



ACTIVITIES OF THE GOA STATE BIODIVERSITY BOARD (GSBB) DURING THE FINANCIAL YEAR 2024-25

(FOR INCLUSION IN THE ANNUAL REPORT OF NBA 2024-25)

Sr. No.	Information required on items/activities	Details				
1.	Name of the SBB/UTBC	Goa State Biodiversity Board (GSBB)				
2.	Details of incumbents of the following posts during 2024-25 (Name, Designation & Tenure etc. & Postal Address along with Phone No./ Official E-mail/Fax).					
2A	Chairperson	<u>Shri. Aleixo Sequeira (Present Chairperson)</u> Hon'ble Minister for Environment and Climate Change; Chairperson, Goa State Biodiversity Board (GSBB). Designation: Chairperson Postal address: Ministerial Block, 1 st Floor, Secretariat, Porvorim, Bardez- Goa Email: goanbiodiversity@gmail.com				
2B	Member Secretary	<u>Dr. Pradip V. Sarmokadam</u> Designation: Member Secretary Postal address: Goa State Biodiversity Board C/o Department of Science Technology and Environment, Opp. Saligao Seminary, Saligao, Bardez- Goa Phone: +91 7758814514 Email: pradipgsbb@gmail.com ; goanbiodiversity@gmail.com ; goa-gsbb@gov.in				
3	Statutory developments during the year (Details of notifications /rules/orders issued)					
4	No. of Board Meetings conducted with date of each meeting during 2024-25	1. GSBB has conducted 43 rd Board Meeting (Regular) held on 29 th August 2024 at Conference Hall, Ministerial Block. 2. GSBB has conducted 44 th Board Meeting (Regular) held on 16 th December 2024 at Conference Hall, Ministerial Block.				
5	Budget and Expenditure of SBB/UTBC (With concise head-wise details) 2024-25	Budget		Expenditure		
Given in Annexure –I						
5A	Funding sources availed by SBB/UTBC (Rs. in Lakhs)	State Fund / Fund of UT administration	Fund from NBA	CAMPA	Panchayat	Other sources

		Given in Annexure -II	Given in Annexure -III	-	-	Given in Annexure -IV
6	Biodiversity Heritage Sites (BHS)	Notified		Identified / Proposed		
		<p>'Purvatali Rai', Sacred Grove of Surla village is notified as Biodiversity Heritage Site vide notification No.7/17/2019-20/GSBB/BHS /037/ 960, printed in official gazette, Govt. of Goa, Series I No.38 dated 13th December 2019.</p>		<p>a) Curtorim Lakes: <i>“Unique Water management system is one of the most indigenous engineering of linking of fresh water lakes within this heritage site between Raitollem, Maitollem and Angdi lakes and this supports agricultural and piscicultural practices round the year”</i> Village Name: Curtorim BMC Name: Curtorim-Biodiversity Management Committee. Taluka: Salcete District: South Goa. State: Goa. (Note: The draft notification of the Curtorim BHS has been notified in the official gazette, Govt. of Goa.)</p> <p>b) Rivona Plateau: <i>“Unique Flora of Goa Dipcadi goense- A critically endangered species”.</i> Village Name: Rivona BMC Name: Rivona-Biodiversity Management Committee. Taluka: Sanguem District: South Goa. State: Goa.</p> <p>c) Chicalim Bay: <i>“Habitat of Endangered species of Goa- Window- pane Oyster (Scientific name: <i>Placuna placenta</i>)”.</i> Village Name: Chicalim BMC Name: Chicalim-Biodiversity Management Committee. Taluka: Mormugao District: South Goa. State: Goa.</p> <p>d) Sateri Sacred Grove: Sateri Sacred Grove of Penha De Franca Village Name: Penha De Franca</p>		

			BMC Name: Penha De Franca - Biodiversity Management Committee. Taluka: Bardez District: NorthGoa. State: Goa.			
7	Progress in the preparation/revision of State Biodiversity Strategy and Action Plan (SBSAP)	The final Goa State Biodiversity Strategy and Action Plan (GSBSAP) is ready and the same will be presented before the stakeholders for final inputs if any.				
8	Preparation of LBSAP (Local Biodiversity Strategy and Action Plan) , if any	-				
9	Assessment of City Biodiversity Index, if any (Name of the city and year of releasing report)	-				
10	Identification of potential OECM (Other Effective area based Conservation Measures), if any	Golden Jackel – Site @ Kulan, Surla, Bicholim Goa is in under process for Identification of potential OECM (Other Effective area based Conservation Measures).				
11	Number of BMCs constituted at different levels	Village/ Panchayat	Block/ Taluk/ Mandal	Nagar Palika /Municipality	Zilla Paris had /District	Total
11A	Number of BMCs at the beginning of the year as on 1 st April 2024	191	0	14	0	205
11B	Formed during the year (2024-25)	Nil	0	Nil	0	Nil
11C	Total number of BMCs at the end of the period as on 31 st March 2025	191	0	14	0	205
12	Number of PBRs prepared at different levels	Village/ Panchayat level	Block/ Taluk/ Mandal	Nagar Palika /Municipality	Zilla Paris had /District	Total
12A	Number of PBRs at the beginning of the year as on 1 st April 2024	191	0	14	0	205
12B	PBRs documented during the year (2024-25)	Nil	0	Nil	0	Nil
12C	Total number of PBRs at the end of the period as on 31 st March 2025	191	0	14	0	205
12D	Number of PBRs updated so far	-	-	-	-	-
12E	Number of Electronic PBRs	41(of which 3 submitted to second level)	-	1	-	42

13	Details of films, posters/brochures prepared on Biodiversity of the State/UT by SBB/UTBC during 2024-25 (If so, please enclose photograph)	NIL		
14	Details of legal action taken against any offender(s) under the Biological Diversity Act, 2002, if any	Nil		
14A	Litigation /Court cases/Offences (Please mention details in brief)	Attached in Annexure –V		
14B	Conducting preliminary enquiry to establish prima-facie an offence (Please mention details in brief)	Nil		
15	Activities of the SBB/UTBC during 2024-25 under Sec.23(B) & Sec.24(1)-of the Act	-		
15A	Under Sec.23(B) of the Act – grant of approval for commercial utilization or Bio-survey & Bio-utilization, during 2024-25	No. of applications received since inception of SBB/UTBC up to 31.03.2025	No. of applications approved up to 31.03.2024	No. of applications rejected/prohibited during 2023-24
		03	03	NIL
		No. of applications received during 01.04.2024 to 31.03.2025	No. of applications approved during 01.04.2024 to 31.03.2025	No. of applications under processing
		NIL	NIL	NIL
15B	Under Sec.24(1)-Prior intimation received from Indians, Indian Companies/ Organizations /Association, during 2024-25	No. of applications received since inception of SBB/UTBC up to 31.03.2024	No. of applications approved up to 31.03.2024	No. of applications rejected/prohibited during 2023-24
		18 Nos.	18 Nos.	Nil
		No. of applications received during 01.04.2023 to 31.03.2024	No. of applications approved during 01.04.2023 to 31.03.2024	No. of applications under processing
		4 Nos.	4 Nos.	Nil
16	Details of celebrations/Awareness Programmes/training Programmes carried out by the SBB/UTBC during 2023-24 (Photos if any may be enclosed)	<ul style="list-style-type: none"> <u>Days of Celebrations</u> GSBB Celebrated IDB- 24 and organized lecture on Giants from our Background on 22nd May 2024 and also GSBB participated in National Level Celebrations of International 		

		<p>Day for Biological Diversity - 2024 on 22.05.2024 at Andhra University Convention Hall, Beach Road, Visakhapatnam.</p> <ul style="list-style-type: none"> • As a part of IDB- 2024 GSBB organized series of cluster meetings/ programs of BMCs at various places. • On 05th June 2024, GSBB along with Dept. of Environment & Climate Change celebrated of World Environment Day (WED)-2024 at Entertainment Society of Goa. • GSBB along with GSWA celebrated World Wetlands Day at Tarvale lake, Shiroda on 02nd February 2025. • GSBB in collaboration with Abhivyaktee organized Yuva Jagruti- 2025 (Pre IDB -2025) at Institute Menezes Braganza on 08th February 2025. • <u>Activities carried out by Goa State Biodiversity Board during 1st April 2024 to 31st March 2025 – (Given in Annexure VI)</u> • <u>Activities carried out by Goa State Climate Change Cell (GSCCC) under Goa State Biodiversity Board during 1st April 2024 to 31st March 2025 have been included in the report.</u>
17	Details of any awards/ recognition /appreciation received by the SBB/UTBC during 2024-25	<ul style="list-style-type: none"> • GSBB has received an appreciation from Dr. Sneha Gitte, Collector North Goa District for successfully organizing Green Election.
18	Details of any awards instituted by the SBB/UTBC and conferred on individuals/ organizations during 2023-24for conserving Biodiversity & related matters	<p><u>Goa Biodiversity Conservation Awards 2023-2024 declared only yet to be presented</u></p> <p>Individual Awards Category:</p> <ol style="list-style-type: none"> 1. Shri. Vitthal Joshi - North Goa 2. Dr. Dattaram Sardessai – South Goa <p>Biodiversity Management Committee Category:</p> <ol style="list-style-type: none"> 1. Piligao Biodiversity Management Committee- North Goa 2. Bandora Biodiversity Management Committee – South Goa <p>Applied Biodiversity Researcher Award Category:</p> <ol style="list-style-type: none"> 1. Dr. Sreekanth G. B <p>Biodiversity Enthusiast Category Category:</p> <ol style="list-style-type: none"> 1. Kamalakant Tari (North Goa) 2. Devesh Naik (South Goa)

		<p>Green Journalist Category: Mr. Ganesh Shetkar - photojournalist</p> <p>and the certificates for Special Appreciation and Special Recognition of the concerned personalities for the work in the field of Biodiversity conservation will be presented during the Award Ceremony.</p>
19	Any other information	<p><u>GSBB has also charge of:</u></p> <ul style="list-style-type: none"> • ‘Nodal Agency’ for Goa State Wetland Authority (GSWA), Govt. of Goa. • Member Secretary, GSBB is ‘Nodal Officer’ for State Level Steering Committee for National Adaptation Funds for Climate Change (SLSC & NAFCC), Govt. of Goa. • Member Secretary, GSBB is appointed as Member for State Level Advisory Body (SLAB) constituted under Solid Waste Management Rules, 2016. • ‘Key State Technical Institute’ for One District One Product (ODOP) under Formalization of Micro Food Processing Enterprises (FME) Scheme. • Member Secretary, GSBB designated as Chairman, Technical Committee on Tree Plantation to provided holistic approach for plantation of trees constituted by The Tree Plantation Authority, Govt. of Goa vide order dated 12.10.2021. • Member Secretary, GSBB appointed as Member of Research Advisory Committee (RAC) to promote research activity in the Forest Department on the issues related to forest and wildlife in the state of Goa vide order dated 21.01.2022. • Member Secretary, GSBB is appointed as ‘Nodal Officer’ to carry out the activities under the LIFE Mission. • Member Secretary, GSBB is appointed as Member, State Board for Wildlife. • Member Secretary, GSBB appointed as Member for Aerodrome Environment Management Committee constituted by Directorate of Civil Aviation. • Member Secretary, GSBB is appointed as member of Goa Waste Management Corporation. • Member Secretary, GSBB is appointed as Member, State Level Advisory Committee on Solid Waste Management.

	<ul style="list-style-type: none">• Member Secretary, GSBB appointed as Member for Tree Authority Committee for the State of Goa.• Member Secretary, GSBB appointed as Nodal officer for Mega Beach Cleaning event.• Member Secretary, GSBB appointed as Nodal officer for Green Election.• Member Secretary, GSBB appointed as Expert Committee Member to study the existing administrative structure of the State Biodiversity Boards (SBBs) and Union Territory Biodiversity Councils (UTBCs) and suggests reforms to execute various function mandated under Biological Diversity Act.• Member Secretary, GSBB appointed as Member on Monitoring Committee for drafting of Heritage Policy for the State of Goa.• Member Secretary, GSBB appointed as Member for sub-committee to develop the curricula for the grades 9th, 10th, 11th & 12th of the Goa Board of Secondary and Higher Secondary Education.• Member Secretary, GSBB is appointed as Member, Landslide Committee for the State of Goa.• Member Secretary, GSBB appointed as Member for implementation of One Taluka One Product under Atmanirbhar Bharat & Swayampurna Goa
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Date: 15.04.2024

-Sd/-
Dr. Pradip V. Sarmokadam
Member Secretary,
Goa State Biodiversity Board

Annexure-I**Details of various grant-in-aid received from various funding agencies by Goa State Biodiversity Board in financial year 2024-25**

Sr.No	Name of the Funding Agency/Financial Institution/Department	Purpose of Funding	Amount of funding received (Rs.)	Expenditure Amount (Rs.)
1.	Department of Science and Technology, Ministry of Science and Technology, Govt. of India	Establishing the State Climate Change Cell under NMSKCCC(SCCC-NMSKCC) in the State of Goa	60,40,235.00	60,37,869.00
2.	Department of Environment & Climate Change	Funds for office administration, staff salaries and routine office expenses	80,80,000.00	80,80,000.00
3.	National Biodiversity Authority	NBA outsourced Personnel Grant-in-aid	11,18,135.00	11,18,135.00
4.	Directorate of Industries , Trade & Commerce	Funds for salary payment of PMU staff under PMFME scheme	10,73,334.00	10,73,334.00
5.	National Biodiversity Authority	Grant-in-aid for celebration of IDB 2024	2,50,000.00	2,50,000.00
6.	National Biodiversity Authority	National Workshop on Advancing India's 30x30 target through exploring other Effective area based Conservation Measures (OECM)	1,98,000.00	1,98,000.00
7.	National Biodiversity Authority	Grant-in-aid for Celebration of WED 2024	50,000.00	50,000.00
Total:			16809704.00	16807338.00

-Sd/-

Date: 15.04.2025

Dr. Pradip Sarmokadam
Member Secretary, GSBB

Annexure-II**Details of grant-in-aid received from Government of Goa by Goa State Biodiversity Board in financial year 2024-25**

Sr.No	Name of the Funding Agency/Financial Institution/Department	Purpose of Funding	Amount of funding received (Rs.)	Expenditure Amount (Rs.)
1.	Department of Environment & Climate Change	Funds for office administration, staff salaries and routine office expenses	80,80,000.00	80,80,000.00
2.	Directorate of Industries , Trade & Commerce -Goa	Funds for salary payment of PMU staff under PMFME scheme	10,73,334.00	10,73,334.00
Total:			91,53,334.00	91,53,334.00

-Sd/-

Date: 15.04.2025

Dr. Pradip Sarmokadam
Member Secretary, GSBB

Annexure-III**Details of grant-in-aid received from National Biodiversity Board by Goa State Biodiversity Board in financial year 2024-25**

Sr.No	Name of the Funding Agency/Financial Institution/Department	Purpose of Funding	Amount of funding received (Rs.)	Expenditure Amount (Rs.)
3.	National Biodiversity Authority	NBA outsourced Personnel Grant-in-aid	11,18,135.00	11,18,135.00
5.	National Biodiversity Authority	Grant-in-aid for celebration of IDB 2024	2,50,000.00	2,50,000.00
6.	National Biodiversity Authority	National Workshop on Advancing India's 30x30 target through exploring other Effective area based Conservation Measures (OECM)	1,98,000.00	1,98,000.00
7.	National Biodiversity Authority	Grant-in-aid for Celebration of WED 2024	50,000.00	50,000.00
Total:			16,16,135.00	16,16,135.00

Annexure-IV**Details of grant-in-aid received from Department of Science & Technology -Govt.India by Goa State Biodiversity Board in financial year 2024-25**

Sr.No	Name of the Funding Agency/Financial Institution/Department	Purpose of Funding	Amount of funding received (Rs.)	Expenditure Amount (Rs.)
1.	Department of Science and Technology, Ministry of Science and Technology, Govt. of India	Establishing the State Climate Change Cell under NMSKCCC(SCCC-NMSKCC) in the State of Goa	60,40,235.00	60,37,869.00
Total:			60,40,235.00	60,37,869.00

-Sd/-

Date: 15.04.2025Dr. Pradip Sarmokadam
Member Secretary, GSBB

Status of Legal Cases of Goa State Biodiversity Board (GSBB) (Court wise Breakup)

High Court cases year 2024

Sr.	Case Number	Party Names	Advocate appointed	status
1	<i>Misc. Civil Application 593/2023 in P.I.L Writ Petition No.10/2017</i>	Tapasya Infotech Pvt. Ltd	<u>Adv. Akshata Bhat</u>	Pending
2	PILWP No.2795/2023(F) Reg No.PILWP 03/2024	Shri. Dhirendra Phadte & 4 others	Adv. Maria Simone Judith Correia	Pending
3.	PIL WP 27/2027	Zon Hotel V/s GCZMA	Adv. Neehal Vernekar (GCZMA)	Disposed
4.	PIL WP 2106/2021(F)	Francisco Drago V/S GCZMA	Adv. Neehal Vernekar (GCZMA)	Disposed on 07/04/2025
5.	PIL WP 17/2024	Chahit Bansal	Adv. Maria Simone Judith Correia	Pending
6.	PIL WP 87/2023(F)	Domingos Alexio Fernandes (Glory)	GSBB not party	pending
7	PIL WP N0.41/2019	Chimbel Gram Seva Kalaani Sunskrutik Manch V/s InfoTech		Pending
8	PIL WP No.32/2019	Agnelo Barreto V/s North Goa Planning and Development		Pending
9	<i>PIL Writ Petition No. 2289/2024 (Filling) Reg.No.PILWP48/2024</i>	<i>Calangute Constituency Forum V/s GSBB(Res No.13)</i>	Adv. Maria Simone Judith Correia	Pending
10	PILSM/03/2023	–High court on its own motion V/s state of Goa &Ors	GSBB Resp. No.14 Adv. Shubham Pirolkar	Pending
11	<i>PIL Writ Petition No. 2317/2024 (Filling)(copy enclosed) filed by Pilerne Citizens</i>	<i>Pilerne Citizens Forum</i>	Adv.Shubham Pirolkar GSBB Res No.12	Pending
12	Contempt p/76/2024(F)	Nilesh Phadte Versus State Of Goa Through Chief Secretary And 2 Others(Romeo Lane)		Disposed

13	<i>PIL No.02/2022(Sou Moto)</i>	<i>High Court by its own motion v/s Anjuna</i>	Adv. Shubham Pirolkar	Pending
14	<i>M.C.A. No.1155/2024 In PIL WP No.2/2022(Sou Moto)</i>	<i>Ramchandra Dabolkar (Ivory)</i>		Disposed
15	<i>PILWP No.39/2018</i>	<i>Kashinath Shetye</i>	Task force Mangrove NH66 Mercedes	Pending
16	<i>MCA No.2392/2024 in PILSou Moto No.2/2022</i>	<i>Peter Almeida Fusion Bar</i>	Site inspection conducted report submitted	Disposed

NGT cases year 2024

Sr.	Case No.	Party names	Advocate Appointed	Status
1	Appeal No. 02/2024 WZ	Calangute Constituency Forum	Adv Mansi Joshi New Shubham	Pending
2	<i>Execution Application No.03/2024(WZ) in Appeal no. 75/2016(PB)</i>	M/s Abhishek Engineering	Adv Mansi Joshi	Pending
3.	O.A 130/2017	Lopinho Xavier /Movaj Pvt ltd	Adv Mansi Joshi	Disposed on 18.03.2024
4.	O.A.No.42/2021	Royola Fernandes v/s GSBB		Pending
5.	O.A. No.06/2023	Patricio Pinto	Adv. Supriya Dangare	Pending
6	O.A. No.140/2024	Manoj Haldankar	Adv Subham Pirolkar	Disposed on 26/09/2024
7	Misc.Appl No.10/2024(WZ) in Execution Application No.05/2023(WZ) Appeal NO.16/2022(WZ)	Suvarn Rajaram Bandekar	We not party however doing restoration work.	
8.	Execution No.04/2018(WZ) in Misc Application No.44/2015(WZ)	Colva Civic Consumer Forum Minino vaz Sernabatim	GSBB is not party however doing restoration work.	Pending

Activities carried out by Goa State Biodiversity Board carried out during 1st April 2024 to 31st March 2025

- Member Secretary, GSBB attended 35th Foundation day at ICAR on 01st April 2024.
- Member Secretary & Project Assistant I attended virtually second review meeting of e- PBR on 02nd April 2024.
- Member Secretary attended 43rd Meeting of Project Screening Committee (PSC) for SFURTI at Central Office, KVIC, Mumbai on 08th April 2024.
- Member Secretary attended conference at GIM institute on 12th April 2024.
- Member Secretary attended virtual knowledge series on Demystifying Sustainability & Simplifying ESG on 19th April 2024.
- GSBB staff attended program Vriksha Vyjanika Sadassu” organized by Raj Bhavan, Dona Paula, Goa on 21st April 2024.
- GSBB attended seminar on “Sustainable Solutions to Water Management”, organized by the Consulate General of Finland on 23rd April 2024.
- Kerala SBB visited Goa for peer learning program from 07th- 09th May 2024.



- GSBB participated in Lok Sabha Green Election by planting & distributing around 1000 saplings.



- Staff from Govan project, GSBB attended 3-day cashew festival organized by Goa Forest Development Corporation Campal, Panaji Goa from 10th- 12th May 2024.



- Member Secretary delivered lecture at cashew festival on 12th May 2024.
- TDU team visit for validation of QCI certified healers from Goa from 13th- 15th May 2024.
- GSBB Celebrated IDB- 24 and organized lecture on Giants from our Background on 22nd May 2024.



- GSBB participated in National Level Celebrations of International Day for Biological Diversity - 2024 on 22.05.2024 at Andhra University Convention Hall, Beach Road, Visakhapatnam.



- GSBB in collaboration with INS Hansa, Goa organized cleanliness drive at Nanda Lake on 26th May 2024.



- GSBB in collaboration with Goa University organized harvest of puran Sheti (A project on rejuvenation of Puran Sheti) on 26th May 2024.



- As a part of IDB- 2024 GSBB organized series of cluster meetings/ programs of BMCs at various places: (Photo report is enclosed)
 - On 27th May 2024, Pernem taluka BMC's cluster at Sant. Sohironanath Ambiye, Government Collage of Arts & Commerce, Virnoda, Pernem- Goa.
 - On 28th May 2024, Sanguem, Dharbandora & Quepem Taluka BMCs cluster at VP Uguem, Sanguem Goa.
 - On 29th May 2024, Mormugao and Salcete (part) taluka BMCs cluster at VP Cansaulim, Salcete Goa.
 - On 30th May 2024, Canacona BMCs cluster at VP Poinguin, Canacona Goa.
 - On 31st May 2024, Sattari & Bicholim taluka BMCs cluster at VP Honda, Sattari, Goa.
 - On 01st June 2024, at VP Verna for Salcete (part) BMCs and at PES college of Arts & Science, Farmagudi, Ponda Goa for Ponda taluka BMCs.
 - On 03rd June 2024 Bardez taluka BMCs cluster at VP Village Panchayat Hall, Anjuna-Caisua, Bardez, Goa.

- On 05th June 2024, GSBB along with Dept. of Environment & Climate Change celebrated of World Environment Day (WED)-2024 at Entertainment Society of Goa.



- On the occasion of World Environment Day (WED)-2024 BMCs across Goa participated in various activities under Meri life theme. (Photo report is enclosed).
- On 06th June 2024, Member Secretary, GSBB delivered session on World Environment Day at IPSHEM- ONGC.



- Attended Visioning Workshop for Panaji's Net-Zero Future organized by Goa Energy Development Authority and Transitions Research's People's Urban Living Lab (PULL) at Panjim INN on 08th June 2024.
- Member Secretary attended interface meet on characterization and documentation of Animal genetic resources of Goa, organized by ICAR on 7th & 8th June 2024.



- Member Secretary attended Goa Revolution Day program at Azad Maidan on 18th June 2024.

- Member Secretary attended Goa State Roundtable on "Natural Climate Solutions" organized by Teri School of Advanced Studies, new Delhi at Van Bhawan, Panaji, on 19th June 2024.
- GSBB held 30th meeting of the Thematic Expert Committee on PBR of Sodiem Siolim - Stage I validation, on 21st June 2024.
- GSBB in association with NBA, WCS organized 2 day National Workshop on Advancing India's 30 x 30 Target Through Exploring Other Effective Area-Based Conservation Measures on 26th & 27th June 2024.



- Visit of IIULER students to the Goa Biodiversity herbal park and Savelem wetland on 27th June 2024.
- Member Secretary participated and delivered lecture during 109th Foundation Day of ZSI and Animal Taxonomy Summit at Kolkata on 01st July 2024.
- Scientific and Administrative Officer (SAO) graced the program held on the occasion of Van Mahotsav at Govind Ramnath Kare College of Law, Margao Goa on 06th July 2024.
- GSBB along with Members of Rotary Club, Donapaula organized plantation drive at the GSBB campus on 07th July 2024.
- GSBB organized Tree plantation at Goa Legislative Assembly under the theme “**Ek Ped Maa ke Naam**” on 15th July 2024.



- Member Secretary participated as expert member in panel discussion on the topic of “Role of decentralized waste management in Goa, on 16th July 2024.

- Member Secretary, GSBB along with Interns attended two days National Conference on 'Mangroves for Climate Change Mitigation and Sustainability of the Coastal Populace (NCMCS 2024), organized by P.E.S.'s Ravi S. Naik College of Arts & Science, Farmagudi, Ponda Goa on 26th -27th July 2024.
- SAO delivered lecture on Biodiversity Awareness for the students of Shree Chandreshwar Bhoothhnath Higher Secondary, Ambaulim on 06th August 2024. The program was organised by Vedanta's Malco Energy Ltd.



- GSBB convened meeting to study Landslide in Goa under the chairmanship of Hon'ble Chief Minister of Goa, on 09th August 2024.
- Andra Pradesh SBB visited Goa for peer learning program from 16th -18th August 2024.



- Chhattisgarh Wetland Authority visited Goa to study and understand the procedure of notifying wetland on 17th August 2024.
- Member Secretary & PA1, attended Mangrove Task Force meeting on 21st August 2024.
- Member Secretary graced function of the Shravan Utsav at VRPP Auditorium, Goa University on 21st August 2024.



- GSBB in collaboration with Adarsh Yuva Sangh, Canacona organised State level Rann Bhaji Mahotsav on 27th August 2024.
- Visit to GSBB campus by the students of Chubby Cheeks on 28th August 2024.



- GSBB held 43rd Board meeting on 29th August 2024.
- Member Secretary and PA1 attended Mangrove task force meeting on 03rd September 2024.
- Member Secretary along with staff visited ONGC, on 06th September 2024, to discuss about upcoming project.
- GSBB held first landslide committee meeting on 13th September 2024.



- GSBB organized plantation drive in the campus under the theme Ek Ped Maa ke Naam on 17th September 2024.



- GSBB & GSWA organized cleanliness drive at Nanda Lake by involving students from nearby schools on 26th September 2024.



- All the staff of GSBB, GSWA, GSCCC & GoVan participated in ‘Swachhata Hi Sewa’ 2024 on 01st October 2024.



- MoU signing between GSBB & PES College of Arts and Science on 03rd October 2024.



- GSBBs Study trip to Western Ghats for the expert members of Thematic Expert Committee on People's Biodiversity Register and its Validation on 05th October 2024.



- Valedictory function of Painting and Poster Designing activity on the occasion of World Environment Day organized at Goa Science Centre in association with Goa State Biodiversity Board on 09th October 2024.



- PA1 attended fourth meeting of Mangrove Task Force, on 09th October 2024.
- GSBB held 32nd meeting of the Thematic Expert Committee on People's Biodiversity Register and its validation to validate PBR of Bandora on 09th October 2024.



- GSBB staff attended lecture by Dr. Narasimhan on the topic ‘Enigma of Savage Plant’ on 21st October 2024 at GSPCB Auditorium Hall.
- Member Secretary, GSBB participated for Sixteenth conference of the parties (COP16) of the Convention on Biological Diversity, (CBD) in Cali, Colombia.



- Tripartite MoU signing between GSBB, GBCN & DMF on 11th November 2024.



- 33rd meeting of the Thematic Expert Committee on People's Biodiversity Register and its validation to validate PBR of Dongurli Thane on 12th November 2024.



- Staff of GSBB participated in National Workshop for Capacity Building for the Erosion Study in the State of Goa held on 18th -19th November 2024.



- Staff of GSBB participated in Basic Konkani training to Govt employees on 18th, 19th & 20th November 2024.



- Member Secretary participated and delivered session to the villagers of Bandora on the occasion of World Fisheries Day on 21st November 2024.



- Visit to GSBB campus by the students & staff of Shree Ganesh High School, Mapusa on 26th November 2024.



- PS1 attended the National Conference on Urban Biodiversity on 29th -30th November 2024 at Hyderabad.



- Member Secretary delivered a talk on Biodiversity to the third BAMS batch on 30th November 2024.



- Member Secretary, GSBB delivered a session at Buyers Seller Meet at Krishi Vigyan Kendra on 01st December 2024.



- Member Secretary, GSBB along with Calangute BMC members inaugurated New BMC office premises and seed bank on 02nd December 2024.



- Member Secretary, GSBB delivered a session on Biodiversity Conservation at the ESG and CSR Summit on 05th December 2024.
- GSBB in association with Shristhal BMC participated and setup a pavilion of GSBB at Lokotsav 2024 organized by Adarsh Yuva Sangh, Canacona from 06th to 08th December 2024.



- GSBB under the GoVan Project has participated in India International Trade Festival (IITF) held in New Delhi from 13th – 28th November 2024.



GOA PAVILION INAUGURATED AT IITF NEW DELHI

Times Day / Goa

Goa Pavilion at the much-awaited 43rd India International Trade Fair, an initiative of India Trade Promotion Organisation (A Government of India Enterprise), based on the theme "Vikasat Bharat @ 2047" a mega event was inaugurated by Shri Dipak Bhandekar, Director of Information and Publicity today. Assistant Information Officer, DIP, Shri Shanto Naik, Information Assistant, Shri Siddheesh Samant, Administrative Officer, ITO, Shri Sadashiv Pandit, Manager, Goa Tourism Development Corporation, Shri Sahadev Goukar, Deputy Manager, Goa Waste Management Corporation, Shri Rohan Ghadi, Engineer, Shri Krunesh Dessai, Project Scientist, Goa State Council for Science and Technology, Shri Deepak Parab, Mentor, Department of Science and Technology, Shri Shivraj Naik, Project Assistant, Goa State Biodiversity Board, Shri Ragesh Velup and Shri Arvind Naik were amongst those present on the occasion. A brochure titled Atmanirbhar Bharat Swayampranama Goa was also released at the hands of Shri Bhandekar on the occasion. IITF is the largest integrated trade fair which has a wide spectrum of Business, Social, Cultural and Educational Dimensions that are weaved together where visitors and exhibitors, media persons, marketing professionals, social activists, NGOs etc. visit to source their needs and objectives. Government Organisations use this platform to spread awareness about their programmes and policies among the public. The fair is set up on a space adjoining 205 Sq. mt, earmarked by ITO in Hall No. 3 (New Hall) designed in line with this year's theme with emphasis on projecting rich Goan Cuisine with courteous hospitality of Goan people and Goa's developmental achievements through Audio Visuals, Small Installations and Photographic display. A lively celebration of Goa's rich cultural legacy will take place during IITF 2024 in the Goa Pavilion. The



woven baskets, Coconut craft etc. Small ambient lighting fixtures are installed above each shelf to softly illuminate the items, creating a gallery-like effect that highlights each piece's unique craftsmanship. Prior to the inauguration of Goa Pavilion the India International Trade Fair was inaugurated by the Union Minister of Commerce and Industry, Shri Piyush Goyal as per the prevailing practice and subsequently the participating States and Union Territories besides foreign countries inaugurated their stalls to pave way for the people to visit their respective stalls. Managing Director, Delhi State Industrial and Infrastructure Development Corporation, Shri Ravi Bhaswan, IAS visited the Goa Pavilion. In the past the Goa pavilion has won accolades and adjudged as best pavilion for excellent display among the smaller States in the country. highlight of the Goa Pavilion will be the performances of Goan artists on a daily basis who will entertain visitors with artistic talent and expertise made by presenting Goa's rich cultural traditions.

pavilion, which aims to provide visitors with an immersive experience, showcases Goa's cultural heritage and local handicrafts. Alongside a variety of indigenous handicrafts, the Goa Pavilion is pleased to present the rich legacy of Kavi Art for the first time at the IITF 2024. Inspired by architectural elements and temple walls, this distinctive art form is renowned for its elaborate red and white murals, which celebrate Goa's coastal culture. Immersion in this cultural experience

allows visitors to discover the creativity of Kavi's & a carefully chosen assortment of regional handicrafts that showcase Goa's rich history and artistry. Besides, an unique display wall is crafted with a rustic finish to reflect the natural, earthy aesthetic typical of traditional Goan interiors. The wall features a raw, textured surface, enhanced with subtle warm tones to evoke the tropical warmth of Goa. Built-in shelves are incorporated seamlessly to accommodate different handicrafts, from pottery and

- Member Secretary attended Goa Vikas Manthan 2024' a state-specific; theme-based conference on 15th December 2024 at Dempo Charities Trust's Srinivassa Sinai Dempo College of Commerce and Economics, Cujira, Goa.
- 44th Board meeting of GSBB on 16th December 2024.



- Member Secretary, GSBB delivered virtual session on "understanding the Biological Diversity Legal Framework: Insights from Tribal Knowledge and Ayush Practice" for the students of All India Institute of Ayurveda, Goa on 19th December 2024.
- GSBB organised meeting with Borim cluster regarding creating Borim village climate resilient in the presence of Hon'ble WRD Minister at Borim Panchayat, on 07th January 2025.



- Visit to the GSBB office by the students of Indian Institute of Forest Management, Bhopal on 08th January 2025.
- Attended Fifth meeting of the mangrove task force on 9th January 2025
- Member Secretary, GSBB attended the Inaugural session of 8th Bird Festival of Goa on 17th January 2025.
- Member Secretary was invited as Resource Person for the youth constitution Assembly: Vision 2047 on 21st January 2025 at GRK College of Law, Margao Goa.



- Project Scientist 1 delivered a lecture on cultivation and uses of local herbs on 22nd January 2025 at Sant Sohrobanath Ambiyee Government College of Arts & Commerce, Virnoda, Pernem-Goa.
- All the staff of GSBB, GSWA, GSCC & Govan took the National Voters Day pledge on 24th January 2025.
- Member Secretary delivered a session on Wetlands to the students of Smt. Parvatibai Chowgule College of Arts & Science college, Margao on 27th January 2025.
- GSBB along with GSWA celebrated World Wetlands Day at Tarvale lake, Shiroda on 02nd February 2025.
- Project Scientist 1 delivered lecture on World Wetlands Day-2025 at Chubby Cheeks Spring Valley High School- Porvorim Goa on 06th February 2025.



- SAO judged Rajya Stariya Bal Vaigyanik Pradarshani (RSBVP) 2024-25 at Shiroda Higher Secondary School on 06th February 2025.
- Member Secretary attended special session on revolutionizing sustainability: iARI Biodegradable wheat straw technology as pollution solution organized by ICAR – Goa on 07th February 2025.
- Member Secretary attended virtually First Information cum Invitation for the Stakeholder Inception cum Validation workshop for the GEF-8 project on “Enhancing the conservation and sustainable use of biodiversity to meet India’s commitment to the Kunming-Montreal Global Biodiversity Framework targets by 2030 (OECM project)” on 07th February 2025.
- GSBB in collaboration with Abhivyaktee organized Yuva Jagruti- 2025 (Pre IDB -2025) at Institute Menezes Braganza on 08th February 2025.



- Campus visit by the students of the Sant Sohrobanath Ambiye Government College of Arts & Commerce, Virnoda, Pernem-Goa on 10th February 2025.

लोकमत



सैंद्रिय शेती प्रमाणपत्र अभ्यासक्रमाच्या समारोपाप्रसंगी प्रा. ईशानी रॉय, मार्गदर्शक व विद्यार्थी.

- GSBB Staff attended Konkani typing training at Vidhya Prabhodini College on 13th, 14th & 17th February 2025.



- GSBB inaugurated renovated GSBB office premises on 21st February 2025.



- GSBB Interns attended 3 days National Youth Biodiversity Conference at Hyderabad from 20th – 22nd February 2025.
- Member Secretary along with staff of GSCCC attended post budget webinar 2025 on Theme 6: Investing in Innovation on 05th March 2025.
- GSBB organized 2nd field trip for the members of landslide committee on 07th March 2025.
- Visit of Manipur SBB for peer learning program from 09th -13th March 2025.



- Attended meeting of Khazan/Mangrove Management Plan on 21st March 2023.

- Educational Visit to Goa State Biodiversity Board by GVM's GGPR College of Commerce and Economics, Farmagudi, Ponda on 21st March & 26th March 2025.
- Attended 8th tree authority meeting under the chairmanship of Chief Secretary, Goa on 27th March 2025.
- Attended National Conference on Environment-2025, organized by National Green Tribunal at Vigyan Bhawan, New Delhi on 29th & 30th March 2025.



Training Programs conducted out by Goa State Biodiversity Board carried out during 1st April 2024 to 31st March 2025

- Project Scientist 2 (PS2), GSCCC, attended knowledge Sharing program on techniques and Technology to reduce Water Consumption on Electricity and Fuel, organized by GSPCB on 12th April 2024.
- GSBB staff attended 3-day training from 28th-30th May 2024 on Mainstreaming Biodiversity into Food Systems and Micro Enterprises at NIRD&PR, Hyderabad
- SAO attended training on the implementation of the PM GatiShakti State Master Plan Goa, training from 19th & 20th September 2024.
- SAO & PSI attended the training program - 'Satellite in your Hand' Capacity Building Program for Women in Geo-Spatial Technology, organized at GIPARD, Ela Goa, on 21st & 22nd November 2024.
- GSBB in collaboration with Department for Empowerment of Persons with Disabilities organized one-day training/workshop on Eco- friendly decoration for the students of Sanjay School Sanjay Centre for Special Education in Alto Porvorim, Goa on 04th December 2024.
- Project Assistant I attended training program of Rprex 2024 at Bogmalo Beach resort from on 10th & 11th December 2024.
- GSBB staff attended Kitchen Garden training program organized by Calangute BMC on 01st January 2025.
- GSBB conducted 30 hrs certification course on topic 'Biodiversity, its Conservation and Livelihood Interventions' at VVM's Shree Damodar College of Commerce & Economics, Margao- Goa with 10 sessions including field trip from 11th February 2025.



- Staff of GSBB & GSCCC attended training program on Self Defense and Safety Tips for Women organized by GIPARD on 05th March 2025.
- Member Secretary along with staff of GSBB attended training on Khazans Goa, organized by Department of Environment & Climate Change on 08th March 2025.
- Staff of GSBB & GSCCC attended training Program on Self Defense and Safety Tips for Women organized by GIPARD on 17th & 18th March 2025.

🌈 Training conducted under the project GoVan for upcoming MPCs are as follows

- a. Training on food processing of bioresources like jackfruit, nutmeg, etc. & Hygiene management during food processing for women's of Bhironda VP on 10th July 2024.
- b. Training on food processing of bioresources like jackfruit, nutmeg, etc. & Hygiene management during food processing for women's of Pilgao VP on 22th July 2024.
- c. Training on food processing of bioresources like jackfruit, nutmeg, etc. & Hygiene management during food processing for women's of Pissurlem VP on 31st July 2024.
- d. Training on food processing of bioresources like jackfruit, millet, etc. & Hygiene management during food processing for women of Mayem VP on 24th September 2024.
- e. Training on sustainable Coconut Ecofriendly Byproduct for women's of Nagoa VP on 21st October 2024.
- f. Training on processing of bioresources & Value Addition to make gluten-free products from millets for VP Rivona & Caurem Pirla on 23rd December 2024.
- g. Training on hygiene, sanitation, packaging & Branding for ladies of Kumbharjua VP organised by ZAO on 24th December 2024.
- h. Training on processing of bio resources & Value Addition to make gluten-free products from millets for VP Sacorda & Sanguem on 18th January 2025.
- i. Training on processing of bio resources, hygiene management, demonstration of food processing machinery & Packaging of final Products on 20th January 2025.
- j. Training for Om Sai Self Help Group, Panshe-Pissurlem based on packaging, processing and working of machinery on 31st January 2025.

- k. Training on Processing of Bio resources & Value addition, labeling & branding for the ladies of Cudnem VP on 04th March 2025.
- l. Training on Processing of Bio resources & Value addition, labeling & branding for the ladies of Dabal VP on 07th March 2025.



Workshops conducted out by Goa State Biodiversity Board carried out during 1st April 2024 to 31st March 2025

- GSBB staff attended Workshop on national space day at Sinchai Bhavan organised by WRD.
- GSBB in collaboration with GBCN organised orientation workshop for BMCs for the White Bellied Sea Eagle project. On 27th September 2024.



- Member Secretary & Staff of GSBB attended 'Citizen engagement workshop on Comprehensive tree assessment and tree maintenance' on 22nd November 2024.

Site Inspection conducted out by Goa State Biodiversity Board carried out during 1st April 2024 to 31st March 2025

- Conducted site inspection at upcoming North Goa MPCs by Project Manager, North on 05th April 2024.

- Project Assistant 1 (PA1), GSBB, attended joint site of proposed Restoration of reclaimed land in property Svy. No. 16/6, 16/7 and 72/1 by m/s Abhishek Engineer, Dabolim, on 16th April 2024 in order to comply to the directions of Hon'ble High Court of Bombay at Goa.
- PA1 attended joint site inspection to inspect illegal land filling and construction on agriculture land in different properties. ___
- PA1 attended joint site inspection of restoration plan in property bearing sy.no.213/4 and 213/5 of village Anjuna, Bardez on 29th May 2024.
- SAO attended site inspection at proposed Restoration work site in the property bearing survey no: 223/8 of village Anjuna in Bardez taluka on 19th June 2024.
- GSBB held site inspection at the proposed Quelossim BHS with Board member on 27th June 2024.
- PA1 attended joint site inspection at Divar Island for Mangrove Restoration on 28th August 2024
- Attended joint inspection held in property bearing Survey No. 214/2 of Village Anjuna Bardez-Goa (Ivory Restaurant) in order to comply to the Hon'ble. High Court of Bombay at Goa, on 15th October 2025.
- First field trip/ site visits of the Members of Landslide Committee under the Chairmanship of Collector at Valpoi Forest Training School on 16th October 2024.
- Attended joint inspection held in property bearing Survey No. 214/2 of Village Anjuna Bardez-Goa (Ivory Restaurant) in order to comply to the Hon'ble. High Court of Bombay at Goa on 07th November 2024.
- Attended site inspection at sy no. 146/4E Zon hotel, Cadolim on 06th December 2024.
- attended joint site inspection at survey no. 362/1@ Benaullim village, in order to comply to the directions of Hon'ble High Court of Bombay at Goa on 06th January 2025.
- PA1 attended joint site inspection regarding retaining wall in Survey No 16/3, 17/4, 17/5, 17/7, 17/8 of Sernabatim Village in the property of The Hotel Baywatch Resort, Sernabatim, Colva, Salcete, in order to comply to the directions of Hon'ble High Court of Bombay at Goa on 10th February 2025.
- Site inspection by Project Assistant 1 at proposed Restoration of reclaimed land in property Sy. No. 16/6, 16/7 and 72/1 by m/s Abhishek Engineer, Dabolim (legal matter) on 05th March 2025.
- Visit by Member Secretary along with staff of GSBB to inspect Batim Saltpan on 10th March 2023.
- PA1 attended joint site inspection at sy. No. 213/18, Anjuna Village, in order to comply to the directions of Hon'ble High Court of Bombay at Goa on 20th March 2023.

Report of International Day for Biological Diversity- 2024



Celebration of International Day for Biological Diversity-2024 on 22nd May 2024.



Dr. Pradip Sarmokadam, Member Secretary, GSBB presented GSBBs achievement.



Shri. Parag Rangnekar, Expert Member, GSBB delivered lecture on Giants from our Backyard.



Cleaning at Nanda Lake (Ramsar Site of Goa) in association with INS Gomantak, Vasco da Gama on 26th May 2024.

BMC Cluster meetings as part of IDB- 2024 celebration



BMC Cluster meeting of Pernem and partly Bardez Taluka on 27.05.2024



BMC Cluster meeting of Sanguem, Quepem & Dharbandora Taluka on 28.05.2024



BMC Cluster meeting of Mormugao & Partly Salcete Taluka on 29.05.2024



BMC Cluster meeting of Canacona Taluka on 30.05.2024



BMC Cluster Meeting of Sattari and Bicholim Taluka on 31.05.2024



BMC Cluster Meeting of Six BMCs from Salcete Taluka on 01.06.2024



BMC Cluster Meeting of Ponda Taluka on 01.06.2024



BMC Cluster Meeting of Tiswadi and Partly Bardez Taluka on 03.06.2024

Report

World Environment Day- 2024

On the occasion of World Environment Day- 2024, Goa State Biodiversity Board (GSBB) along with Biodiversity Management Committees (BMCs) organized various programme across State.

State level WED- 2024 was celebrated in collaboration with Department of Environment & CC, Goa State Pollution Control Board & Goa State Biodiversity Board. Selected BMCs from Goa exhibited the Stall.



State Level WED celebration



Inauguration of Exhibition at the hands of Chief Guest, Hon'ble Chief Minister of Goa.



Visit to Chicalim BMC Stall



Traditional Food Festival by Shristhal BMC

Apart from the above, as a part of World Environment Day, following BMCs participated in WED-2024 by organising various activities.

1. Awareness programme by Collem Dharbandora BMC Chairperson at Govt. Primary School, Collem.



2. Cleaning of Pond by Virnoda BMC



3. Bandora BMC organised awareness programme at RPRS School, Ramnathi Ponda on Snake Rescue.





4. Veling Priol BMC took Mission Life Pledge.



5. Mulgao BMC organised Plantation drive at Govt. High School, Mulgao Goa.



6. Navelim, Salcete BMC organised awareness programme at Perpetual Succor Convent, Navelim on Seed Bombing.



7. Barcem Quedem BMC in association with Govt. High School Padi organized cleanliness Drive.



8. Cleanliness drive by Uguem BMC.



9. Poinguinim BMC along with Shree Shradhanand High School organized plantation drive.



10. Torxem BMC distributed Plant Sapling to the Panch members.



11. Chinchinim Deussua BMC organized awareness programme in Mount Mary's High School, Chinchinim.



12. Cleaning of spring at Murgem by Sancordem BMC.



13. Cleanliness drive at Arambol Beach by Harmal BMC.



14. Morpiria BMC felicitate traditional healers on WED-2024.



15. Waterbody desilting and cleaning of it's banks by Assolna BMC.



16. Bicholim Municipal Council BMC organized plantation Drive.



17. Cleaning of Ponds & spring by Mollem BMC.



18. Sanvordem Sanguem BMC organized Poster Competition for High School Students.



19. Plantation drive by Chandel Hasapur BMC



20. Awareness programme and plantation drive by Dramapur Sirlim BMC.



21. Cleanliness drive by Cavellossim BMC at Cavellossim Beach.



22. Curtorim BMC organized tree plantation activity in the premises of BMC office Campus.



23. Cansaulim- Issorcim- Pale BMC organized Plantation drive in GPS School.



24. Shiroda BMC organized Plantation drive within Panchayat jurisdiction



25. Querim- Sattari BMC organised tree plantation program along with Panchayat members.



26. Durbhat BMC organised plantation drive along with Forest Department.



27. Surla BMC organised Awareness program in High School.



28. Morlem BMC organised felicitation of traditional healers.



29. Bhironda BMC organised Plantation and Cleanliness drive.





30. Honda BMC organized Cleanliness drive along with School Students.



31. Aldona BMC organised Awareness programme on Biodiversity Conservation & Its Sustainable Use at St. Thomas Girls' High School, Aldona.



32. Cleanliness of natural spring by Nagargao BMC



33. Se Old Goa BMC organised BMC logo competition.



34. Dhargal BMC organised tree plantation program at Govt. High School, Dhargal.





GOA STATE CLIMATE CHANGE CELL (GSCCC)

Principal Investigator: Dr. Pradip Sarmokadam, Member Secretary, Goa State Biodiversity Board,
State Nodal Officer for Climate Change

The Goa State Climate Change Cell (GSCCC) **formally completed ONE YEAR on 10 April 2024** under the National Mission for Strategic Knowledge on Climate Change (NMSKCC) financially supported by DST Delhi and as an integral part of the Goa State Biodiversity Board (GSBB), Saligao, Goa.

1) Details of Publications/Articles/News report etc

1. **Pradip Sarmokadam, Michelle Fernandes, Yeshika Malik; *Blueprint for Resilience: Goa's Innovative Model in Blended Climate Finance and Sustainable Development*; March 2024** (paper **accepted** for peer-review and publication with Bloomsbury Publishers in an edited book of consortium of articles/papers on Climate Change).
2. **Pradip Sarmokadam, Lalita Vithal Baragi, Shruthi Vasudev Adpaikar; *Global Synergy for Climate Resilience: Cross-Border Collaboration in Climate Adaptation and Mitigation*; March 2024;** (paper **accepted** for peer-review and publication with Bloomsbury Publishers in an edited book of consortium of articles/papers on Climate Change).
3. **Pradip Sarmokadam, Lalita Vithal Baragi, Priya Bharti, Simran Sharma;** A Comparative Analysis of Four Wetlands in Goa Across Different Landscapes and Anthropogenic Pressures and Evaluating Changes in their Ecosystem Services Using the InVEST Model. 18th International Conference on Wetland Systems for Water Pollution Control (Abstract Accepted for poster presentation at the La Batelière hotel in Martinique)

2) Capacity building programmes - Training/workshops and awareness programmes and number of beneficiaries

Workshop

- 1) **Goa State Climate Change Cell team** organised a One-day National-level Workshop titled 'Understanding Opportunities in Climate Finance & **Budgetary Analysis Perspective for the State of Goa**', 19 April 2024.

GSCCC organised a One-day National-level Workshop titled 'Understanding Opportunities in Climate Finance & **Budgetary Analysis Perspective for the State of Goa**' in collaboration with NABARD, on 19 April 2024. The Guided Workshop assigned Mentors from NABARD, Celestial Earth, TERI, CSIR-NIO and GSBB-GSCCC to the participating Departmental Officers. The mentors helped the Officers in identifying financial allocation by each sector towards climate change, including schemes linked with climate change already in place at various Government Departments and to help indicate some of the projects indirectly connected to mitigation or adaptation measures being carried out in the State. Departments then presented

their budgetary tables for feedback from the expert panellists and later submitted the updated tables to GSCCC for further action. This exercise was an important contribution for any additions and modifications to the State Action Plan for Climate Change in Goa.
No. of beneficiaries = 100 people

2) **Goa State Climate Change Cell team** organised a Two-day National-level Workshop titled 'Advancing India's 30 x 30 target through exploring Other Effective area-based Conservation Measures (OECMs)', 26-27 June 2024.

National Workshop on "Advancing India's 30x30 Target through exploring Other Effective Area-based Conservation Measures (OECMs)" was organized by Goa State Biodiversity Board and Goa State Climate Change Cell in collaboration with National Biodiversity Authority, Government of Goa and Wildlife Conservation Society – India.

Over these two days, participants engaged in discussions about India's path to meeting the 30x30 target. They examined the status and challenges of declaring OECMs and featured presentations on India's protected area network, opportunities presented by OECMs, and various Indian ecosystems' unique contexts.

The World Cafe session explored key themes: recognition of OECMs, management strategies, regulatory frameworks, monitoring and reporting mechanisms, and funding options. The workshop provided a platform for experts to exchange knowledge, discuss challenges, and propose innovative solutions for enhancing biodiversity conservation through OECMs.

Primarily, it played a significant role in devising a roadmap for implementing the 30x30 target, balancing biodiversity protection with local communities' needs. The draft workshop outcome was shared with the National Biodiversity Authority for input to their OECMs subcommittee.

3) **Details of Personnel trained /Human Resources Development & skill Enhancement trainings**

Conference / Workshop / Seminar / Meetings

- 1) **Michelle Fernandes**; Interview - Oral Histories for Net Zero Futures; Transitions Research; 03 April 2024.
- 2) **Michelle Fernandes and Shruthi Adpaikar**; National Climate Change Conclave: Inception, Implementation and Impacts; Research and Innovation Park, IIT Delhi; 27-28 May 2024.
- 3) **Lalita Vithal Baragi**; GIS Based Environmental Conservation Information System; 30 April 2024
- 4) **Michelle Fernandes**; Workshop on One Health and Agroecology: Building Synergies; Ministry of Environment, Forest and Climate Change, Government of India with support of *Deutsche Gesellschaft für Internationale Zusammenarbeit*, Germany (GIZ), 03 June 2024, New Delhi.
- 5) **Pradip Sarmokadam and Lalita Vithal Baragi** Knowledge and Training Programme for Promoting Natural Climate Solutions in India State Roundtable, Forest Department, Panaji, Goa; organized by Office of the PCCF (HoFF) and supported by The Nature Conservancy, Goa on June 19, 2024.
- 6) **Lalita Vithal Baragi and Shruthi Adpaikar**; Hexagon Indias technical summit 2024 on 20 June 2024.

4) Knowledge Centres established/strengthened

- 1) Coastal Biodiversity Management Committees taken under the wings of Goa State Climate Change Cell for SAPCC implementation.
- 2) Knowledge sharing and promoting awareness about Goa's State Action Plan for Climate Change - Several MOUs are signed including those with DMs College, Vidya Prabodhini and Parsekar College and Kokum Design Trust - ActForGoa; MoU Signed 13 November 2023: to establish enduring, effective collaboration between Kokum Design Trust (ActForGoa) and the GSBB-GSCCC, focusing on implementing the Goa State Climate Action plan and various biodiversity and habitat conservation initiatives in Goa. This partnership aims to advance Goa's Resource Efficiency and Circular Economy strategy while supporting the sustainable advancement of Goa, mindful of the SDGs and Climate Action imperatives. Commencing with promoting awareness and implementing Goa's New Climate Action Plan, this effort will start by supporting the implementation and awareness around Goa's new Climate Action Plan.

5) Any other activity/technical outcome

PROJECTS:

1. State Action Plan for Climate Change for the State of Goa (SAPCC)

1) Goa SAPCC Status

Vulnerability Assessment and data projections were an integral component while preparing Goa's SAPCC and hence efforts to update the same is in continuous progress.

- a. Goa's SAPCC received Cabinet Approval on 28.10.2020.
- b. Further, submitted to MoEFCC-23/02/2021 vide email.
- c. Revised SAPCC after incorporating suggestions was submitted to MoEFCC on 15.06.2021 vide email.
- d. 16th Meeting of the NSC on CC held on 24.08.2022 approved Goa SAPCC *in principle* and Minutes of the meeting were conveyed by MoEFCC on 26.09.2022.

2) 3-tier System functioning to review the SAPCC performance

- i. Government of Goa notified (Sept 2021) State Governing Council comprising of 18 members headed by Hon'ble Chief Minister, Goa State.
- ii. Government of Goa notified (Sept 2021) State Level Steering Committee for Climate Change (reconstituted) comprising of 31 members headed by Chief Secretary, Govt. of Goa.
- iii. Government of Goa notified (Sept 2021) Climate Change Cell (will function as Climate Change Secretariat) comprising of 11 members headed by Secretary, Environment, Govt. of Goa.

***SAPCC progress review meetings are conducted up to the standing of the State Level Steering Committee for Climate Change.**

Proposal was submitted to the Ministry of Science & Technology for funding Climate Change Cell in Goa for 'National Mission on Strategic Knowledge for Climate Change (NMSKCC) in March 2022.

3) Budgetary Analyses workshop, 19 April 2024

Factoring climate action into the State Budget annually can contribute to the economic progress and aid in climate-proofing Goa and its investments. The same may get revised or updated over the years based on any additions or modifications to the State Action Plan for Climate Change (SAPCC). Hence a need to re-visit the budgetary analyses stated under the various key sectors like transportation, agriculture, water, power, waste management, tourism, mining, forest, human health and habitat is proposed. This workshop held on 19 April 2024, focussed on the schemes linked with climate change already in place at various Government Departments and some of the projects indirectly connected to mitigation or

adaptation measures being carried out in the State. It was observed in the last budgetary analyses workshop that 1.1 % of the State GDP was committed for implementing the SAPCC in Goa through various schemes, programs, initiatives and projects through State and other funds, which is 1.1 % of the Annual Budget (estimated for 2020), which was an unaccounted leap from the initial envisaged calculation of 0.5 % as received from the raw data from the Government Departments prior to the previous Guided Budgetary Analyses Workshop carried out in the State. Hence it was necessary to conduct another Budgetary Analyses Workshop to get the exact precise figures on budgets linked to climate change activities already in place at the Departments and to further enlist and chalk out the budget for the new measures that can be taken for climate change mitigation and adaptation strategies.

Good turnout of all the State Government Departmental SAPCC Nodal Officers = 83

2. NAFCC Project (National Adaptation Fund for Climate Change)

Project / Programme Sector: Agricultural and Biodiversity Resilience

Project Title: Development of sustainable models for strengthening, systematizing, and promoting climate change resilient methods of integrated Agriculture Management by attempting convergence of Governance and participatory approach.

Project proponents: Goa State Biodiversity Board through Goa State Climate Change Cell, Department of Agriculture, and Gomantak Goseva Mahasangh and other related Government Departments.

Objectives: a) To create two climate change resilient models of integrated agriculture management, including Khazan restoration (being vulnerable to climate change), to support farmers and allied sectors to implement climate-resilient practices in day-to-day farming such as climate-smart community seed banks, in-situ and ex-situ conservation of climate resilient germplasm, including climate-smart paddy varieties (rice park), and other livelihood-based climate resilient activities.

b) To enhance climate resilience of low-lying agricultural lands near the coastline of the selected beach stretch / riverine bank areas through appropriate interventions such as control of beach and river bank erosion and reviving population of edible clams/ Oysters/mussels etc.

Status: Ongoing

3. Blended Finance Project with World Bank

Project Title: ‘Climate & Disaster-Resilient Greener Goa’ (CDRGG) - with a multi-sectoral approach including Clean Energy, Green Tourism, Green Economy & Disaster Risk Reduction Based Sustainable Growth with Convergence of Governance.

Aim: The project aims to foster low-carbon, climate and disaster resilient development through multisectoral investments and leveraging climate finance.

Objectives: (a) Enhancing resilience of coastline, riverine and forest ecosystems; (b) Scaling low-carbon infrastructure in key sectors; and (c) Strengthening Institutions and Financing Mechanisms.

Status: i) The PPR uploaded on the Portal of the Department of Economics Affairs, Ministry of Finance was scrutinized and recommended by MoEFCC, NITI Aayog, MNRE and MHA. After final nod from DEA, a Detailed Project Report will be submitted with incorporation of suggestions and comments from MoEFCC, NITI Aayog, MNRE and MHA.

4. Installation of Automatic Weather Stations

As part of the National Mission on Strategic Knowledge for Climate Change Project (NMSKCC), we plan to set up meteorological stations in vulnerable ecosystems in coastal areas, uplands and the proximity area of western ghats in Goa along with phenological monitoring cameras. In this regard, we

are signing MoU with the Indian Meteorological Department and BITS Goa for the Automatic Weather Stations.

Status: Pending

5. State Biodiversity State Action Plan (SBSAP)

The Goa State Biodiversity Action Plan (GSBAP) is currently under development, with data collection and consultations ongoing. The plan aims to document the state's biodiversity in detail and create a strategy for its conservation, linking it to the livelihoods of local populations. The preparation of the plan is based on input from various stakeholders, including the public, biodiversity management committees, scientists, and experts.

Status: Ongoing

- 1) The Wetland component of SBSAP is complete and submitted for further review.
- 2) Health sector compilation in progress

6. Salt Pan

The Special Task Committee of the GoVan Project has been constituted by GSBB and Goa State Climate Change Cell (GSCCC) is appointed committee member. The Special Task Committee of GoVan Project is committed to identifying the traditional knowledge and activities related to salt pans and the associated Khazan ecosystem.

Status: Ongoing

7. Beach Nourishment and Sand Dune Restoration – Cavelossim Project

This will be a model for climate resilience in coastal areas. Coastal studies carried out by Cavelossim beach is getting eroded so we will be involved in beach nourishment and restoration activities.

Status: Ongoing

8. Monsoon Observer Project

It is a collaborative effort between Goa State Climate Change Cell and SATARK to study and understand the behavior of the monsoon in the region. We distributed rain gauges and wet & dry thermometers to students, BMC members, and locals. Daily rainfall data of the State of Goa is updated on the Citizen Science app for early warning alerts. Also, data on temperature and humidity is collected on a daily basis.

Status: Ongoing

9. Green Crackers

The Green Crackers initiative aims to promote the use of environmentally friendly fireworks during festivals and celebrations. These crackers are designed to produce less pollution and noise compared to traditional fireworks, thus reducing their impact on the environment and public health. By encouraging the adoption of Green Crackers, the initiative seeks to strike a balance between preserving cultural traditions and safeguarding the planet. Through innovation and awareness, it aspires to create a more sustainable and enjoyable way of celebrating special occasions.

Status: Pending

10. Green Skilling Committee

It is constituted by Goa State Biodiversity Board for designing, implementation and skilling for building ecofriendly water retention/ bunds structure across the State of Goa. Till date 5 meetings have been conducted.

Status: Ongoing

11) Rare Bird species in Mangroves Project

Morphological description and documentation of feeding, territorial and breeding behavior of an endemic bird species found in the mangrove zones in Goa. This will include a complete structural study

of the unique bird species which may qualify as a *Keystone Species* indicating the health of the mangrove ecosystem in Goa.

Status: Ongoing.

Sight survey for the bird nesting sites was conducted in collaboration with the Bird Institute of Goa.

12) Kyasanur Forest Disease (KFD) Management initiative under One Health Approach project

As part of our comprehensive approach with stakeholders from climate change perspective to understand, address and manage KFD, we are in the process of compiling a detailed concept note. This note aims to outline strategies and measures for the effective management and control of KFD, with a particular focus on understanding the wildlife vectors involved, especially monkey populations and their habitats in Goa.

Status: Preliminary Discussion Stage

13) Installation of Early Warning System

As part of the National Mission on Strategic Knowledge for Climate Change Project (NMSKCC), we're planning to set up an early warning system for vulnerable ecosystems in coastal areas, uplands, and near the Western Ghats in Goa. A collaborative meeting is underway to discuss the progress and requirements for this system. We aim to enhance preparedness and response capabilities against natural disasters and environmental threats.

Status: Ongoing

1) Details of Publications/Articles/News reports etc

1) Draft Report on Shoreline Changes along the Coast of Goa.

A report on the assessment of the Shoreline changes for the coast of Goa was prepared for the Department of Environment and Climate Change, Government of Goa, by the National Centre for Sustainable Coastal Management (NCSCM), Chennai, as part of vulnerability assessment studies of the Goa State Climate Change Cell.

2) Capacity building programmes - Training/workshops and awareness programmes and number of beneficiaries

Workshops

- 1) Goa State Climate Change Cell in association with GIZ, organised a 'Stakeholder Consultation Meeting: Reducing the Risk of **Kyasanur Forest Disease (KFD)** transmission to foresters and communities dwelling near the forest as well as to monkeys in Goa', 14-15 October 2024; Legislative Assembly Block, Secretariat, Porvorim.

The objective of the meeting was to understand the current KFD scenario in Goa and the lessons learned from Karnataka on KFD management for developing a joint vision and specific goals for the planned measure in Goa. In addition, the SMART (Specific, Measurable, Achievable, Relevant, and Time-Bound) indicators to measure implementation success, immediate steps to be taken in 2024, and the way forward for 2025 were discussed.

Officials from the Directorate of Health Services, Forest Department, Department of Animal Husbandry and Veterinary Services, North and South District Collector's Office, Goa University, Birla Institute of

Technology and Science Pilani, Goa, and KFD experts from the National One Health Mission Project Management Unit, participated in the meeting.

No. of beneficiaries = 40 people

- 2) Goa State Climate Change Cell, in collaboration with the Mineral Foundation of Goa and the Goa Bird Conservation Network, hosted a series of workshops to focus on a new research study of the **White-Bellied Sea Eagle** (*Haliaeetus leucogaster*), aiming to document its nesting sites; 17 October 2024, Shree Mallikarjun and Shri Chetan Desai Manju College, Canacona, South Goa.

No. of beneficiaries = 39 people

19 October, 2024, Carmel College, Nuvem, Margao, South Goa.

No. of beneficiaries = 40 people

Public Lectures / Panel discussion

- 1) **Pradip Sarmokadam**, Resource Person, Session on buyer-seller meet at Krishi Vigyan Kendra KVK South Goa, 01 Dec 2024.
- 2) **Pradip Sarmokadam**, Resource Person, Talk on Biodiversity Conservation, ESG and CSR Summit; 05 Dec 2024.
- 3) **Michelle Fernandes**; Resource Person on Climate Action in Goa; Goa University, Taleigao Goa; 13 Dec 2024. **Beneficiaries = 37 Teaching faculty members**
- 4) **Pradip Sarmokadam**, Presentation on developing and mainstreaming a sustainable and regenerative model of tourism in Goa; 18 Dec 2024.

State-level Creative Competition

The Goa State Climate Change Cell of the Goa State Biodiversity Board (GSCCC-GSBB), along with other departments, is establishing a **Special Purpose Vehicle (SPV) in the form of a new company under the Goa State Government's Blended Finance Initiative** to pool resources and strengthen climate resilience across the State. This SPV will be instrumental in channelling funds from multilateral and other sources to support diverse climate adaptation and mitigation strategies in the State of Goa, to combat climate challenges like rising temperatures, sea level rise and changing rainfall patterns; thereby to create a 'Climate & Disaster – resilient Greener Goa'.

To give this new company a distinct identity, the GSCCC-GSBB invited entries from the wider public including students & youth to participate in a creative competition to propose a name, logo, and a multi-lingual motto that represents its mission and vision.

3) Details of Personnel trained /Human Resources Development & skill Enhancement trainings

Conference / Workshop / Seminar / Meetings

- 1) **Michelle Fernandes, Lalita Baragi and Apurva Sawant**; 5th Core Committee meeting for the preparation of the Goa State Biodiversity Strategy and Action Plan (GSBSAP); National Institute of Oceanography (NIO), Dona Paula, Goa; 11 Nov 2024.
- 2) **Rupesh Velip**; India International Trade Fair 2024; Bharat Mandapam, New Delhi; 13-19 Nov 2024.

- 3) **Michelle Fernandes facilitated, and the Goa State Climate Change Cell team** participated in, the National Workshop on Capacity Building for Erosion Study in the State of Goa; Nanu Beach Resort, Betalbatim-Goa; 18-19 Nov 2024.
- 4) **Lalita Baragi**; GIS workshop; Goa Institute of Public Administration and Rural Development (GIPARD); 21-22 Nov 2024.
- 5) **Michelle Fernandes**; Participatory Conscious Planning workshop; Xaviers Historical Centre, Porvorim, 23 Nov 2024.
- 6) **Apurva Sawant**; Urban Development workshop, Hyderabad, India; 29-30 Nov 2024
- 7) **Rupesh Velip**; LOK UTSAV 2024; Adarsh Gram, Amone, Poinguinim, Canacona; 6-8 December, 2024.
- 8) **Lalita Baragi**; Program for regional-level pollution response exercise (RPREX)-2024, organised by Indian Navy & Govt. of Goa; Majorda, 9-10 Dec 2024.
- 9) **Pradip Sarmokadam**; Annual State Credit Seminar, 16 Dec 2024.

4) Collaborative Visits/Field Visits

1. **Landslide field visit** under the chairmanship of the District Collectors, October 16, 2024.

As part of the initiatives of the reconstituted Landslide Committee, a field visit to assess the landslide-prone areas in Sattari was conducted, specifically at the site near Valpoi. This visit aimed to examine the potential causes and conditions of the landslide, analyze the environmental and anthropogenic factors involved, and discuss possible mitigation strategies.

2. **Oil spill mock drill: Shoreline clean-up at Majorda beach**, 11 December 2024.

The oil spill mock drill was conducted to control and curtail environmental damage due to oil spills.

5) Knowledge Centres established/strengthened

Nil

6) Any other activity/technical outcome

PROJECTS:

1. State Action Plan for Climate Change for the State of Goa (SAPCC)

1) **Goa SAPCC Status**

Budgetary gap analyses

Factoring climate action into the State Budget annually can contribute to the economic progress and aid in climate-proofing Goa and its investments. The same may get revised or updated over the years based on any additions or modifications to the State Action Plan for Climate Change (SAPCC). Hence, the budgetary analyses stated under the various key sectors like transportation, agriculture, water, power, waste management, tourism, mining, forest, human health and habitat are ongoing. Departments are also entrusted to further enlist and chalk out the budget for the new measures that can be taken for climate change mitigation and adaptation strategies.

Status: Guided one-to-one Budgetary analyses at the departmental level in progress.

2. NAFCC Project (National Adaptation Fund for Climate Change)

Project / Programme Sector: Agricultural and Biodiversity Resilience

Project Title: Development of sustainable models for strengthening, systematizing, and promoting climate change resilient methods of integrated Agriculture Management by attempting convergence of Governance and participatory approach.

Project proponents: Goa State Biodiversity Board through Goa State Climate Change Cell, Department of Agriculture, and Gomantak Goseva Mahasangh and other related Government Departments.

Objectives: a) To create two climate change resilient models of integrated agriculture management, including Khazan restoration (being vulnerable to climate change), to support farmers and allied sectors to implement climate-resilient practices in day-to-day farming such as climate-smart community seed banks, in-situ and ex-situ conservation of climate resilient germplasm, including climate-smart paddy varieties (rice park), and other livelihood-based climate resilient activities.

b) To enhance climate resilience of low-lying agricultural lands near the coastline of the selected beach stretch / riverine bank areas through appropriate interventions such as control of beach and river bank erosion and reviving population of edible clams/ Oysters/mussels etc.

Status: Ongoing

3. Blended Finance Project with World Bank

Project Title: 'Climate & Disaster-Resilient Greener Goa' (CDRGG) - with a multi-sectoral approach including Clean Energy, Green Tourism, Green Economy & Disaster Risk Reduction Based Sustainable Growth with Convergence of Governance.

Aim: The project aims to foster low-carbon, climate and disaster-resilient development through multisectoral investments and leveraging climate finance.

Objectives: (a) Enhancing resilience of coastline, riverine and forest ecosystems; (b) Scaling low-carbon infrastructure in key sectors; and (c) Strengthening Institutions and Financing Mechanisms.

Status: Ongoing i) The PPR uploaded on the Portal of the Department of Economics Affairs, Ministry of Finance was scrutinized and recommended by MoEFCC, NITI Aayog, MNRE and MHA. After final nod from DEA, a Detailed Project Report will be submitted with incorporation of suggestions and comments from MoEFCC, NITI Aayog, MNRE and MHA.

4. Installation of Automatic Weather Stations

As part of the National Mission on Strategic Knowledge for Climate Change Project (NMSKCC), we plan to set up meteorological stations in vulnerable ecosystems in coastal areas, uplands and the proximity area of western ghats in Goa along with phenological monitoring cameras. In this regard, we are signing MoU with the Indian Meteorological Department and BITS Goa for the Automatic Weather Stations.

Status: Ongoing. Installation complete at GSPCB. Two ongoing – GSBB and at the Secretariat, Porvorim.

5. State Biodiversity State Action Plan (SBSAP)

The Goa State Biodiversity Action Plan (GSBAP) is in its final stage. The document will be available for public viewing. The plan includes extensive documentation of the State's biodiversity in detail and a strategy for its conservation, linking it to the livelihoods of local populations. The plan's preparation is based on input from various stakeholders, including the public, biodiversity management committees, scientists, and experts.

Status: Finalisation before launching online for public-viewing

6. Salt Pan

The Special Task Committee of the GoVan Project has been constituted by GSBB and Goa State Climate Change Cell (GSCCC) is appointed committee member. The Special Task Committee of

GoVan Project is committed to identifying the traditional knowledge and activities related to salt pans and the associated Khazan ecosystem.

Status: Village-wise cluster meetings are being planned.

7. Beach Nourishment and Sand Dune Restoration – Cavellosim Project

This will be a model for climate resilience in coastal areas. Coastal studies carried out by Cavellosim beach is getting eroded so we will be involved in beach nourishment and restoration activities.

Status: Sand dune vegetation initiated

8. Monsoon Observer Project

It is a collaborative effort between Goa State Climate Change Cell and SATARK to study and understand the behavior of the monsoon in the region. We distributed rain gauges and wet & dry thermometers to students, BMC members, and locals. Daily rainfall data of the State of Goa is updated on the Citizen Science app for early warning alerts. Also, data on temperature and humidity is collected on a daily basis.

Status: The above project is being merged into a new umbrella program, called the, All- Season Observer Program, which will be launched soon. Workshop to re-distribute the weather monitoring gadgets is being scheduled.

9. Green Crackers

The Green Crackers initiative aims to promote the use of environmentally friendly fireworks during festivals and celebrations. These crackers are designed to produce less pollution and noise compared to traditional fireworks, thus reducing their impact on the environment and public health. By encouraging the adoption of Green Crackers, the initiative seeks to strike a balance between preserving cultural traditions and safeguarding the planet. Through innovation and awareness, it aspires to create a more sustainable and enjoyable way of celebrating special occasions.

Status: Launched in the State at Chaturthi celebrations in August 2024.

10. Green Skilling Committee

It is constituted by Goa State Biodiversity Board for designing, implementation and skilling for building ecofriendly water retention/ bunds structure across the State of Goa. Till date 5 meetings have been conducted.

Status: Ongoing

11) Initiative to explore a Bird species expected to be rare & climate indicator species in mangroves ecosystem

Morphological description and documentation of feeding, territorial and breeding behavior of an endemic bird species found in the mangrove zones in Goa. This will include a complete structural study of the unique bird species which may qualify as a *Keystone Species* indicating the health of the mangrove ecosystem in Goa.

Status: Ongoing.

Sight survey for the bird nesting sites was conducted in collaboration with the Bird Institute of Goa.

12) White-bellied Sea-Eagle

Project title: ‘Assessing the population of White-bellied Sea-Eagle (WBSE) (*Haliaeetus leucogaster*) in Goa, Threats and Conservation Strategy’

The project's objective is to document this coastal bird's behaviour along the coastal belt of Goa and in a few unique freshwater habitats across the State, with specific information on nesting locations and ecology during the breeding season as well as assessing the threats and proposing a conservation strategy.

The project entails mapping the WBSE nests and population in the State through a citizen science approach involving the Biodiversity Management Committees (BMCs) and the Goa Board Conservation Network (GBCN), wherein GSBB-GSCCC will mobilise the respective BMCs in the Panchayats / Councils and the local communities to participate in the training workshops organised by GBCN and to support inclusion of the identified nesting locations/trees in the People's Biodiversity Register (PBR) of the respective BMCs. Enthusiastic students and teachers have also signed up for the initiative in the State.

Status: Ongoing.

13) Kyasanur Forest Disease (KFD) Management initiative under One Health Approach project

The Project "One Health and Agroecology" has been agreed upon between the Government of India and the Government of the Federal Republic of Germany and is being implemented by the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India, with support of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

The project aims to strengthen the institutional framework conditions and capacities at national, state, and local levels to develop and implement an integrated One Health and Agroecological approach for reducing risks to human, animal, and environmental health. Under this project, the pilot measure 'Reducing the Risk of Kyasanur Forest Disease (KFD) transmission to Foresters and Communities dwelling near the Forest as well as to Monkeys' is being implemented in the State of Goa.

A Stakeholder Consultation Meeting was organised by the Goa State Climate Change Cell of the Goa State Biodiversity Board (GSBB), the nodal agency for the project implementation in Goa, with support from GIZ. The objective of the meeting was to understand the current scenario of KFD in Goa and the lessons learned from Karnataka on the KFD management for developing a joint vision and specific goals for the planned measure in Goa. In addition, the SMART (Specific, Measurable, Achievable, Relevant, and Time-Bound) indicators to measure implementation success, immediate steps to be taken in 2024, and the way forward for 2025 were discussed.

Officials from the Directorate of Health Services, Forest Department, Department of Animal Husbandry and Veterinary Services, North and South District Collector's Office, Goa University, Birla Institute of Technology and Science Pilani, Goa, and KFD experts from the National One Health Mission Project Management Unit, participated in the meeting.

Status: Ongoing

14) Installation of Early Warning System

As part of the National Mission on Strategic Knowledge for Climate Change Project (NMSKCC), we are planning to set up an early warning system for vulnerable ecosystems in coastal areas, uplands, and near the Western Ghats in Goa. A collaborative meeting is underway to discuss the progress and requirements for this system. We aim to enhance preparedness and response capabilities against natural disasters and environmental threats.

Status: Ongoing

15) Carbon Removal Unit (Carbon Credit) Program

The Goa State Climate Change Cell of Goa State Biodiversity Board (GSBB), in collaboration with NABCONS (a subsidiary of NABARD), has launched the "Carbon Removal Unit (CRU) Plan" to promote agroforestry, combining tree planting with traditional crops to enhance farmers' resilience to climate change and generate Carbon Removal Units (CRUs) for sale as carbon credits. Approved by the Hon'ble Minister for Environment & Climate Change, the plan targets 2000 hectares, focusing on the Kulagar model and cashew plantations in Sattari and Bicholim talukas, with 1800 hectares already completed. Over 200 farmers from across Goa, including Valpoi, have joined, benefiting from sustainable practices and direct revenue from CRUs.

Status: Ongoing

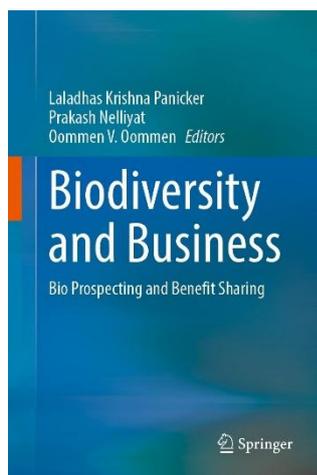
16) Biodiversity Conservation

Submitted a Proposal for developing biodiversity conservation in ONGC-ATI campus. The project focuses on developing an Apiculture unit and butterfly garden, protecting and enhancing the existing medicinal herbs, and replacing invasive Acacia plantations with native fruit bearing trees.

Status: Proposed

5) Details of Publications/Articles/News reports etc

Book Chapter publication:



Sarmokadam, P. V. and George, A. N. (2025) Traditional Knowledge and Bioeconomy Page 145 in Book Chapter edited by: Panicker LK, Nelliya P, Oommen OV. Biodiversity and Business: Bio Prospecting and Benefit Sharing: Springer Nature Switzerland; 2025.

Abstract: The preservation and transmission of traditional knowledge (TK) is crucial, as a vital aspect of cultural identity, also provides valuable insights into sustainable resource management practices, promoting ecological resilience and reducing the risk of environmental degradation. The intersection of traditional knowledge and bioprospecting holds immense potential for the bioeconomy. However, challenges such as biopiracy and the commodification of TK pose threats to its integrity and cultural significance, necessitating community-centered governance structures that prioritize local ownership and participation. Goa, with its

rich biodiversity and diverse cultural heritage, presents interesting possibilities for leveraging traditional knowledge and bioprospecting for the bioeconomy. Goa State Biodiversity Board has added a few more formats in addition to those prescribed by the National Biodiversity Authority, like recording practices of using bioresources from birth to death in various communities and another format is prescribed for human-animal conflict and its management.

6) Capacity building programmes - Training/workshops and awareness programmes and number of beneficiaries

Workshops

The Goa State Climate Change Cell of the Goa State Biodiversity Board organized a workshop titled “Creating a Green Niche for a Greener Tomorrow” on March 11, 2025, at the Village Panchayat Borim, Ponda, South Goa. The workshop focused on sustainable agriculture practices for local farmers, BMC members, and Village Panchayat representatives. It was inaugurated by local MLA Shri. Subhash Shirodkar and MS GSBB Dr. Pradip Sarmokadam. Topics included site selection, kitchen gardening, preparation of *Jivamrut* and bio-enzyme solutions, seed germination, and hands-on training in *Kokedama* and grafting techniques. The goal was to provide participants with the knowledge and skills to promote sustainable farming and contribute to a climate-resilient future.

No. of beneficiaries = 230 people



Creating a Green Niche for a Greener tomorrow – Workshop organised by Goa State Climate Change Cell, Borim Village Panchayat, Ponda, South Goa; 11 March 2025.

Public Lectures / Panel discussion

- 5) **Pradip Sarmokadam**; National Seminars on “Technological Innovations for Transforming Agriculture”;ICAR-CCARI, 23 January 2025.
- 6) **Apurva Sawant**; Resource person, talk on Increasing Carbon-sink, Borim Village Panchayat, 30 January 2025.
- 7) **Lalita Baragi**; Talk on Protecting Wetlands for a Sustainable Future; Chubby Cheeks School, Porvorim-Goa; 04 February 2025
- 8) **Lalita Baragi**; Talk on Protecting Wetlands for a Sustainable Future; Pillar St Agnel College, Goa Velha; 05 February 2025.
- 9) **Apurva Sawant**; Talk on the Importance of Research & Invention at Borim Village Panchayat, Ponda-Goa, 25 February 2025.
- 10) **Apurva Sawant and Saloni Kakodkar**; Workshop on the occasion of Science Day: “Understanding Earth’s Ecosystem” at the Government Primary School, Taligao-Goa, on 27th February 2025.

State-level Creative Competition

The Goa State Climate Change Cell of the Goa State Biodiversity Board (GSCCC-GSBB), along with other departments, is establishing a **Special Purpose Vehicle (SPV) in the form of a new company under the Goa State Government’s Blended Finance Initiative** to pool resources and strengthen climate resilience across the State. This SPV will be instrumental in channelling funds from multilateral and other sources to support diverse climate adaptation and mitigation strategies in the State of Goa, to combat climate challenges like rising temperatures, sea level rise and changing rainfall patterns; thereby to create a ‘Climate & Disaster – resilient Greener Goa’.

To give this new company a distinct identity, the GSCCC-GSBB invited entries from the wider public including students & youth to participate in a creative competition to propose a name, logo, and a multi-lingual motto that represents its mission and vision.

The selection process was held with an esteemed Screening Committee and the winners of the All-Goa Creative Competition will be declared soon.

7) Details of Personnel trained /Human Resources Development & skill Enhancement trainings

Conference / Workshop / Seminar / Meetings

- 4) **Lalita Baragi & Apurva Sawant**; Kitchen Gardening Training Program; Calangute Panchayat Goa; 01 January 2025.
- 5) **Lalita Baragi & Apurva Sawant**; Stakeholder Consultation Meeting; Water Resource Department; Porvorim- Goa; 09 January 2025.
- 6) **Apurva Sawant and Rupesh Velip**; Lecture on Cultivation and uses of local herbs; Sant Sohirobanath Ambiye Government College of Arts & Commerce, Virnoda, Pernem – Goa; 22 January 2025.
- 7) **Goa State Climate Change Cell team**; Blended Climate Finance Facility Working Group Committee 2nd Meeting and Round-table meeting regarding Draft Final Report on Low Carbon and Climate Resilient Goa.; Conference Room, Mantralaya, Porvorim Secretariat- Goa.; 23 January 2025.

- 8) **Michelle Fernandes & Rupesh Velip**; Public Lecture on Climate Change, ICG, Dona Paula- Goa, 24 January 2025
- 9) **Lalita Baragi**; Meeting with Flory Fernandes PES Collage regarding Salt Pan, Goa State Biodiversity Board; 13 February 2025.
- 10) **Goa State Climate Change Cell team**; Online session on Vigyan Dhara Scheme; 17 February 2025.
- 11) **Apurva Sawant, Saloni Kakodkar & Soniya Gaude (GSCCC Intern)**; Turtle Nesting Awareness Program; Morjim Beach; 03 March 2025.
- 12) **Michelle Fernandes & Lalita Baragi**; Coral Monitoring Meeting; Goa State Biodiversity Board; 03 March 2025.
- 13) **Saloni Kakodkar**; Women's Safety Training; Goa Institute of Public Administration & Rural Development GIPARD; 05 March 2025.
- 14) **Goa State Climate Change Cell team**; Post Budget Webinar 2025; Online; 05 March 2025.
- 15) **Michelle Fernandes**; Workshop on Khazans; Goa Sanskruthi Bhavan, Panaji; 08 March 2025.
- 16) **Michelle Fernandes**; Meeting with Reef Watch and Royal Enfield to discuss marine recovery infrastructure; Goa State Biodiversity Board; 13 March 2025.
- 17) **Michelle Fernandes**; Meeting on Community & Conservation of Biodiversity; Village Panchayat Parcem, Pernem- Goa; 15 March 2025.
- 18) **Lalita Baragi**; Training program on Management of Adolescent Problems; Goa Institute of Public Administration & Rural Development GIPARD; 17 March 2025.

8) Collaborative Visits/Field Visits

3. **Mopa Plantation field visit at Mopa Airport**; to check Survival & Density of trees, 29 January 2025.
4. **ONGC site inspection**; Confirmation of site, Butterfly garden & Floral garden 29 January 2025.
5. **OECM site visit at Surla**, 29 January 2025.
6. **Field visit for Muscle Culturing at Anjuna**, 04 March 2025.
7. **2nd Human Induced Landslide Field Visit at Collectorate North Goa & South Goa**, 07 March 2025.
8. **Field visit to inspect Khazans, sluice gates, bunds and mangroves in Mercas**, 08 March 2025.

5) Knowledge Centres established/strengthened

Nil

6) Any other activity/technical outcome

PROJECTS:

1. State Action Plan for Climate Change for the State of Goa (SAPCC)

2) Goa SAPCC Status

Budgetary gap analyses

Factoring climate action into the State Budget annually can contribute to the economic progress and aid in climate-proofing Goa and its investments. The same may get revised or updated over the years based on any additions or modifications to the State Action Plan for Climate Change (SAPCC). Hence, the budgetary analyses stated under the various key sectors like transportation, agriculture, water, power, waste management, tourism, mining, forest, human health and habitat are ongoing. Departments are also entrusted to further enlist and chalk out the budget for the new measures that can be taken for climate change mitigation and adaptation strategies.

Status: Guided one-to-one Budgetary analyses at the departmental level in progress.

Department of Tourism budget compilations in progress.

2. NAFCC Project (National Adaptation Fund for Climate Change)

Project / Programme Sector: Agricultural and Biodiversity Resilience

Project Title: Development of sustainable models for strengthening, systematizing, and promoting climate change resilient methods of integrated Agriculture Management by attempting convergence of Governance and participatory approach.

Project proponents: Goa State Biodiversity Board through Goa State Climate Change Cell, Department of Agriculture, and Gomantak Goseva Mahasangh and other related Government Departments.

Objectives: a) To create two climate change resilient models of integrated agriculture management, including Khazan restoration (being vulnerable to climate change), to support farmers and allied sectors to implement climate-resilient practices in day-to-day farming such as climate-smart community seed banks, in-situ and ex-situ conservation of climate resilient germplasm, including climate-smart paddy varieties (rice park), and other livelihood-based climate resilient activities.

b) To enhance climate resilience of low-lying agricultural lands near the coastline of the selected beach stretch / riverine bank areas through appropriate interventions such as control of beach and river bank erosion and reviving population of edible clams/ Oysters/mussels etc.

Status: Ongoing

3. Blended Finance Project with World Bank

Project Title: 'Climate & Disaster-Resilient Greener Goa' (CDRGG) - with a multi-sectoral approach including Clean Energy, Green Tourism, Green Economy & Disaster Risk Reduction Based Sustainable Growth with Convergence of Governance.

Aim: The project aims to foster low-carbon, climate and disaster-resilient development through multisectoral investments and leveraging climate finance.

Objectives: (a) Enhancing resilience of coastline, riverine and forest ecosystems; (b) Scaling low-carbon infrastructure in key sectors; and (c) Strengthening Institutions and Financing Mechanisms.

Status: Ongoing i) The PPR uploaded on the Portal of the Department of Economics Affairs, Ministry of Finance was scrutinized and recommended by MoEFCC, NITI Aayog, MNRE and MHA. After final nod from DEA, a Detailed Project Report will be submitted with incorporation of suggestions and comments from MoEFCC, NITI Aayog, MNRE and MHA.

Presently, compiling responses to comments from DEA / Finance.

4. Installation of Automatic Weather Stations

As part of the National Mission on Strategic Knowledge for Climate Change Project (NMSKCC), we plan to set up meteorological stations in vulnerable ecosystems in coastal areas, uplands and the proximity area of western ghats in Goa along with phenological monitoring cameras. In this regard, we are signing MoU with the Indian Meteorological Department and BITS Goa for the Automatic Weather Stations.

Status: Ongoing. Installation complete at GSPCB. Two ongoing – GSBB and at the Secretariat, Porvorim.

5. State Biodiversity Strategic Action Plan (SBSAP)

The Goa State Biodiversity Strategic Action Plan (GSBSAP) is in its final stage. The document will be available for public viewing. The plan includes extensive documentation of the State's biodiversity in detail and a strategy for its conservation, linking it to the livelihoods of local populations. The plan's preparation is based on input from various stakeholders, including the public, biodiversity management committees, scientists, and experts.

Status: Finalisation before launching online for public-viewing

6. Salt Pan

The Special Task Committee of the GoVan Project has been constituted by GSBB and Goa State Climate Change Cell (GSCCC) is appointed committee member. The Special Task Committee of GoVan Project is committed to identifying the traditional knowledge and activities related to salt pans and the associated Khazan ecosystem.

Status: Village-wise cluster meetings are being planned.

7. Beach Nourishment and Sand Dune Restoration – Cavelossim Project

This will be a model for climate resilience in coastal areas. Coastal studies carried out by Cavelossim beach is getting eroded so we will be involved in beach nourishment and restoration activities.

Status: Sand dune vegetation initiated

8. Monsoon Observer Project

It is a collaborative effort between Goa State Climate Change Cell and SATARK to study and understand the behavior of the monsoon in the region. We distributed rain gauges and wet & dry thermometers to students, BMC members, and locals. Daily rainfall data of the State of Goa is updated on the Citizen Science app for early warning alerts. Also, data on temperature and humidity is collected on a daily basis.

Status: The above project is being merged into a new umbrella program, called the, All- Season Observer Program, which will be launched soon. Workshop to re-distribute the weather monitoring gadgets is being scheduled before the coming monsoon season in Goa.

9. Green Crackers

The Green Crackers initiative aims to promote the use of environmentally friendly fireworks during festivals and celebrations. These crackers are designed to produce less pollution and noise compared to traditional fireworks, thus reducing their impact on the environment and public health. By encouraging the adoption of Green Crackers, the initiative seeks to strike a balance between preserving cultural traditions and safeguarding the planet. Through innovation and awareness, it aspires to create a more sustainable and enjoyable way of celebrating special occasions.

Status: Launched in the State at Chaturthi celebrations in August 2024. Making big plans to promote Green Crackers for Chaturthi 2025.

10. Green Skilling Committee

It is constituted by Goa State Biodiversity Board for designing, implementation and skilling for building ecofriendly water retention/ bunds structure across the State of Goa. Till date 5 meetings have been conducted.

Status: Ongoing

11) Initiative to explore a Bird species expected to be rare & climate indicator species in mangroves ecosystem

Morphological description and documentation of feeding, territorial and breeding behavior of an endemic bird species found in the mangrove zones in Goa. This will include a complete structural study of the unique bird species which may qualify as a *Keystone Species* indicating the health of the mangrove ecosystem in Goa.

Status: Ongoing.

Sight survey for the bird nesting sites was conducted in collaboration with the Bird Institute of Goa.

12) White-bellied Sea-Eagle

Project title: ‘Assessing the population of White-bellied Sea-Eagle (WBSE) (*Haliaeetus leucogaster*) in Goa, Threats and Conservation Strategy’

The project's objective is to document this coastal bird's behaviour along the coastal belt of Goa and in a few unique freshwater habitats across the State, with specific information on nesting locations and ecology during the breeding season as well as assessing the threats and proposing a conservation strategy.

The project entails mapping the WBSE nests and population in the State through a citizen science approach involving the Biodiversity Management Committees (BMCs) and the Goa Board Conservation Network (GBCN), wherein GSBB-GSCCC will mobilise the respective BMCs in the Panchayats / Councils and the local communities to participate in the training workshops organised by GBCN and to support inclusion of the identified nesting locations/trees in the People's Biodiversity Register (PBR) of the respective BMCs. Enthusiastic students and teachers have also signed up for the initiative in the State.

Status: Ongoing.

13) Kyasanur Forest Disease (KFD) Management initiative under One Health Approach project

The Project “One Health and Agroecology” has been agreed upon between the Government of India and the Government of the Federal Republic of Germany and is being implemented by the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India, with support of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

The project aims to strengthen the institutional framework conditions and capacities at national, state, and local levels to develop and implement an integrated One Health and Agroecological approach for reducing risks to human, animal, and environmental health. Under this project, the pilot measure ‘Reducing the Risk of Kyasanur Forest Disease (KFD) transmission to Foresters and Communities dwelling near the Forest as well as to Monkeys’ is being implemented in the State of Goa.

A Stakeholder Consultation Meeting was organised by the Goa State Climate Change Cell of the Goa State Biodiversity Board (GSBB), the nodal agency for the project implementation in Goa, with support from GIZ. The objective of the meeting was to understand the current scenario of KFD in Goa and the lessons learned from Karnataka on the KFD management for developing a joint vision and specific goals for the planned measure in Goa. In addition, the SMART (Specific, Measurable, Achievable, Relevant, and Time-Bound) indicators to measure implementation success, immediate steps to be taken in 2024, and the way forward for 2025 were discussed.

Officials from the Directorate of Health Services, Forest Department, Department of Animal Husbandry and Veterinary Services, North and South District Collector's Office, Goa University, Birla Institute of Technology and Science Pilani, Goa, and KFD experts from the National One Health Mission Project Management Unit, participated in the meeting.

Status: Ongoing

14) Installation of Early Warning System

As part of the National Mission on Strategic Knowledge for Climate Change Project (NMSKCC), we are planning to set up an early warning system for vulnerable ecosystems in coastal areas, uplands, and near the

Western Ghats in Goa. A collaborative meeting is underway to discuss the progress and requirements for this system. We aim to enhance preparedness and response capabilities against natural disasters and environmental threats.

Status: Ongoing

15) Carbon Removal Unit (Carbon Credit) Program

The Goa State Climate Change Cell of Goa State Biodiversity Board (GSBB), in collaboration with NABCONS (a subsidiary of NABARD), has launched the "Carbon Removal Unit (CRU) Plan" to promote agroforestry, combining tree planting with traditional crops to enhance farmers' resilience to climate change and generate Carbon Removal Units (CRUs) for sale as carbon credits. Approved by the Hon'ble Minister for Environment & Climate Change, the plan targets 2000 hectares, focusing on the Kulagar model and cashew plantations in Sattari and Bicholim talukas, with 1800 hectares already completed. Over 200 farmers from across Goa, including Valpoi, have joined, benefiting from sustainable practices and direct revenue from CRUs.

Status: Ongoing

16) Study of Landslides in Goa

The Reconstituted Landslide Committee, reconstituted vide Order No. 1/13/1/2020-RD/6159 dated 03/09/2024 under the chairmanship of the Collector, North Goa, was established to study the causes of landslides in Goa and propose effective restoration measures. Since its formation, the committee has made significant progress. The first meeting was held on 13 September 2024, followed by a field visit to the Santrem landslide site on 16 October 2024 to assess ground conditions and contributing factors. The second meeting and field visit, conducted on 7 March 2025, focused on examining human-induced landslides, further enhancing the committee's understanding of anthropogenic influences on slope stability. The ongoing efforts of the committee aim to develop science-based recommendations for landslide-prone regions in Goa.

Status: Ongoing

17) Biodiversity Conservation

Submitted a Proposal for developing biodiversity conservation in ONGC-ATI campus. The project focuses on developing an Apiculture unit and butterfly garden, protecting and enhancing the existing medicinal herbs, and replacing invasive Acacia plantations with native fruit-bearing trees.

Status: Proposed

18) Climate-smart Flora

The Goa State Climate Change Cell has embarked on an extensive initiative to implement climate-smart flora strategies in Goa. These include large-scale plantation of salt-tolerant rice varieties, drought-tolerant cashews, flood-resilient mangroves, nitrogen-fixing plants like legumes, economic-resilience flora and income-enhancing flora. Enhanced research and community participation led by GSCCC team will be key to ensuring the successful integration of these practices in the present scheme of matters involved in building a sustainable and resilient agricultural system in the State of Goa.