Regular Training Programme

Imparting training to the engineers of the user agencies is an integral part of the research programme of the Institute. During the year, following refresher courses/training programmes for in-service engineers of the user organizations related to roads and road transportation in the Govt. Public & Private Sectors were organized. Through these programmes, the Institute imparted training to the junior, middle and senior level engineers of the user organizations and acquainted them with the latest research based information on various aspects of road and road transportation.

Special Training Programme

Besides the regular training programmes, the Institute conducted customer oriented programmes to meet the specific training requirements of the user agencies. During the year, the Institute conducted the following customer oriented training programmes:

**Design, Construction and Maintenance of Flexible and Rigid Pavement for Rural Roads under PMGSY Scheme**

On the request of Rural Engineering Department, Lucknow, a Customized Training Programme was

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<tr>
<th>S. No.</th>
<th>Title of the Course</th>
<th>Duration with Dates</th>
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<tbody>
<tr>
<td>A.</td>
<td>Pavement Engineering &amp; Materials</td>
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<tr>
<td></td>
<td>• Design, Construction and Maintenance of Flexible Pavements</td>
<td>Sept. 5-9, 2011</td>
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<tr>
<td></td>
<td>• Pavement Evaluation Techniques and their Applications for Maintenance and Rehabilitation</td>
<td>Dec. 12-16, 2011</td>
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<td>B.</td>
<td>Geotechnical Engineering</td>
<td>Feb. 06-09, 2012</td>
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<td></td>
<td>• Geo-spatial Technology (GIS, GPS, RS etc.) for Roads and Transportation</td>
<td></td>
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<td>C.</td>
<td>Bridges and Structures</td>
<td>May 20-24, 2011</td>
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<td></td>
<td>• Bridge Diagnostics, Performance Evaluation and Rehabilitation</td>
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<td>D.</td>
<td>Traffic &amp; Transportation Planning</td>
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<td></td>
<td>• Vibration and Noise Measurement and Analysis</td>
<td>June 06-09, 2011</td>
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<td></td>
<td>• Traffic Engineering and Transportation System Management</td>
<td>July 25-29, 2011</td>
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<td>• Road Safety Audit</td>
<td>Aug. 8-11, 2011</td>
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<td></td>
<td>• Environmental Impact Assessment (EIA) and Environmental Clearance Process for Road &amp; Highway Project</td>
<td>Dec. 19-21, 2011</td>
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organised for the Assistant Engineers, Executive Engineers and Superintending Engineers of RED UP from May 18 – 23, 2011.

**Pavement Evaluation Techniques and their Applications for Maintenance and Rehabilitation**

A Customized Training Programme was organised for the Engineers of Road Construction Department, Patna from June 30 to July 2, 2011 at Patna.

**Road Safety Audit including EIA**

A Customized Training Programme on “Road Safety Audit including EIA” at Staff Training College, Gandhinagar was organised from July 18-22, 2011.

**Road Safety Audit for NHAI / RITES**

The Institute organized a Training-cum-Workshop on “Road Safety Audit” for the Engineers of NHAI / RITES at Jaipur from August 17-20, 2011.

**Road Design Standards for Flood Affected Areas**

On the request of Road Construction Department, Patna, a customized training programme was organized for the engineers of RCD Patna during September 26-29, 2011 at Patna.

**International Course on Dissemination of Highway Development and Management (HDM-4)**

A Special Training Programme on HDM-4 was organised from October 10-21, 2011 which was attended by the participants from India and Afghanistan.

**Environmental Pollution and Air Quality Monitoring System for Ministry of Environment, Govt. of IRAQ**

A tailor made Training Programme on “Environmental Pollution and Air Quality Monitoring System” was organised for the officials of Ministry of Environment, Govt. of IRAQ from October 16-30, 2011 at CRRI.

**Design, Construction and Maintenance of Flexible Pavements for RCD, Bihar**

At the request of Road Construction Department, a customized Training Programme on “Design, Construction and Maintenance of Flexible Pavements” was organised at Patna for Engineers of RCD, Bihar from December 7-10, 2011.

**Highway Development & Management (HDM-4) for Engineers of RCD, Bihar**

A customized Training Programme on “HDM-4” was organised for Engineers of RCD, Bihar at Patna from December 19-24, 2011.

**Project Preparation, SBD, Quality Assurance and Maintenance of Rural Roads**

On the request of National Rural Roads Development Agencies (NRRDA), CSIR-CRRI organized training programme for the field engineers involved in PMGSY of various state PWDs in 3 batches as per details given below:

i) January 03-07, 2012

ii) January 09-13, 2012

iii) February 06-10, 2012
Material Testing, Laboratory and Quality Control Aspects

On the request of RCD Patna, the Institute organized a customized training programme on ‘Material Testing, Laboratory and Quality Control Aspects’, for the Assistant Research Officers and Research Assistants from Jan. 30 - Feb. 02, 2012.

Human Resource Development Programme

Human resource development is a philosophy of management and is purported to upgrade the capabilities and professional skills of the personnel working in an organization to match the changing work demands. To enhance the professional capabilities of scientists and scientific staff for undertaking the R&D work in frontline areas of highway engineering and with the urge to develop technologies which have competitive edge and marketable strength, CRRI has been devoted in human resources development. Realizing the need for skill development and capacity building of the human resources, training programmes were selected. Staff members received specialized training in the areas of their expertise to cope up with the challenging assignments. The details of those who attended various training programme and the specialized areas of training are given on page 193-194.

Publications

CRRI Annual Report for the Year 2010-2011

The report is the profile of achievements of the Institute during the year 2010-2011. It also serves as a medium to acquaint the user agencies, clients and the other related organizations in the roads and road transportation research with R&D and other concomitant activities of the Institute. Progress reports of the R&D work and other related activities during the year from the various divisions/sections of the Institute was collected, compiled, edited and brought out as Institute’s Annual Report for the year 2010-2011.

General Report on Road Research Work Done in India during 2010-2011

The progress reports on R&D and consultancy projects involving innovative ideas at the highway engineering, research and development and academic institutions from all over the country were received from the Indian Roads Congress for preparation and compilation of the General Report on Road Research work done in India during the year 2010-2011. Based on the input received from organizations including CRRI, the report was compiled in six sections, namely, Highway Planning, Management, Performance Evaluation and Instrumentation; Pavement Engineering and Paving Materials; Geotechnical Engineering; Bridge Engineering; Traffic and Transportation and Research work done in Academic Institutions related to Thesis Work. The suggestions received from the scientists of the various R&D areas were incorporated and the report was finally compiled and edited by CRRI as the General Report on Road Research work done in India which was published as Highway Research Record Number 37 by Indian Roads Congress. The report was presented by CRRI in the 72nd Annual Session of Indian Roads Congress at Lucknow from Nov. 3-6, 2011.
CRRI Newsletter

During the year, three issues of CRRI Newsletter were brought out. The Newsletter contains information related to R&D activities and other general information related to the Institute.

Other Activities

Mailing of Publications

The Institute’s R&D publications such as CRRI Annual Report and CRRI Newsletter were sent to highway professionals, engineering & academic organizations in the country and abroad. The publications are meant to disseminate R&D based information to the highway engineering profession.

Technical Queries

Technical queries concerning the R&D activities and technical know-how of the Institute were attended. Information on various technologies developed by the Institute was sent to a number of organizations dealing with databases, technology transfer and consultancy assignments pertaining to roads and road transportation.

Press Publicity

Various local presses approached CRRI for information on research & developments and studies carried out by the Institute on roads, flyovers, bridges etc. The needed information was provided to the press for the purpose of publicity.

Press clippings pertaining to road and road transport in particular and Science and Technology in general were culled out from various National dailies and were brought to the notice of the Director and circulated to staff members for information, if needed. These were also compiled in the form of document.

Publicity through CRRI Advertisement

To popularise the Institute’s past R&D achievements and present R&D programmes, capabilities, facilities and expertise, the Institute issued various advertisements at various forums. One such forum was the scientific documents brought out by various organizations on different occasions. The Institute got published its various advertisements in the documents brought out by various organizations on different occasions.

Publication of Research Outputs

Research outputs i.e. Research papers emanating from the R&D work were processed for publication in various National & International Journals/ Conferences through internal review system. Cases pertaining to deputation of CRRI Scientists to attend various Conference/ Symposia were processed and attended.

ISTAG Activities

The scientists of the Institute were deputed abroad under various collaborative, exchange and bilateral programme of CSIR to participate in various conferences/symposia/seminar/study programme and to attend advanced equipment training.
Exhibitions

(a) Intertraffic India Exhibition 2011
CRRI participated in Intertraffic India Exhibition 2011 organised by International Road Federation - India Chapter at New Delhi during Oct. 3-5, 2011.

(b) 72nd Annual Session of the Indian Roads Congress and Technical Exhibition
The Institute actively participated in the 72nd Annual Session of the Indian Roads Congress organized at Lucknow from Nov. 3-6, 2011. A Technical Exhibition with special emphasis on Highway Engineering, Bridge Engineering, Traffic and Transportation planning, Road Safety and Environment was displayed, which included Charts and Models and showcased the capability and expertise of CRRI and technologies developed by the Institute.

(C) 2nd African Road Safety Conference-cum-Exhibition
CRRI participated in the technical exhibition organised during the 2nd African Road Safety Conference from November 9-11, 2011 at Addis Ababa, Ethiopia. A pavilion showcasing R&D achievements & capabilities of CRRI was setup in the exhibition.

Technology Transfer and Business Development
The division is actively engaged in technology transfer and marketing of Institute’s knowledge base through active coordination of promotional activities and professional channels. Scrutinizing proposals of contract research and consultancy assignments of externally funded project as an active member of project scrutiny Committee.

Visitors
Visits of distinguished professionals and delegates from various organizations related to road transportation from India and abroad to CRRI were organized during the year.

Linkages with Professional Bodies
The Institute is represented as the Institutional Member on the various technical, executive and administrative committees and groups of various National and Foreign Organizations. These organizations maintain their databases including R&D activities, Organizational Heads, etc. of the Member Institutions and regularly seek the updated information. The updated information on CRRI was provided to various organizations and the annual subscriptions were paid to continue the membership. The Institutional membership of the Institute is given on page 211.
Inaugural Session of Training Programme on Driver Diagnostics, Performance Evaluation and Training
Training Programme on Road Safety Audit

Training Programme on Rigid Pavements: Design, Construction and Quality Control

CSIR-CRRI, New Delhi
Training Programme on Pavement Evaluation Techniques and their Applications for Maintenance and Rehabilitation

Training Programme on EIA and Environment Clearance Process for Roads and Highways

Training on Road Safety Audit including EIA at Gandhinagar
Participant of International Training Programme on HDM-4 Receiving Certificate

Participants Attending International Course on HDM-4

Inaugural Session of Training Programme on Bridge Diagnostics, Performance Evaluation and Rehabilitation
A view of CRRI Pavilion at Addis Ababa, Ethiopia

CRRI Pavilion during Inter Traffic India Exhibition

CRRI Pavilion during IRC Annual Session at Lucknow
Training Programme for the Engineers of RCD, Bihar at Patna

Training for the field engineers involved in PMGSY

Training Programme on air quality monitoring system for the Officials of Ministry of Environment, Govt. of IRAQ
HRD & Project Management
Information, Liaison and Training

Customized Training Programme on Rural Roads for NRRDA

Customized Training Programme on HDM-4 at Patna for RCD, Bihar

A view of Inauguration of Regular Training Programme