

गुरु घासीदास विश्वविद्यालय  
(केन्द्रीय विश्वविद्यालय अधिनियम 2009 अ. 25 के अंतर्गत स्थापित केन्द्रीय विश्वविद्यालय)  
कोनी, बिलासपुर - 495009 (छ.ग.)



Guru Ghasidas Vishwavidyalaya  
(A Central University Established by the Central Universities Act 2009 No. 25 of 2009)  
Koni, Bilaspur - 495009 (C.G.)

## Report on National Seminar cum Workshop on Managing Soil Carbon or Monetizing Carbon Credits to Benefit Indian Farmers

organized by Department of Forestry, Wildlife and Environmental Sciences on  
World Soil Day 2022

**Date of Event** : 5-6 December 2022

**Venue** : Department of Forestry, Wildlife and Environmental Sciences

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Guru Ghasidas Vishwavidyalaya  
Bilaspur, Chhattisgarh  
Department of Forestry, Wildlife & Environmental Sciences  
In association with  
Isha Foundation, Bilaspur Centre  
December 05-06, 2022

Sponsored by

National Seminar cum Workshop & Celebrates  
World Soil Day  
MANAGING SOIL CARBON FOR  
MONETISING CARBON CREDITS  
TO BENEFIT INDIAN FARMERS

World Soil Day 2022  
SOILS WHERE FOOD BEGINS



### Details of Event Proceedings

Date (DD-MM-YYYY)	Details of the Session	Details of Resource Person	Number of Participants
05-12-2022 and 06-12-2022	National Seminar cum Workshop on Managing Soil Carbon or Monetizing Carbon Credits to Benefit Indian Farmers	Dr. AK Gangwar, Prof. RK Bajpai, Anjali Singhal, Prof. Jagdish Prasad, Prof. SS Singh, Dr. Deepika Jangam, GV Ramanjaneyuyu, Prof. MJ Dobriyal, Prof. AK Sahu, Prof. Veenapani Dubey, Shri Rajesh Ranjan	110

### Link of Farmers Meet:

[https://drive.google.com/file/d/1PSqAWspKSxC02yOcdcTjzNxNvt4rC7XV/view?usp=share link](https://drive.google.com/file/d/1PSqAWspKSxC02yOcdcTjzNxNvt4rC7XV/view?usp=share_link)



## Details of Technical Program

NATIONAL SEMINAR CUM WORKSHOP  
on  
MANAGING SOIL CARBON FOR MONETISING CARBON CREDITS TO BENEFIT INDIAN FARMERS  
5<sup>th</sup>-6<sup>th</sup> December 2022  
WORLD SOIL DAY CELEBRATION

### Schedule of Technical Sessions

<b>5<sup>th</sup> December 2022, Monday</b>		
Time		
9:00-10:00 AM	Registration of Participants	
10:00-11:30 AM	Inaugural Session	
<b>Technical Session 1 (11:30-12:40 PM)</b>		
<b>Moderator-Prof. S. S. Singh</b>		
Time	Topic	Name of Speaker and Affiliation
11:30-12:00 PM	<b>Keynote Talk</b> - Managing Soil Becoming Nature Positive	Dr. A. K. Gangwar, <i>Regional Centre of Expertise on Education for Sustainable Development, Srinagar (J&amp;K)</i>
12:00-12:20 PM	<b>Lead Talk</b> - Managing Soil Health: Concepts and Practices	Prof. R. K. Bajpai, <i>Ex- Director of Research, Indira Gandhi Krishi Vishwavidyalaya, Raipur, C.G.</i>
12:20-12:40 PM	<b>Invited Talk</b> - Save Soil	Anjali Singhal, <i>ISHA Foundation, Raipur Centre</i>
12:40-1:00 PM	<b>TEA BREAK</b>	
<b>Technical Session 2 (1:00-2:30 PM)</b>		
<b>Moderator- Prof. Uma Shankar</b>		
1:00-2:30 PM	Mapping of Soil Resources for Science-Based Watershed Planning in Reward districts of Odisha	Ajit Kumar Swain, <i>College of Agricultural Engineering and Technology, Odisha University of Agriculture and Technology, Bhubaneswar, Odisha, India</i>
	Biochemical Activities and <i>in silico</i> Antifungal Analysis of <i>J. excisa</i> Seed Oil	Satish Kumar Kenar, <i>Microbiology and Bioinformatics, UTD, Atal Bihari Vajpayee University, Bilaspur, 495009, Chhattisgarh, India</i>

	Accessibility of Horticulturists to the Different Sources Information in Himachal Pradesh	Tara Hetta, <i>Department of Journalism and Mass Communication, Himachal Pradesh University</i>
	Managing Soil Pollution Caused by Airborne PM Deposition Through Plants	Ankesh Tiwari, <i>Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur C.G.</i>
	Nutrient Management in Organic Farming	Durga Hemanth Kumar.Ch, <i>Department of Vegetable Science, Dr. Y.S.R Horticultural University, (Andhra Pradesh), India.</i>
	Natural Resources and Their Utilization in Agriculture	Swapnil Jain, <i>Department of farm power and machinery, SHUATS, Prayagraj (U.P.) India</i>
	Effect of Drip Irrigation Schedules and Fertigation Levels on Yields and Quality of Wheat ( <i>Triticum aestivum</i> L.)	Damor Navdeep Kumar Narsabhai, <i>Department of Agronomy, S. D. Agricultural University, India</i>
	Projects to Reduce Carbon in the Agricultural Sector	Raj Kumar Gourav, <i>Division of Agronomy, Indian Agricultural Research Institute, New Delhi-110012</i>
	Importance of Weeds of Rice Crop Fields of Takhatpur Region, Bilaspur District, Chhattisgarh	Indu Kaushal, <i>Department of Botany, C. M. Dubey P.G. College Bilaspur (C.G.)</i>
	Utilization of Agriculture Waste as Biochar for Sustainable Soil Management	Mohineeta Pandey, <i>Department of Botany, Guru Ghasidas Vishwavidyalaya, (A Central University), Koni, Bilaspur (C.G.), 495009, India</i>
2:30-3:00 PM	<b>LUNCH BREAK</b>	
<b>Technical Session 3 (3:00-5:30 PM)</b>		
<b>Moderator-Prof. R. K. Bajpai</b>		
3:00-3:20 PM	<b>Lead Talk</b> - Soil Health Management	Prof. Jagdish Prasad, <i>Former Principal Scientist, ICAR-National Bureau of Soil Survey and Land Use Planning, Nagpur, Maharashtra</i>
3:20-3:40 PM	<b>Lead Talk</b> - Forest Genetic Resources: its Significance and Conservation	Prof. S. S. Singh, <i>Dean, School of Natural Resources, Guru Ghasidas Vishwavidyalaya, Bilaspur 495009, (C.G.), India</i>



3:40-4:00 PM	<b>Lead Talk-</b> Dynamics of Soil organic carbon and carbon sequestration under different land use systems	Dr. Deepika Jangam, <i>Scientists-B, Forest Ecology and Climate Change Division, Tropical Forest Research Institute, Jabalpur, M.P.</i>
4:00-5:30 PM	Role of Microbes in Organic Carbon Decomposition	Kota Meghana, <i>Department of Floriculture and Landscape Architecture, Dr. Y.S.R Horticultural University, Andhra Pradesh, India</i>
	Affect of Microfauna of Acid Mine Drainage From Coal Mine in Soil Fertility: A Review	Anjana Chaudhuri, <i>Hemchand Yadav University, Durg, Chhattisgarh India.</i>
	Management of Soil fertility with Ecological Principles for Sustainable Environment	Dr. Akash Vikram, <i>Department of Environment Science, Lucknow University</i>
	Effect of Fungicide Carbendazim on The Microbiological Processes in Soil	Ravinder Kumar, <i>Department of Energy and Environmental Sciences, Chaudhary Devi Lal University, Sirsa, Haryana 125005</i>
	Altitudinal Variation of Agrobiodiversity and Soil Organic Carbon Stocks in Temperate Agroforestry System of Western Himalaya, India	Satendra Kumar Rathaude, <i>SRM University-AP, Andhra Pradesh.</i>
	Plant Biodiversity and Carbon Sequestration Potential of Subtropical Forest Stands of Nagaland, India	Dr. Aosanen Ao, <i>Department of Forestry, Mizoram University, Aizawl-796004, Mizoram, India</i>
	Estimation of Biomass, Carbon Stock and Sequestration Potential of Ghagrapahar Community Forest and Kawasing Reserve Forest of Assam, North-East India	Dr. Sangeeta Deka, <i>Department of Botany, Pandit Deendayal Upadhaya Adarsha Mahavidyalaya, Amjonga, Goalpara, Assam, India</i>
	Long Term Effect of FYM and Vermicompost on Soil Carbon Fractions	Dr. Vikrant P. Bhalerao, <i>Department of Soil Science and Agricultural Chemistry, College of Agriculture, Dhule - 424 004</i>

	under Pearl Millet-Chickpea Cropping Sequence	
	Conservation Agriculture: A way of Carbon Sequestration	Raghuvveer Choudhary, <i>Department of agronomy, College of agriculture, Junagadh Agricultural University (JAU)-362001</i>
	Enumeration, Isolation and Identification of Soil Nitrifying Bacteria from Soil Sample of Farms of Ahmedabad, Gujarat	Swati Sao, <i>Department of Rural Technology and Social Development, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India</i>
	Influencing Improved Natural Resource Management on Farms: A Review	Manisha Sahu, <i>DKS, CARS, Bhatapara, Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh</i>
	Role of Microbes in Soil Organic Matter formation and Soil Sustainability	Purusottam Majhi, <i>Microbiology Laboratory, Department of Botany, Indira Gandhi National Tribal University, Amarkantak (M.P). Anuppur- 484887, India</i>
	Antibacterial and antioxidant activity of the green synthesized silver nanoparticles by using the <i>Mallotus philippensis</i> leaf extract	Umakant Pradhan, <i>Microbiology Laboratory, Department of Botany, Indira Gandhi National Tribal University, Amarkantak (M.P). Anuppur- 484887, India</i>
	Effect of Fertility and Different Zinc Level on Soil Organic Carbon	Jaipal Yadav, <i>RCA, MPUAT, Udaipur</i>
<b>6<sup>th</sup>December 2022, Tuesday</b> <b>Technical Session 4 (10:30-12:40 PM)</b> <b>Moderator- Dr. A. K. Gangwar</b>		
<b>10:30-11:00 AM</b>	<b>Keynote Talk-</b> Carbon Financing	<b>Dr. G. V. Ramanjaneyulu</b> , <i>Executive Director, Centre for Sustainable Agriculture, Hyderabad, Telangana</i>
<b>11:00-11:20 AM</b>	<b>Lead Talk</b> - Carbon Credits Generation through Agroforestry Interventions for compounding the Farmers Income	<b>Prof. M. J. Dobriyal</b> , <i>Dean, College of Horticulture and Forestry, Rani Laxmi Bai Central Agriculture University, Jhansi, U.P.</i>
<b>11:20-11:40 AM</b>	<b>Lead Talk</b> - Soil and water conservation for sustainable agriculture	<b>Prof. A.K. Sahu</b> , <i>Ex-Dean College of Agriculture Engineering &amp; Technology, Indira Gandhi Krishi Vishwavidyalaya, Mungeli, C.G.</i>



11:40-12:40 PM	Lead Talk	Dr. P.K. Kesari, <i>Soil Scientist, TCB college, IGKV, Bilaspur (C.G)</i>
<b>Farmers Session (12:40-1:30 PM)</b> <b>Moderator- Shri J. Basawaraj</b>		
<b>Time</b>	<b>Speaker</b>	<b>Organization</b>
12:40-1:30 PM	Shri Sandeep Sharma	Director, Farmers Pride, Bilaspur
	Shri Naresh Mohan Sharma	Progressive farmer, Agrofarm, Bahtarai, Bilaspur (C.G.)
	Shri Kshetrapal Ji	Progressive farmer, Sipat Road, Mopka, Bilaspur (C.G.)
	Mr. Didayal Yadav	Bhaharadih Village, Baloda block, Janjgir Champa
	Mr. Amitth Kumar Tiwari	Jarvey cha village, Baloda block, Janjgir Champa
	Mr. Ramadhar Diwangan	Sivni village, Bloda block, Janjgir Champa
	Ms. Revti Yadav	Kosmanda village, Bloda block, Janjgir Champa
	Ms. Harshlata Shah	Chandrakhuri/Baithalpur village, Patariya block, Mugeli District
	Mr. Chintamani Banjare	Kharihi village, Patariya block, Mungeli District
	Mr. Hirkund Kashyap	Pacheda village, Navagarh block Janjgir Champa
1:30-2:00 PM	<b>LUNCH BREAK</b>	
<b>Technical Session 5 (2:00-5:30 PM)</b> <b>Moderator- Prof. A.K. Sahu</b>		
	<b>Topic</b>	<b>Name of Speaker and Affiliation</b>
2:00-2:15 PM	<b>Invited Talk-</b> Soil Conservation and Organic Farming	Shri Rajesh Ranjan, <i>Adani Foundation</i>
2:15-2:30 PM	<b>Lead Talk-</b> Carbon Trading in India	Prof. S. C. Tiwari, <i>Department of Forestry, Wildlife and Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Koni, 495009, Bilaspur, Chhattisgarh, India</i>

2:30-2:45 PM	<b>Lead Talk-</b> Patterns of Rice-Weed Communities Problems & Management.	Prof. Veenapani Dubey, <i>Department of Botany, CMD College, Bilaspur, Chhattisgarh, India</i>
2:45-5:30 PM	Assessment of Soil Properties and Nutrients in Agricultural Practiced Land of Parsa Village, Bihar	Dr. Garima Tiwari, <i>Department of Forestry, Wildlife and Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Koni, Bilaspur</i>
	Physico-Chemical Attributes of Soil under Different Natural Forest Stands in Achanakmar -Amarkantak Biosphere Reserve	Dr. Bhavana Dixit, <i>Department of Forestry Wildlife and Environmental Science, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh</i>
	Effects of Ecological Restoration on Soil Organic Carbon Sequestration in Post-mining Lands: A review in reference to Central India	Abhishek Maitry, <i>Department of Forestry, Wildlife &amp; Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh 495001, India</i>
	The Impacts of Agroforestry Practices on Soil Multi-Functionality Depending on Practices and Duration Along the Lilagar River Catchment Bilaspur, Chhattisgarh	Arun Kumar Shukla, <i>Department of Forestry, Wildlife &amp; Environmental Sciences Guru Ghasidas Vishwavidyalaya, Bilaspur Chhattisgarh-495009</i>
	Estimation of Carbon sequestration potential of tree species in Gharghoda Range of Raigarh Forest Division, C.G. via Non-destructive method	Shishir Chandrakar, <i>Department of Forestry, Wildlife and Environmental Science, Guru Ghasidas Vishwavidyalaya, Bilaspur, C.G., 495009</i>
	Soil Microbial Biomass Carbon in Monoculture and Mixed Forest Stands	Prof. Rashmi Agarwal, <i>Department of Forestry, Wildlife and Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) 4950091, India</i>
	Change detection in sodic land of Raebareli district using remote sensing and GIS	Gayatri Devi, <i>Department of Forestry, Wildlife and Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)</i>



	techniques	495009I, India
	Non-timber forest products and Climate change adaptation among forest dependent communities in Korba Forest Division of Chhattisgarh	Priti Singh, <i>Department of Forestry, Wildlife &amp; Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur-495009, Chhattisgarh, India</i>
	Conservation of Forests and Environmental Awareness	Kamesh, <i>Department of Forestry, Wildlife and Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India</i>
	Assessment of Organic Carbon Content in Soils of Forest Growing Stock around National Thermal Power Plant, Sipat, Bilaspur, Chhattisgarh, Central India	Harshita Singh, <i>Department of Forestry, Wildlife and Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India</i>
	Arbuscular Mycorrhizal Fungi Important Role Play in Soil Carbon Storage in Soil	Rajesh Kumar, <i>Department of Forestry, Wildlife and Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India.</i>
	Role of Gene Flow in Forest Tree Resources Management	Ankita Singh, <i>Department of Forestry, Wildlife and Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India.</i>
	The Environmental Impacts of River Sand Mining: A Review	Alok Kumar Chandrakar, <i>Department of Forestry, Wildlife and Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India</i>
	Lichen as pioneer species in ecological succession and its role in formation and conservation of soil in North Chhattisgarh	Arvind Prajapati, <i>Department of Forestry, Wildlife and Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India</i>
	Lichen as a Bioindicator for Ecological sustainability	Lata Prajapati, <i>Department of Forestry Wildlife &amp; Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Koni, Bilaspur, Chhattisgarh</i>
	Restoration of degraded soil and improve	Ankit Pandey, <i>Department of Forestry, Wildlife and Environmental</i>
	soil biodiversity through agroforestry system	<i>Sciences, Guru Ghasidas Vishwavidyalaya Bilaspur, (C.G.) 495009</i>
	Arsenic contamination in Soil and Sediment in India: A review	Shraddha Pandey, <i>Department of Forestry, Wildlife and Environmental Sciences, Guru Ghasidas Vishwavidyalaya Bilaspur, (C.G.) 485009</i>
<b>5:30-6:00 PM</b>	<b>Valedictory Session</b>	

### **A Brief Abstract of the Event (Maximum 500 Words):**

On the occasion of World Soil Day (5<sup>th</sup> December 2022), a National Seminar cum Workshop on Managing Soil Carbon for Monetizing Carbon Credits to benefit Indian Farmers was organized by Department of Forestry, Wildlife and Environmental Sciences in association with ISHA Foundation, Bilaspur Chapter (Convener- Prof. S.C. Tiwari, Organizing Secretary- Dr. Garima Tiwari, Co-Organizing Secretaries- Dr. B.P. Singh and Dr. Chowhani Manpoong). The theme of the National Seminar cum Workshop was to deliberate on various issues and policies of carbon monetizing and carbon trading at domestic and international market to benefit Indian farmers.

The technical session consisting of 02 Keynote talks, 09 Lead talks and 41 Oral Presentations was held through Online and Offline mode during 5-6 December 2022. The keynote lectures were delivered by Dr. A.K. Gangwar, *Ex-coordinator, Regional Centre of Expertise on Education for Sustainable Development, Srinagar (J&K)* on the topic Managing Soil

Becoming Nature Positive and Dr. G.V. Ramanjaneyulu, *Executive Director, Centre for Sustainable Agriculture, Hyderabad, Telangana* on the topic Carbon Financing. More than 20 progressive farmers have participated during the workshop in which they were taught about the scope of carbon monetizing at the domestic level and increase their income from agricultural activities. They were educated how they can improve level of organic carbon in their crop fields which they can monetize and sell it as carbon credits to increase their cash income improving their livelihood. The representatives of Adani Foundation, Restoration Foundation and Farmers Pride organizations showcased their several organic products during the exhibition in two days event. During this event various competitions were organized for the students to create awareness and develop participatory skills among them. The event has also given an opportunity to the student community of the University to derive skills which can be helpful to them to become self-reliant under the motive of University's flagship Program on Swavalambi Chhattisgarh. The two days National Seminar cum Workshop was concluded by a brief report of the event by the Convener and distribution of Certificates to all the participants including the farmers during the Valedictory session.



Image 1: Chief Guest and Dignitaries



Image 2: Inaugural address by Prof. Nilambari Dave, Former Vice Chancellor, Saurashtra University, Rajkot



Image 3: Release of Abstract Book



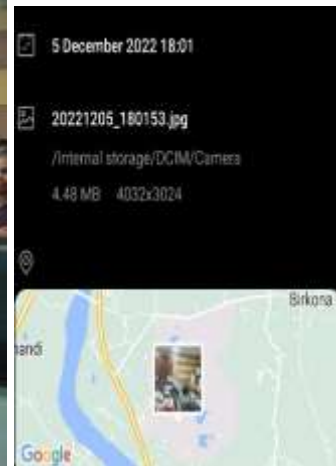


Image 4: Photo during technical session



Image 5: Exhibition Stall of Organic Products



Image 6: Farmers Meet with Experts



Image 7: A Group of Farmers

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Image 8: Group photo during Valedictory Session

Signature of Convener

