

A three-day National Seminar on **"Global climate change and its impacts on floral, faunal and microbial biodiversity"** in was organized by **Dept. of Botany, St. Joseph's College, Darjeeling** in joint collaboration with **Teesta Torsa Agro Care Welfare Society, Kalimpong** from **June 26<sup>th</sup> to 28<sup>th</sup> 2015**.

Darjeeling which is known worldwide not only for its scenic beauty but also for a very rich source of biodiversity, organizing a National Seminar on biodiversity related issue was a fruitful endeavor. The many ways in which climate and biodiversity interact are gradually leading researchers and policymakers to the conclusion that working on the two issues together will be more effective than dealing with them separately. It is with this idea of offering the invaluable opportunity of sharing the "easy to adopt strategies", research findings, "lifestyle changes to be adopted" and enabling the students, teachers and environmentalists to interact with experts in the field who have proposed sustainable practices and applied them in mitigating and management of various environmental issues, the National Seminar was organized.

The seminar was organized in following subthemes:

- 1. Global climate change and its impacts in the past, present and future.**
- 2. Changing climate & Microbial Biodiversity.**
- 3. Climate change and floral and faunal biodiversity.**
- 4. Human-climate-ecosystem interactions.**
- 5. Climate change and Extinction Risks.**
- 6. Climate change impacts on human health.**
- 7. Sustainable Strategies for Mitigation.**
- 8. Climate change, adaptation & Management.**

**Schedule:**

<b>Date</b>	<b>Time</b>	<b>Programme</b>
<b>26.06.2015</b>	09:00 - 10:30	Registration
	10:30 - 11:15	Welcome of guests by MC
		Offering of Khadas (traditional scarf)
		Lightening of Inauguration lamp
		Welcome speech by <b>Dr. Anirudra Gurung</b> , Organizing Secretary
		Address by The Joint Secretary
		Address by <b>Fr. Dr. Donatus Kujur</b> , SJ, Principal, St. Joseph's College
		College Choir
		National Anthem
		Vote of Thanks by H.O.D.
	11:15 - 11:30	Tea break
	11:30 - 12:30	<b>Keynote Address by Prof. Ranadhir Chakraborty, Dept. of Biotechnology, NBU.</b>
	12:30 - 02:00	Lunch
	02:00 - 03:00	<b>Plenary Lecture I</b>
		<b>Dr. B. C. Vashishtha, DST Sikkim</b>
	03:00 - 03:15	<b>Climate change and its influence in floral distribution: A case study in Lachen valley</b>
		Tea break
	03:15 - 05:00	<b>Technical Session I</b>
		Global Climate change and its impacts on floral, faunal and microbial biodiversity
		<b>Lalit Kr. Chaurasia</b>
		<b>Dr. Dhiraj Brahman</b>
		<b>Khusboo Lepcha</b>
	05:00-05:15	<b>Dr. Chandra Ghosh</b>
		<b>Dr. J. B. Bhandari</b>
		<b>Dr. Lhanjey Bhutia</b>
	05:00-05:15	<b>Tea break</b>
	05:00 - 06:30	Cultural Programme
	06:30 - 07:30	Dinner




27.06.2015	09:00 - 10:00	Registration contd.
	10:00 - 11:00	<b>Plenary Lecture II</b>
		<b>Prof A. Mukhopadhyay, Dept. of Zoology, N.B.U.</b>
		<b>Changing diversity and Activity of Insect Pests in response to climate-change with their implication in Human Economy</b>
	11:00 - 11:15	Tea Break
	11:15 - 12:30	<b>Technical Session II</b>
		Climate change and human climate ecosystem interaction
		<b>Dr. Bireshwar Bera</b>
		<b>Dr. Manjula Rai</b>
		<b>K. Basnet</b>
		<b>Mrs. Barkha Rai</b>
		<b>Sanjoy Sadhukhan</b>
	12:30 - 01:30	Lunch break
	01:30 - 02:15	<b>Poster presentation</b>
		<b>Chandrima Ghosh</b>
		<b>Srijana Rai</b>
		<b>Nayan Thapa</b>
		<b>Nayan Thapa</b>
		<b>S.S. Bora</b>
		<b>Dr. Mayukh Sarker</b>
		<b>Vivek Kr. Ranjan</b>
	02:15 - 03:15	<b>Plenary Lecture III</b>
		<b>Prof. A. P. Das, Dept. of Botany, N.B.U.</b>
		Conservation of East Himalayan Biodiversity, Climatic Amelioration and future of the Biosphere
	03:15 - 04:15	<b>Technical Session III</b>
		Climate change and extinction risks
		<b>Aditya Pradhan</b>
		<b>Dr. Cyaria Gurung</b>
		<b>Dr. Debojyoti Dutta</b>
		<b>Dr. Sushmita Roy</b>
		<b>Mr. Rajendra Yonzon</b>
	04:15 - 04:30	Tea break
	04:30 - 05:30	<b>Plenary Lecture IV</b>
		<b>Prof. J. Britoo, The Rapinat Herbarium and Centre for Molecular systematics</b>
		Climate Change and Biodiversity in the Eastern Himalayas
	05:30 - 06:30	<b>Technical Session IV</b>
		Climate change: Impact on health
		<b>Biswadeep Ghosh</b>
		<b>Deepika Majumdar</b>
		<b>Kriti Ghatani</b>




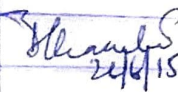

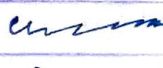



	<b>Surjit Sen</b>
06:30 - 07:30	Dinner

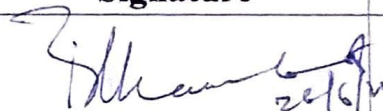
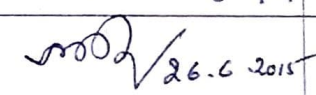
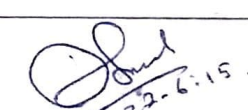
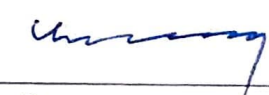
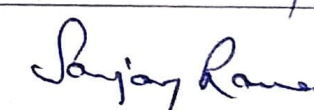
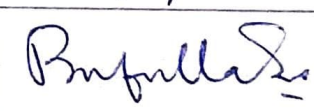
<b>28.06.2015</b>	10:00 - 11:00	<b>Plenary Lecture V</b>
		<b>Mr. Praful Rao, President, Save the Hills</b>
		<b>Recent observed rainfall trends in Darjeeling Sikkim Himalaya and the frequency of cyclonic disturbances in the bay of Bengal</b>
	11:00 - 11:15	Tea Break
	11:15 - 12:15	<b>Technical Session V</b>
		Climate change: adaptation and management
		<b>Dr. Arindam Roy</b> <b>Dr. Shriparna Mukherjee</b> <b>Dr. Hadida Yasmin</b>
	12:15-01:15	Lunch
	01:15 - 02:15	<b>Special lecture</b>
		<b>Dr. Sajay Rana, President, TTACWS, Kalimpong</b>
		<b>Soil health management using organic agri-inputs and vermi-compost manure and balancing the social and economic status of the farmers</b>
	02:15-03:00	<b>Technical Session V (contd.)</b>
		<b>B. A. Gudade</b> <b>Dr. Gouri Das</b> <b>Dr. Suparna Saha Bhowal</b>
	03:00 - 04:00	<b>Valedictory Session and Certificate distribution</b>
	04:00 - 04:30	Tea Break

The seminar was witnessed by 33 research scholars and 32 student participants.

  
 (Anirudra Gunning)  
**Assistant Professor**  
 Department of Botany  
 St. Joseph's College  
 North Point, Darjeeling

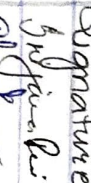






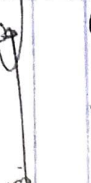



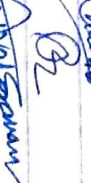

















# Resource Persons

Sl.No.	Name	Designation	Address	Ph. no.	Signature
1.	ANANDA MUKHOPADHYAY	<del>ASSOCIATE</del> PROFESSOR	North Bengal University	9434872445	
2.	RANADHIR CHAKRABORTY	ASSOCIATE PROFESSOR	"		
3.	TRILOK DEWAN	MLA			
4.	JHON BRITTO	DIRECTOR	THE RAPINAT HERBARIUM AND CENTRE FOR MOLECULAR SYSTEMATICS		
5.	SANJAY RANA		TEESTA TORSA AGRO CARE SOCIETY		
6.	A.P DAS	PROFESSOR	NORTH BENGAL UNIVERSITY		
1.	PRAFUL . RAO	PRESIDENT	SAVE THE HILLS		

List of Resource persons					
Sl. No.	Name	Address	Designation	Signature	Remarks
1	Ranadhir Chakraborty	Department of Biotechnology, N.B.U.	Assosiate Professor	 22/6/15	
2	Ananda Mukhopadhyay	Department of Zoology, N.B.U.	Professor	 26.6.2015	
3	A. P. Das	Department of Botany, N.B.U.	Professor	 22-6-15	
4	John Britoo	Director, The Rapinat Herbarium and Centre for Molecular systematics	Professor		
5	Sanjay Rana	Teesta Torsa Agro Care Society, Kalimpong			
6	Prafulla Rao	President Save the Hills			





# Research Scholars

Sl. No.	Name	Designation	Address	Ph. no.	Signature
1. <sup>94/51</sup>	SRIJANAKAI	RESEARCH SCHOLAR	DART. GOVT. COLLEGE	9641858936	
2.	KUMAR BASNET	RESEARCH SCHOLAR	N. B. U	9983867593	
3.	SAROLA CHETIKI	RESEARCH SCHOLAR	DART. GOVT. COLLEGE	9775943350	
4.	KHUSBOO LEPCHA	RESEARCH SCHOLAR	N. B. U	9800717492	
5.	Dr. BIRESHWAR DEBA	ASST. PROFESSOR	ST. JOSEPH'S COLLEGE	82293820697	
6.	KRITI GHATANI	RESEARCH SCHOLAR	SIKKIM UNIVERSITY	9800953068	
7.	SANAKA SEKHAR BOHRA	<sup>Scientist</sup> RESEARCH SCHOLAR	ICRI, RRS, Tadong	9733305305	
8.	SUBHANIL CHAKRABORTY	"	OMICS LAB	9883824150	
9.	ADITYA PRADHAN	"	SIKKIM UNIVERSITY	9641742094	
10.	NAYAN THAPA	"	ST. JOSEPH'S COLLEGE	9635164107	
11	Dr. CYARIA GURUNG	ASST. PROFESSOR	SILIGURI COLLEGE	9832060464	
12.	Dr. JNANBIKASH BHANDARI	"	"	94784689236	
13.	Dr. DEBOSTYOTI DUTTA	"	A. B. N. SEAL COLLEGE	9474519168	
14.	Dr. LIHANGYU? BHUTIA	"	SIKKIM GOVT. COLLEGE	8900576448	
15.	Dr. PRANMAL NANDAL	"	RAIGANG UNIVERSITY	9800699154	
16.	SUSMITA ROY	"	NETPAT MAGAR COLLEGE FOR WOMEN	9831633715	
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18.	MR. VIVEK ROY	<del>Research Scholar</del>	RAIGANG UNIVERSITY	9679059827	
19.	Dr. ARUNDAM ROY	"	R. K. M. VIDYAMANDIRA	9433408180	
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29.	SUDARSHAN GHOSAL	RESEARCH SCHOLAR	OMICS LAB	9434427052	



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31	DR. DIWANAK INAPA	ASST. PROFESSOR	St. JOSEPH'S COLLEGE		
32.	GAURI DAS.	ASST. PROFESSOR	BALURCHATHI COLLEGE		



# Students Participants

Sl.No	Name	Designation	Address	Ph. no.	Signature
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4✓	Banu Nika Subba	"	Darjeeling	7602411370	Barunika
5✓	Neha Rai	"	Darjeeling	9593353716	Neha Rai
6✓	Neetu Rai	"	"	9832876064	Neehura
7✓	Neha Rai	"	"	9635241606	Neha Rai
8✓	Alisha Rai	"	"	8906100547	Alin Rai
9✓	Arista Senter	"	"	9609719803	Arista
10✓	Nishu Nani	"	"	9933441716	Nishu Nani
11✓	Prativa Rai	"	"	9832402758	Ruhin
12✓	Kunjula Sherpa	"	"	9002205967	Kunjula Sherpa
13✓	Deeksha Sharma	"	"	9734327474	Deeksha
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23✓	Rishant Rai	"	Darjeeling	959950361	Rishi
24✓	Monica Thapa	"	Darjeeling	9885965412	Monica
25✓	Samriddha	"	Darjeeling	7557844117	Samriddha
26✓	Divya Agarwal	"	"	9679643925	Divya
27✓	Abhishek Mishra	"	"		Abhishek
28✓	Reet Subba	"	Darjeeling	8001559820	Reet Subba
29✓	Shubika K. Thapa	"	"	9775972307	Shubika
30✓	Sukila Rumbak	"	"	8172037169	Sukila
31✓	Sumit Subba	"	"	7602974700	Sumit
32✓	Anurag Ghising	"	"	9563600309	Anurag
33✓	Nikhil Tamsang	"	"	7063663867	Nikhil



## List of participants for the National Seminar

Sl. No.	Name	Address	Designation	Signature	Remarks
✓ 1	Aditya Pradhan	Sikkim University	Research Scholar	<i>Aditya Pradhan</i>	
✓ 2	Bharat Arjun Gudade	Indian Cardamom Research Institute	Research Scholar	<i>B. Gudade</i>	
✓ 3	Biswadeep Ghosh	Singimari High School	Research Scholar	<i>B. Ghosh</i>	
✓ 4	Chandrima Ghosh	Ghogomali High School	Research Scholar	<i>C. Ghosh</i>	
✓ 5	Dr. Debojyoti Dutta	A.B.N Seal College	Asst. Professor	<i>D. Dutta</i>	
6	Deepika Mazumdar	N.B.U.	Asst. Professor		
7	Dr. Chandra Ghosh	Gour Mahavidyalay	Asst. Professor		
✓ 8	Dr. Cyaria Gurung	Siliguri College	Asst. Professor	<i>C. Gurung</i> 26/6/15	
✓ 9	Dr. Dhiraj Brahman	St. Joseph's College	Research Scholar	<i>D. Brahman</i> 26/6/15	
10	Dr. Gouri Das	Balughat College	Asst. Professor		
11	Dr. Hadida Yasmin	Raiganj College	Asst. Professor		
✓ 12	Dr. Lhanjey P. Bhutia	Sikkim Govt. College	Asst. Professor	<i>L. Bhutia</i> 26.06.15	
✓ 13	Dr. Mayukh Sarker	A.P.C.R. College	Asst. Professor	<i>M. Sarker</i> 26/6/15	
✓ 14	Dr. Parimal Mandal	Raiganj University	Asst. Professor	<i>P. Mandal</i> 26.6.15	
15	Dr. Shriparno	P.D. Women's College	Asst. Professor	<i>S. Shriparno</i> 27/6/15	



	Mukherjee						
16	Dr. Surjit Sen	University of Calcutta	Teacher				
✓17	Dr. Susmita Roy	Netaji Nagar College for Women	Asst. Professor		<u>9831633715</u>		
✓18	Juan Bikash Bhandari	Siliguri College	Asst. Professor		B Bhandari		
✓19	Khusboo Lepcha	N B U.	Research Scholar		Khusboo Lepcha.		
✓20	Kriti Ghatani	Sikkim University	Research Scholar		Kriti Ghatani		
✓21	Kumar Basnet	N B U	Research Scholar		Basnet		
✓22	Lalit Kumar Chaurasia	Sikkim University	Research Scholar		Kalish Chaurasia		
23	Mrs. Barkha Rai	St Joseph's College	Asst. Professor				
✓24	Nayan Thapa	St. Joseph's College	Research Scholar		Nayan		
✓25	Dr. Sanjoy Sadhukhan	Raiganj University	Asst. Professor		Sanjoy Sadhukhan	26/6/15	
✓26	Saroja Chettri	Darjeeling Govt College	Research Scholar		Saroja Chettri		
✓27	Sasanka Sekhar Bora	Indian Cardamom Research Institute	Research Scholar		S Bora		
✓28	Srijana Rai	Darjeeling Govt. College	Research Scholar		Srijana Rai		
✓29	Subhanil Chakraborty	Omics Lab	Research Scholar		Subhanil Chakraborty		
✓30	Suparna Saha Bhawal	Omics Lab	Research Scholar		Suparna Saha Bhawal		

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31	DR. BIRESHWAR BERA	ST. JOSEPH'S COLLEGE	ASST. PROFESSOR	Vivek
32	VIVEK ROY	Rajoy University	Asst. Professor	Quills
33	DR ARINDAM ROY	R. K.M Vidyamandira	" "	R
34	ONGYAL BHUTIA	NAMCHI GOVT. COLLEGE	ASST. PROFESSOR	Dr. J. K. J.
35	SONAM THENDOP BHUTIA	" "	" "	Dr. J. K. J.
36	DR. DIMAKAR THAPA	St. JOSEPH'S COLLEGE	ASST PROFESSOR	Dr. J. K. J.