

# Chhattisgarh State Center for Climate Change

## Quarterly Newsletter

### Volume 3

ISSUE- October – December 2017



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### *Message from the editor's*



**Dear Reader,**

Welcome to the 3rd issue of the Chhattisgarh State Centre for Climate Change's Newsletter. In the current issue, there is detailed information about institutional events.

In the current issue, apart from institutional reports, the Newsletter highlights the reports on ToT (Training of Trainers), second Lecture series and Climate Change Conclave held in December 2017. I am delighted that the state centre is developing and conducting so many events to spread the message of Climate Change concern amongst people of the state.

This issue also carries information regarding the baseline survey done by the centre under the project “Climate Adaptation in Wetlands along the Mahanadi River Catchment area in Chhattisgarh” funded by NAFCC (National Adaptation Fund for Climate Change).

We want it to be an informative and useful newsletter that carries a mixture of news, features and regular columns on a wide range of climate change-related topics.

I hope you enjoy this issue and do let us know if there are any topics you'd like to see covered in the future.

(Dr. Arvind Anil Boaz)  
PCCF & HoFF

Nodal officer on Climate change  
Govt. of Chhattisgarh

## Training of Trainers On Climate Change & Adaptation

Training of Trainers was organised by **Chhattisgarh State Centre for Climate Change** on 6 October 2017, under the project "Climate Adaptation in Wetlands along the Mahanadi River Catchment area in Chhattisgarh" sponsored by MoEFCC & GoI under National Adaptation Fund on Climate Change (NAFCC).

The ToT was inaugurated by Dr. Arvind Boaz, PCCF & Head of Forest Force and Nodal Officer Climate Change, Chhattisgarh. While addressing to the participants of ToT he stressed upon the magnitude of harsh impact of Climate Change on environment and human life as it is becoming an ever growing concern, for which an array of things to be done to build the awareness at the district and grassroot level. This training was organised to empower the field staff, sectoral officers and the grass root people on environmental issues and proficient in carrying out the NAFCC funded project activities. This is first of its kind in the State and after this training the few potential candidates will be selected and sent to the national level training institutes for advance training on climate change.

The aim of "Training of Trainers (ToT)" was to build the capacity and educate the project area forest officers and field staff on 'Climate Change and adaptation' with the major activities to tackle the present scenario of climate change so that effective implementation of project activities at the ground level can be ensured. ToT was conducted by the experts from the key sectoral departments i.e. agriculture, forest and Chhattisgarh State Renewable Energy Development Agency (CREDA).

In the First Session of the ToT Professor G.K Das, Professor and Head, Department of Agrometeorology, IGKV, spoke on "**Climate Change adaptation strategies with reference to Chhattisgarh**"

**Prof. Das** explained about Climate Change and its relation with Agriculture, further he added that key affected areas of climate change in state are temperature rise and change in rainfall pattern; he also shared few incidences where erratic rainfall and increase in temperature have been recorded in different districts of C.G.



Speakers on the stage (Right to Left-Dr.Boaz, PCCF & Head of Forest Force and Nodal Officer Climate Change, at the podium, Prof. G.K. Das., A.K.Dewedi, IFS, Mr. Prem Kumar, IFS., Prof Jitendra Sinha, Prof IGKV

In the second session of the ToT **Shri. Prem Kumar**, IFS, CCF, Durg Circle, shared his experience on "**Modification of working plan according to the Climate Change Scenario**". In his lecture he emphasised on the Role of Forest working plan in combating climate change and also explained, how the implementation of REDD++ (Reducing emissions from deforestation and forest degradation) approach in Chhattisgarh Forest working plan can be advantageous to fight against climate change



Participants during the ToT



Presentation by Mr. Prem Kumar IFS, CCF durg

In Third Session of the ToT **Shri. Jitendra Sinha**, Assistant Professor, IGKV, Raipur delivered lecture on "**Climate Change and role of Soil and water conservation**", he made the trainers to understand and realize the Consequences of Climate Change on Soil and Water conservation, as well as the interventions undertaken by National Initiative on Climate Resilient Agriculture (NICRA) for Soil and Water Conservation. The last lecture of the training was delivered by Shri S. M. Deshpandey, Chief Engineer, CREDA, on "**Role of renewable energy in Climate Change and increasing its accessibility in rural areas**". Training imparted by the experts proved to be very useful for the master trainers.

## Second Lecture of the Series on "Climate Change Biodiversity & Sustainable Development"

Second lecture of the Climate Change series was organized by the centre on 9th October 2017. **Dr. Ram Bhooj**, who is a Senior Programme Officer in the Natural Science Unit at the UNESCO Cluster Office for South Asia in New Delhi, was the Guest Speaker.

**Shri Mahesh Gagda** Hon'ble Minister, Forest and Law & Legal Affairs Department who presided over the function as a chief guest expressed his view on the current problem related to the climate change, he also stressed that we need to act very fast in cohesive manner to combat the climate change and to adapt to the changing climate. All concern departments of the state need to work together to fight against the adverse effect of the climate change.

The programme began with keynote speech by **Dr. A A Boaz**, PCCF & Head of Forest Force and Nodal Officer Climate Change. He briefed on Chhattisgarh State Centre for Climate Change (CSCCC) activities and laid emphasis on initiation on State Action Plan on Climate Change (SAPCC) in Aug. 2015 and the activities and programmes initiated under SAPCC. Also he briefly explained about the National Adaption Fund (NAFCC) that CSCCC has received from Ministry of Environment, Forest & Climate Change (MoEFCC) on "Climate Adaptation in Wetlands along the Mahanadi River Catchment area in Chhattisgarh".

Dr. Boaz informed that 13 books are being published on Wildlife Sanctuary, Tiger Reserve & Biodiversity and establishment of Faunal Museum with the assistance of Zoological Survey of India. He also informed about Digital Library and called on participants to provide books and figures related to the subject.

**Dr. Bhooj** started his presentation with the explanation of various important "Environment & Sustainable Movements" such as Stockholm 1972, Brundtland Report- 1980, Rio Earth Summit 1992, WSSD, Johannesburg 2002 Rio+20: 2012, Sustainable development Goals, Paris Agreement, Sendai Framework for DRR-2015 etc.

He further talked about Sustainable Development Goals & Climate Change, Major Challenge for Sustainable Development like Global Atmospheric CO<sub>2</sub> Reaching High Record, Rise in Temperature, Global Systems Vulnerability to Climate, WORLD HERITAGE AND BIODIVERSITY / Global Strategy, INDC(Intended Nationally Determined Contributions) National Action Plan on Climate Change (NAPCC), Renewable Energy, National Clean Energy Fund (NCEF), National Clean Energy & Environment Fund (NCEEF), Green Growth Challenge, Urban Forests.



Welcome speech by **Dr. A A Boaz**, PCCF & Head of Forest Force and Nodal Officer Climate Change (Left to Right-Dr. Boaz., Dr. Ram Bhooj, Guest Speaker, Shri Mahesh Gagda, Hon'ble Minister, Forest and Law & Legal Affairs)



Releasing of Centre's Quarterly News Letter by Shri Mahesh Gagda Hon'ble Minister, Forest and Law & Legal Affairs(Center), Dr.Boaz (Right), Dr. Ram Bhooj(Left)



Speech by Shri Mahesh Gagda Hon'ble Minister, Forest and Law & Legal Affairs

### Lecture's Highlights

Biodiversity key facts which gives the clear signal that there has been rapid changes and extinction of various biodiversity. The loss of biodiversity is one of humanity's main sustainability challenges.

- **150-200 species** become extinct **every 24 hours**. (IUCN)
- **70% of plant species** assessed are threatened. (IUCN 2009 update)
- **One bird out of 8, 1 mammal out of 4 and 6 marine turtles out of 7** are all threatened with extinction. (IUCN 2009 update)
- **75% of the world's fisheries** are fully or over exploited and **one-third of reef-building corals** around the world are threatened with extinction. (IUCN 2009 update)
- More than **80 % of the Earth's natural forests** have already been **destroyed** (World Resources Institute)
- **20-30% of plant and animal species** could go **extinct** if the global temperature increase exceeds **1.5 – 2.5 °C** (IUCN)

## Chhattisgarh Climate Change Conclave- Meeting 2030 Target

Chhattisgarh has been experiencing the impact of climate change over the years. Climate Change is negatively impacting all the sectors especially agriculture, forests and water resources. To address climate change impacts, Government of Chhattisgarh has approved a State Action Plan on Climate Change, and formed the State Climate Change Centre, which has been spearheading the climate change mitigation and adaptation activities in the state.

State Centre for Climate Change (SCCC) organized “Chhattisgarh Climate Change Conclave – Meeting 2030 Target”, at SFRTI Conference Hall, Near Vidhan Sabha, Raipur, on 19th -20th December, 2017 with the support of Action on Climate Today-Climate Change Innovation Programme (ACT-CCIP).

The Climate Change Conclave comprised of thematic discussions by eminent speakers on the need of mainstreaming Climate Change Adaptation and the way forward for a Resilient Chhattisgarh. In addition to this targeted interactive sessions and panel discussions on Climate Finance and Climate Resilience, Water, Agriculture and Forestry Management were conducted.

**Shri Mahesh Gagda**, Hon'ble Minister of Forest, Law & Legal Affairs, Government of Chhattisgarh was the Chief Guest at the Climate Change Conclave and the Guest of Honour were Shri. C.K. Khaitan, Addl. Chief Secretary Forest, Government of Chhattisgarh and Dr. Cristina Rumbaitis del Rio, Regional Programme Manager, Department for International Development (DFID) - Climate Proofing Growth and Development (CPGD).

**Dr. A.A Boaz**, PCCF & Head of Forest Force and Nodal Officer Climate Change in his welcome speech explained about the initiatives being undertaken by the centre, he also briefly explained about the establishment of "Knowledge Management Cell" with the help of Department of Science, GoI and implementation of a 4 year pilot project "Climate Adaptation in Wetlands along the Mahanadi River Catchment area in Chhattisgarh" under NAFCC (National Adaptation Fund for Climate Change).

The Conclave brought together senior bureaucrats, officials from the government, scientists and professors from renowned national and international institutions, experts from industry, academia and civil society members from different states of India and United Kingdom, USA & Germany. During the conclave reports were also released by the Forest Minister viz Forest Sector Review of Chhattisgarh, Scoping Study on Public Transport in Raipur, Climate Resilient Agriculture Strategy for Chhattisgarh: Impacts and Recommendations, Summary of state Action Plan on Climate Change (in Hindi), Second issue of the Newsletter, Report on first lecture series, Along with the reports a "Documentary on the Climate Change of Chhattisgarh" made by CSCCC was also released.



**Inaugural session of the Conclave**

(Left to Right- Dr. Arvind Boaz, PCCF & Head of Forest Force and Nodal Officer Climate Change, Chhattisgarh, Shri. C.K. Khaitan, Addl. Chief Secretary Forest, Government of Chhattisgarh, Shri Mahesh Gagda, Hon'ble Minister of Forest, Law & Legal Affairs, Government of Chhattisgarh, Shri R.K. Singh, PCCF, Chhattisgarh, Dr. Cristina Rumbaitis del Rio, Regional Programme Manager, Department for International Development (DFID) - Climate Proofing Growth and Development (CPGD), Ms. Vidya Soundarajan, Head-India, DFID-Climate Change Innovation Programme (CCIP).)

### The Conclave encouraged discussion and had presentations on the following issues:

- National and Sub-National Actions for Achieving India's Nationally Determined Contributions –The Way Forward
- Public Attitude & Behavior About Climate Change How to influence them
- Rural Infrastructure and Development under Climate Constraints
- Sustainable Development Goals and Climate Change – Wetlands
- Madhya Pradesh a Vulnerable and Responsive State - Experiences and Initiatives
- State Action Plan on Climate Change - Issues and Concerns
- Role of Forestry in meeting Sustainable Development Goal
- Infrastructure for Climate Resilient Growth in India (ICRG)
- Chhattisgarh Climate Conclave meeting the 2030 challenge
- Enabling Climate Resilience in Agriculture: A Value Chain-based Approach
- Forest & Water Conservation in Mahanadi Basin - Bilaspur Forest Circle (A Climate Change Initiative)
- Prioritizing Climate Change Actions using CC Financing Framework
- Innovative Climate Financing for Adaptation: Mainstreaming Adaptation Financing in Development Planning in India
- Achieving Mitigation and Adaptation to Climate Change through Sustainable Agroforestry Practices in Chhattisgarh
- Climate Resilient Agriculture Strategy for Chhattisgarh
- Weather and Climate of Chhattisgarh
- Forests-Water-Climate Linkages
- Wildlife, Eco-systems and Climate Change
- Climate-resilient Water Resource Management of the Mahanadi River in Chhattisgarh

# Baseline Survey under the Project “Climate Adaptation in Wetlands along the Mahanadi River Catchment area in Chhattisgarh

## About The Project

"Climate Adaptation in Wetlands along the Mahanadi River Catchment Area in Chhattisgarh; the project is mainly focused on Wetland Ecosystem Conservation and Improved Food & Water Security. The area of the project is 20,000 ha. of watershed area in 3 districts of Chhattisgarh namely Mahasamund, Raipur (Baloda Bazar), Dhamtari.

## Project Objective/s

- Develop baseline on climate change vulnerability to ecosystems and local livelihood in the project areas.
- Promote an integrated climate adaptation strategy for wetlands and its dependent communities through water conservation and demand side management.
- Improving adaptive capacity of farmers and other wetland dependent local communities.
- Identify good practices and successes from this pilot project and to develop knowledge products for dissemination for replications in wetland management across the State of Chhattisgarh.

## Baseline survey

The aim of the project is to develop baseline on climate change vulnerability to ecosystems and local livelihood in the project areas, improving adaptive capacity of farmers and other wetland dependent local communities. So that adaptive capacity of the people towards Climate Change can be enhanced. The purpose of the baseline survey is to know the status of the farmers, local dwellers, tribal community and present situation of the project area, so that at the end of the project the impact of project can be analyzed. This baseline covers all aspects impact of climate change on Humane and their Livelihoods sector.

Initiation point of the baseline survey was Mahasamund district. Mahasamund district was surveyed by the team of experts. In this project were 7 villages named Borid, Amlor, karradih, Pasid, Chucri, Maraud, and Kedyadih, the team surveyed those 7 villages in whereas 176 household families that is 20% of the total population of villages, a survey team was fielded in Mahasamund district from 11/09/2017 to 16/09/2017 for carrying out baseline survey work of this project village site.

After completion of Mahasamund district, team went for 2 more districts named Dhamtari and Balodabazar for the baseline survey. In Dhamtari district Dugali forest range was surveyed from 10 November 2017 to 13 November 2017 there were 5 villages named Dinkarpur, Chargaon, Munaikera, Bhabholabhera, and Jabarra total number of 126 households covered. In Baloda bazar district Arjuni and Bilaigarh forest range was surveyed, in which 7 villages named Khosda, Daldali, Mahkoni, Limtari, Mahuadih, Shinghitara and Kariyatar (total 180 households) covered, during baseline survey from 14 November 2017 to 18 November 2017.

After completing the survey, report of the baseline survey will be publishing very soon. The Centre is very much sure that this report will serve as baseline to the project and helpful to assess the impact of the project at the end.



Work of Baseline survey In the project area (Mahasamund, Dhamtari & Balodabazar): Group Discussion & Individual Household Survey

## Sacred groves: Hopes for Climate Change??

Sacred groves of India are the forest fragments of varying size, which are communally protected, and which usually have a significant religious connotation for the protecting community. Sacred groves are the fine example of in-situ conservation. Sacred groves are forest fragments size varying between 0.5-500 hectare, which are protected by religious communities.

sacred groves are the mini forests with rich biodiversity, around 15000 sacred groves have been reported from different parts of India. Above 100 SGs are present in Rajasthan (Only Few in documented form) .Hunting & logging are usually prohibited in sacred groves. Development activities are also restricted within the patches. Sacred groves are mostly associated with temples/monasteries/Shrines or with cremation grounds.

Sacred groves occur in many parts of India, particularly where the indigenous communities live. Sacred groves are also culturally important; various cultural and religious festivals are often arranged by local people within these patches. Sacred groves contain various ecosystem, various food chains and food webs are present in sacred groves.

**Sacred Groves in Chhattisgarh:-** Many anthropological studies on tribes give account of the traditional of SGs in Chhattisgarh. Villages of Bastar have three kinds of scared groves namely **Mategudi, Devgudi, & Gaondevi**. Different tribes have their own mata or gaondevi or goddess in Devigudi.

The chotanagpur part of the state shows the predominance of sarana or jahera kind of SGs plotted all over the state (Patnaik & Pandey,1998; Pandey,2000). The sarhul sarana, mahadani saran etc generally area occupied by the sarana in less than an acre.

### It helps to Improve the Ecosystem

**Rich Biodiversity-**The practice of the worship and reverence of sacred groves has an ecological dimension too. Modern environmental scientists and academicians have observed sacred groves to be rich in biodiversity.

**Medicinal Storehouse-**Today, it is observed that several medicinal plants that were previously endemic to the forest have disappeared and are only to be found in the sacred groves. The availability of these medicinal plants was at the foundation of locally developed and practiced medications.

**Soil conservation** -The vegetation helps to prevent top soil erosion and improve soil fertility. As an ecosystem, the environmental of the sacred groves lies in their stellar role in soil and water conservation, besides preserving the rich and diverse biological wealth.

Biodiversity and ecosystem services help us to adapt to and mitigate climate change. They are therefore a crucial part of our effort to combat climate change. Working with nature, rather than against it, brings multiple benefits also for preserving our climate. By conserving nature and restoring ecosystems we reduce vulnerability and increase resilience. Nature conservation and restoration is a major, cost-efficient ally in our fight against climate

change Climate change damages biodiversity. It is one of the causes of biodiversity loss. At the same time, climate change will accelerate further if biodiversity and ecosystems are not effectively protected.



Purana Shiv Temple (Vangram Benda, RF 144), Kabirdham district  
Source:[http://www.cpreecenvi.nic.in/Database/Chhattisgarh\\_2344.aspx](http://www.cpreecenvi.nic.in/Database/Chhattisgarh_2344.aspx)

### Chhattisgarh Joins The Under2 coalition : Dr. A.A. Boaz, at Signatory Function of Under2Clean Energy Forum at Beijing,



From Left to Right:- Helen Clarkson, CEO, The Climate Group; Michael Schack Balle Jensen, Counsellor, Head of Economic Affairs, Growth and Sector Policies, Danish Embassy in Beijing; Governor Brown from California; T W Mchunu, Premier, KwaZulu-Natal; Dr Arvind Anil Boaz PCCF & Head of Forest Force & Nodal Officer Climate Change, Chhattisgarh ; Karen Shippey, Chief Director, Environment Sustainability, Western Cape Government.

[From the issue -1]

You Can hear the full speech of **Dr. A.A. Boaz**, Chief Conservator of Forest (PCCF) Head of Forest Force (HOFF), & Nodal Officer Climate Change, in under2 coalition, at web link given below

[https://www.youtube.com/watch?v=UYVV\\_oAIa1HM](https://www.youtube.com/watch?v=UYVV_oAIa1HM)

## Chhattisgarh Showcased at COP-23

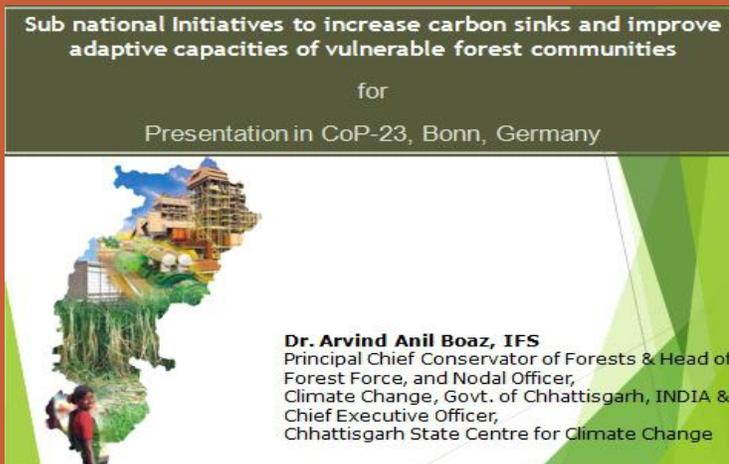
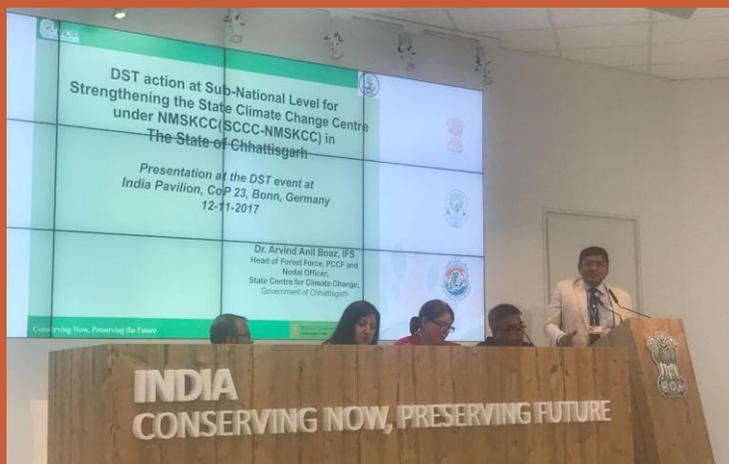
**Background-**The United Nations Climate Change Conference was an international meeting of political leaders and activists to discuss environmental issues. A major United Nations gathering on climate change gets underway in Bonn, Germany. It was held at UN Campus in Bonn (Germany) from 6–17 November 2017. The conference incorporated the twenty-third Conference of the Parties (COP23), the thirteenth meeting of the parties for the Kyoto Protocol (CMP13), and the second meeting of the parties for the Paris Agreement (CMA2).

**Indian Theme for the COP-**India's theme for COP 23 was "*Conserving Now, Preserving Future*" taken India's message forward. India has been ambitious in its climate change actions, and expects other countries also to be ambitious based on their historical responsibility on the basis of equity and Common but Differentiated Responsibilities. With the hope that through its activities, the India Pavilion will create awareness about India's positive climate actions.

**Chhattisgarh In COP23-**In the COP23 'Chhattisgarh and Odisha presented the Indian states' experience in developing and implementing State Action Plan on Climate Change. Efforts of the Chhattisgarh government in combating climate change was also put up as posters in the India pavilion for the benefit of larger number of people. Dr. Arvind Anil Boaz, Principal Chief Conservator of Forest (PCCF) Head of Forest Force (HOFF), & Nodal Officer Climate Change, Government of Chhattisgarh represented the state of Chhattisgarh.

Dr. Boaz highlighted Chhattisgarh's effort mainly in the forestry sector in addressing climate change issues and proposed to move towards more sustainable use of forest products even as replacements of modern day construction materials like cement and steel. He gave Presentation at the DST event at India Pavilion, COP 23, Bonn, Germany 12-11-2017 on "**DST action at Sub-National Level for Strengthening the Chhattisgarh State Climate Change Centre under NMSKCC (SCCC-NMSKCC)**".

At India Pavilion, CoP23 was hosted by GIZ India, where the Agenda was Climate Change Adaptation and State Actions, Dr. Arvind Anil Boaz delivered a presentation on "**Sub National Initiatives to Increase carbon sinks and improve adaptive capacities of vulnerable forest communities**". He stated the initiatives taken by the chhattisgarh state centre for climate change for enhancement of the carbon sink are to be carried out as per the INDCs commitment.



**Climate Change Adaptation and State Actions – GIZ India (Wednesday, 15 Nov , India Pavilion)**

Dr. Arvind Anil Boaz, Head of Forest Force (HOFF),  
Principal Chief Conservator of Forest (PCCF) &  
Nodal Officer Climate Change, Government of Chhattisgarh (On the Dais)

