Participation in Side Event on Climate Change, Biodiversity Conservation and Adaptation at CBD COP 11: Dr. V.K. Bahuguna, Director General, ICFRE chaired the event on Climate Change, Biodiversity Conservation and Adaptation organized by GEF at CBD COP 11, Hyderabad on 17 October 2012. The event presented impacts of climate change on biodiversity of forests and other natural ecosystems and opportunities for adaptation; assessing the implications of climate change Impacts on biodiversity for biodiversity-dependent communities, and identify approaches to reduce vulnerability of forest ecosystems and forest-dependent communities and highlight the role of the GEF in this regard.

Participation in Side Event on International REDD+ Architecture and its Relevance for Developing Countries at CBD COP 11: Shri Sandeep Tripathi, Dy. Director General (Research) participated in the side event on ‘International REDD+ architecture and its relevance for developing countries’ which was organized at the Eleventh Conference of the Parties to the Convention on Biological Diversity (CBD COP 11) by the Ministry of Environment...
- ment and Forests, Government of India and The Energy and Resources Institute (TERI) on 11 October 2012. He stated in the side event that REDD+ was following the same path of heavy transaction costs as AR CDM. He also said that we should not portray REDD+ as a poverty alleviation scheme if market based funding is required, and it should clearly be seen as a forest carbon enhancing scheme if market based funding needs to be tapped.

**Participation in Regional Level Consultation on Preparedness for REDD+:** Shri Sandeep Tripathi, Dy. Director General (Research) participated in the Regional Level Consultation on Preparedness for REDD+ and delivered a talk on ‘Finance for REDD+’. The regional level consultation was organized at Indian Institute of Forest Management, Bhopal by the Ministry of Environment and Forests, Government of India and The Energy and Resources Institute from 8 to 9 November 2012.

**Training workshop on The Significance and Scope of REDD/ REDD+ for India’s Forests:** ICFRE organized a two days training workshop on “The Significance and Scope of REDD / REDD+ for India’s Forests” from 07 - 08 November 2012 at ICFRE, Dehradun. The training workshop was inaugurated by Dr. V.K. Bahuguna, Director General, ICFRE training workshop. Various aspects of REDD+ viz. evolution of REDD+ mechanism; UNFCCC debates and international scenarios; REDD+ implementation and piloting in India; monitoring, reporting, verification and REDD+ finance; carbon sequestration and carbon inventories and reference levels for REDD+, and mainstreaming REDD+ in forest management in India were covered. The training workshop was sponsored by the Ministry of Environment and Forests, Government of India and 17 officers of Indian Forest Service from different states participated in the training workshop.
Training Programme on Climate Change and Carbon Mitigation: ICFRE organized a one week training programme on “Climate Change and Carbon Mitigation” for scientists and technologists working in Government Sector from 19-23 November 2012 at ICFRE, Dehradun. The training programme was inaugurated by Dr. V.K. Bahuguna, Director General, ICFRE training workshop. Various aspects of climate change viz. carbon markets, clean development mechanism; international negotiations in climate change, impact of climate change on agriculture, forests, biodiversity, water resources, glaciers; use of renewable energy in mitigation & adaptation; carbon mitigation opportunities in forest sector and CO2 flux measurements etc. were covered in the training programme. The training programme was sponsored by the Department of Science and Technology, Government of India, and 19 scientists and technologists from different research organizations and universities participated in the training programme.

Training Programme on Climate Change, Forest Ecosystems and Biodiversity: Vulnerabilities and Adaptation strategies: ICFRE organized a one week training programme on “Climate Change, Forest Ecosystems and Biodiversity: Vulnerabilities and Adaptation Strategies” for scientists and technologists working in Government Sector from 17-21 December 2012 at ICFRE, Dehradun. The training programme was inaugurated by Dr. V.K. Bahuguna, Director General, ICFRE training workshop. Various aspects of climate change, forest ecosystem and biodiversity viz basics of climate change and international negotiations, Biodiversity Act and IPR issues, need for assessment of biodiversity, certification issues relating to biodiversity, marine biodiversity and its assessment, forest genetic resource, vulnerability, adaptation and safeguards for biodiversity in REDD+, Himalayan ecosystem, biodiversity, land characterization and climate change, carbon pools in forest ecosystem etc. were covered in the training programme.
The training programme was sponsored by the Department of Science and Technology, Government of India, and 22 scientists and technologists from different research organizations and universities participated in the training programme.

**REDD+ Cell in Relation to Global Warming and Climate Change:** Indira Gandhi National Forest Academy has constituted a REDD+ Cell in which Sh. Sandeep Tripathi, Dy. Director General (Research), ICFRE has been nominated as a member in the Apex Academic Committee of the Cell and Dr. T.P. Singh, Assist. Director General (Forests and Climate Change), ICFRE has been nominated as a member in the Core Committee of the Cell.

**Participation in Doha Climate Change Conference:** Shri V.R.S. Rawat, Scientist ‘E’/Addl Director, ICFRE, participated as a member of official India delegation in the UNFCCC Climate Change Negotiations at COP 18/CMP 8, 37th Session of SBSTA/SBI, 15th Session of AWG-LCA, 17th Session of AWG-KP and 1st Session of Ad-hoc Working Group on Durban Platform for Enhanced Actions (ADP) held at Doha (Qatar) from 26 November to 9 December 2012.

**Participation in side event on “REDD+ and Poverty Reduction: What has worked and What is possible?” at the Doha Climate Change Conference:** Shri V.R.S. Rawat, Scientist E/Additional Director, Forest and Climate Change Division, ICFRE also participated in the side event on REDD+ and Poverty Reduction: What has worked and What is possible? as a Panelist, and presented a national-level approach to REDD+, highlighting his country’s experience. He noted that although India began to implement REDD+ very recently, the government already has a climate change policy and strong forestry management policies and programmes. He noted that the government is implementing
Participation in Meeting for Facilitating Identification of Sites for Implementing USAID/India Forest Plus Project: Dr. Varghese Paul and other members of USAID visited ICFRE on dated 19 October 2012 and discussed the various issues for facilitating identification of sites for implementing USAID/India Forest Plus Project with Dr. T.P. Singh, Assist. Director General (Forests and Climate Change), ICFRE and his team of scientist/officer of Forests and Climate Change Division, ICFRE.

Participation in International Poplar Commission 2012: Shri Sandeep Tripathi, Dy. Director General (Research), ICFRE participated in International Poplar Commission and presented a paper on Large scale commercial plantation of *Populus deltoides* Bartr. in nontraditional zone of poplar under agroforestry in Vaishali district, Bihar on 30 October 2012 at FRI, Dehradun.

Dr. T.P. Singh, Assist. Director General (Forests and Climate Change), ICFRE also participated in International Poplar Commission and presented a paper on Poplar as climate change mitigation option under REDD+ a case from North Indian state of Haryana on 31 October 2012 at FRI, Dehradun.

Lecture Delivered

◊ Shri Sandeep Tripathi, Deputy Director General (Research), ICFRE delivered a presentation on ‘Adaptation Challenges: Climate Change, its Impact on Populace and Economic Development’ on 1 November 2012 in the training programme on Public Policy and Governance for the officers of the UTs Civil Services at Lal Bahadur Shastri National Academy of Administration, Mussoorie.

◊ Shri Sandeep Tripathi, Deputy Director General (Research), ICFRE delivered a presentation on ‘Climate Change and Evolution of REDD+ Mechanism: UNFCCC debates and international scenarios’ on 7 November 2012 in training workshop on “The significance and scope of REDD/ REDD+ for India’s Forests” at ICFRE, Dehradun.
Dr. T.P. Singh, Assistant Director General (FCC), ICFRE delivered a presentation on ‘REDD+ Implementation and Piloting in India’ on 7 November 2012 in training workshop on “The significance and scope of REDD/REDD+ for India’s Forests” at ICFRE, Dehradun.

Shri V.R.S. Rawat, Additional Director, FCC Division, ICFRE delivered a presentation on ‘Monitoring, Reporting, Verification and REDD+ Finance’ on 7 November 2012 in training workshop on “The significance and scope of REDD/REDD+ for India’s Forests” at ICFRE, Dehradun.

Dr. T.P. Singh, Assistant Director General (FCC), ICFRE delivered a presentation on ‘Introduction to Climate Change and Carbon Markets Mechanisms’ on 19 November 2012 in one week training programme on “Climate Change and Carbon Mitigation” for scientists and technologists working in Government Sector at ICFRE, Dehradun.

Shri V.R.S. Rawat, Additional Director, FCC Division, ICFRE delivered a presentation on ‘Climate Change Mitigation through Clean Development Mechanism (CDM) Projects: Policy, Modalities and Institutions in India’ on 19 November 2012 in one week training programme on “Climate Change and Carbon Mitigation” for scientists and technologists working in Government Sector at ICFRE, Dehradun.

Shri Sandeep Tripathi, Deputy Director General (Research), ICFRE delivered a presentation on ‘International Negotiations in Climate Change’ on 20 November 2012 in one week training programme on “Climate Change and Carbon Mitigation” for scientists and technologists working in Government Sector at ICFRE, Dehradun.

Dr. T.P. Singh, Assistant Director General (FCC), ICFRE has delivered a presentation on ‘Vulnerability, Adaptation and Safeguards for Biodiversity in REDD+’ on 18 December 2012 in training programme on “Climate Change, Forest Ecosystems and Biodiversity: Vulnerabilities and Adaptation Strategies” for scientists and technologists working in Government Sector at ICFRE, Dehradun.

Shri Sandeep Tripathi, Deputy Director General (Research), ICFRE delivered a presentation on ‘Basic Concepts of Climate Change and International Negotiations’ 17 December 2012 in training programme on “Climate Change, Forest Ecosystems and Biodiversity: Vulnerabilities and Adaptation Strategies” at ICFRE, Dehradun.

Shri V.R.S. Rawat, Additional Director, FCC Division, ICFRE delivered a presentation on ‘Overview of Climate Change, Carbon Trading: International Standards’ on 17 December 2012 in one week training programme on “Carbon Stock Inventory” at Forest Survey of India, Dehradun.
Report finds climate change poses threat to Indian farmers: A new synthesis report about the challenges posed by climate change in India has found that changes in temperature and rainfall will have a serious effect on already fragile farming communities. The report is part of a joint project by the UK’s Department of Energy and Climate Change and the Indian Ministry of Environment and Forests to better understand the potential impacts of climate change in India. (Source: http://www.ids.ac.uk/news/report-finds-climate-change-poses-threat-to-indian-farmers)

Indian monsoons may fail more often due to climate change: The Indian monsoon is likely to fail more often in the next 200 years threatening food supplies. The monsoon rains could collapse about every fifth year between 2150 and 2200 with continued global warming. India's monsoon, which lasts from June to September, is vital for India's 1.2 billion people to grow crops such as rice, wheat and corn. India last faced a severe widespread drought in 2009 and had to import sugar, pushing global prices to 30-year highs. The researchers defined monsoon failure as a fall in rainfall of between 40 and 70 percent below normal levels. (Source: http://www.indianexpress.com/news/indian-monsoons-may-fail-more-often-due-to-climate-change-study/1027550/)

Glaciers cracking due to presence of excessive carbon dioxide: Presence of excessive levels of CO$_2$ in our atmosphere is causing global temperatures to rise and glaciers and ice caps to melt, researchers have warned. A new study by researchers from the Massachusetts Institute for Technology has shown that CO$_2$ molecules may be having a more direct impact on the ice that covers our planet. They found that the material strength and fracture toughness of ice are decreased significantly under increasing concentrations of CO$_2$ molecules. This results in making ice caps and glaciers more vulnerable to cracking and splitting into pieces, as was seen recently when a huge crack in the Pine Island Glacier in Antarctica. (Source: http://www.indianexpress.com/news/glaciers-cracking-due-to-presence-of-excessive-carbon-dioxide/1015337/)

What did Doha achieve? The 18th Conference of the Parties to the UN Framework Convention on Climate Change took place in Doha over two weeks, ending on December 7. Most of the decisions taken at Doha are for an extension of work already being done. One significant decision was to modify the Kyoto Protocol and extend it for a second commitment period of eight years, but some commentators have pointed out that this version covers only 15 per cent of global emissions. (Source: http://www.indianexpress.com/news/what-did-doha-achieve/1047198).

Early flowering in Rhododendron arboretum and early fruit ripening in Myrica esculenta: Early flowering in Rhododendron arboretum and early fruit ripening in Myrica esculenta was reported in the month of January this year from Lakhera village, Gairsan of Distt. Chamoli (Chamoli) which may be due to climate change as said by the experts. (Source: Amar Ujala Dehradun edition, 13 January 2013).
Past Events

**International conference of Urban Biodiversity and Climate Change; Adaptation and Mitigation:** The 3rd International conference of Urban Biodiversity and Climate Change; Adaptation and Mitigation was organised by the Indian Institute of Technology Bombay at Mumbai from 8 to 12 October 2012.

**Conference on Climate Change and Development in Africa:** The second Climate Change and Development in Africa conference of the Climate for Development in Africa provides a forum for dialogue and engagement with various stakeholders involved in climate and development in Africa. Which was organized from 19 to 20 October 2012 at Addis Ababa (Adis Abeba), Ethiopia.

**National Research Conference on Climate Change:** The Indian Climate Research Network which is a consortium of organizations like Indian Institute of Science, Bangalore, Indian Institute of Technology Delhi, Indian Institute of Technology Madras, and Delhi based Centre for Science and Environment had organized the third national research conference on climate change at Indian Institute of Science Bangalore from 3 to 4 November 2012. The conference had covered the topics related to the scientific, technical, economic and policy aspects of climate change in South Asian countries.

**International Conference on Global Environmental Change and Human Security:** Third International Conference on Global Environmental Change and Human Security was organized by North-South Center for Social Sciences, Morocco, Deutsche Gesellschaft für Internationale Zusammenarbeit, Germany, Department of Environment, Ministry of Energy, Mines, Water and Environment, Morocco and National Council for Climate Change, Sustainable Development and Leadership, India from 22 to 24, November 2012 at Marrakesh.

**Doha Climate Change Conference:** The 18th session of the Conference of the Parties to the UNFCCC and the 8th session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol was held from 26 November to 7 December 2012 in Doha, Qatar.

**International Conference on Earth Science and Climate Change:** International Conference on Earth Science and Climate Change was organized in Paris, France from 28 to 29 November 2012 and it aims to bring together leading academic scientists, researchers and scholars to exchange and share their experiences and research results about all aspects of Earth Science and Climate Change.

**International Conference on Biodiversity and Climate Change:** International Conference on Biodiversity and Climate Change was organized from 29 to 30 December 2012 at Hong Kong, China.
Upcoming Events

◊ **National Seminar on Climate Change and Sustainable Development: Issues and Challenges:** The Seminar will be organized by Maharaja Sayajirao University of Baroda at Vadodara (Gujarat) from 23 – 24 January 2013.

◊ **National Conference on Strategies to Climate Change Mitigation and Adaptation towards Sustainable Development:** The conference will be organized by Institute of Public Enterprise at Hyderabad from 24-25 January 2013.

◊ **International Conference on Agriculture and Climate Change:** International Conference on agriculture and climate change will be organized by TERI at India Habitat Centre, Lodhi Road, New Delhi on 29-30 January 2013.

◊ **Event on Agroforestry for Food Security and Climate Change Mitigation:** The online learning event is organized by the Food and Agriculture Organization of the UN (FAO) in collaboration with the Tropical Agricultural Research and Higher Education Center and the World Agroforestry Center from 4-26 February 2013.

◊ **International Conference on Climate Change and Humanity:** The conference will be organized at Rome, Italy from 24th to 25th February 2013.

◊ **International Conference on Dryland Development: Global Climate Change and its Impact on Food & Energy Security in the Drylands:** The 11th International Conference will be organized by the International Dryland Development Commission and hosted by the Chinese Academy of Sciences and Cold and Arid Regions Environmental and Engineering Research Institute (China) from 18-23 March 2013 in Beijing, China.

◊ **Training on Glacier Studies, Climate Change and Remote Sensing:** Training on Glacier Studies, Climate Change and Remote Sensing, March 4-15, 2013 Indian Institute of Science.

Relevant Publications


