)	2(3,38)	3	3
60.	Er. B.S. Naik	Scientist (S.S.) (Engg.)	1(37)	5(3,6,23,57,59)	6	3,23,59
61.	Mr. H. Gowda	Scientist (Forestry)	2(24,38)	3(3,37,57)	5	3,24
62.	Mr. P. Jakhar	Scientist (Agro.)	2(23,59)	3(6,24,37)	5	23,24,59
63.	Dr. P.P. Adhikary	Scientist (Soils)	2(3,6)	5(23,24,37,38,57)	7	3,23,24
Research Centre, Kota						
64.	Dr. R.K. Singh	Head of Centre	2(6,25)	4(41,46,53,55)	6	-
65.	Dr. A.K. Parandiyal	Sr. Scientist (Forestry)	4(40,41,49,56)	4(39,46,55,57)	8	56
66.	Dr. Ashok Kumar	Sr. Scientist (Ag. Eco.)	3(59,60,61)	5(25,39,40,55,57)	8	59,60
67.	Dr. Shakir Ali	Sr. Scientist (Engg.)	1(46)	5(49,55,57,60,61)	6	60
68.	Er. B.K. Sethy	Scientist (SS) (Engg.)	3(53,55,57)	4(6,25,56,59)	7	56,59
69.	Mr. H.R. Meena	Scientist (Hort.)	1(39)	5(25,46,53,56,59)	6	56,59
70.	Dr. G.L. Meena	Scientist (Soils)	-	2(39,40)	2	-
Research Centre, Udhagamandalam						
71.	Dr. O.P.S. Khola	Head of Centre	-	2(4,47)	2	-
72.	Dr.(Ms.) P.Sundarambal	Sr. Scientist (Ag. Extn.)	2(60,61)	-	2	60
73.	Dr. K. Kannan	Sr. Scientist (Agro.)	1(59)	3(6,46,57)	4	59
74.	Dr. S. Manivannan	Sr. Scientist (Engg.)	2(47,57)	1(61)	3	-
75.	Dr. R. Ragupathy	Scientist (SS) (Forestry)	1(42)	1(4)	2	-
76.	Er. (Ms.) V. Selvi	Scientist (SS) (Engg.)	2(6,46)	1(59)	3	59
77.	Dr. K. Rajan	Scientist (Soils)	1(4)	3(42,47,57)	4	-
78.	Dr. D. Dinesh	Scientist (Soils)	-	3(6,59,61)	3	59
Research Centre, Vasad						
79.	Dr. R.S. Kurothe	Head of the Centre	2(48,57)	2(6,61)	4	-
80.	Dr. G.L. Bagdi	Sr. Scientist (Ag. Extn.)	1(61)	1(60)	2	60
81.	Dr. V.C. Pande	Sr. Scientist (Ag.Eco.)	2(59,60)	5(5,43,48,49,57)	7	59,60
82.	Dr. A.K. Vishwakarma	Sr. Scientist (Agro.)	1(43)	5(5,6,46,48,59)	6	59
83.	Dr. B.K. Rao	Sr. Scientist (Engg.)	3(5,46,49)	2(43,50)	5	50
84.	Dr. Gopal Kumar	Scientist (Soils)	2(6,50)	6(43,46,48,49,57, 59)	8	50,59

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

LIST OF PARTICIPANTS

1.	Dr. P.K. Mishra	Director	Chairman
CSWCRTI, DEHRADUN			
2.	Dr. K.S. Dadhwal	Head, SS&A Division	Member
3.	Dr. G.P. Juyal	Head (H&E Division)	Member
4.	Dr. O.P. Chaturvedi	Head (Plant Science Division)	Member
5.	Dr. R.K. Avasthe	Head (HRD&SS Division)	Member
6.	Er. K.P. Tripathi	Principal Scientist (Engg.)	
7.	Dr. B.L. Dhyani	Principal Scientist (Agril.Eco.) & OIC, PME Cell	Member Secretary
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. D.R. Sena	Senior Scientist (Engg.)	
17.	Dr. D. Mandal	Senior Scientist (Soils)	
18.	Dr. J.M.S. Tomar	Senior Scientist (Forestry)	
19.	Dr. Rajesh Kaushal	Senior Scientist (Forestry)	
20.	Mr. M. Muruganandam	Senior Scientist (Fisheries)	
21.	Dr. A.C. Rathore	Scientist (SS) (Hort.)	
22.	Dr. J. Jayaprakash	Scientist (Forestry)	
23.	Dr. N.M. Alam	Scientist (Ag. Stat.)	Rapporteur
24.	Ms. Chayna Jana	Scientist (Ag. Stat.)	
25.	Mr. M. Sankar	Scientist (Soils)	
26.	Mr. Raj Kumar	Scientist (Forestry)	
27.	Mr. Rajiv Ranjan	Scientist (Soils)	
28.	Mr. Nirmal Kumar	Technical Officer (T-7-8)	Rapporteur
29.	Mr. S.K. Sinha	Technical Officer (T-6)	Rapporteur
RESEARCH CENTRE, AGRA			
30.	Dr. S.K. Dubey	Head of the Centre	Member
31.	Dr. P.K. Panda	Senior Scientist (Agro.)	
32.	Dr. K.K. Sharma	Senior Scientist (Engg.)	
33.	Dr. (Ms.) S. Kala	Scientist (Forestry)	
34.	Mr. R.B. Meena	Scientist (Soils)	
RESEARCH CENTRE, BELLARY			
35.	Dr. A. Raizada	Head of the Centre	Member
36.	Dr. N. Loganandhan	Scientist (S.S.) (Ag. Extn.)	
37.	Dr. B. Mondal	Scientist (Ag. Eco.)	
38.	Ms. M. Prabhavathi	Scientist (Soils)	

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