



Goa University

The Discipline of Biotechnology, School of Biological Sciences and Biotechnology

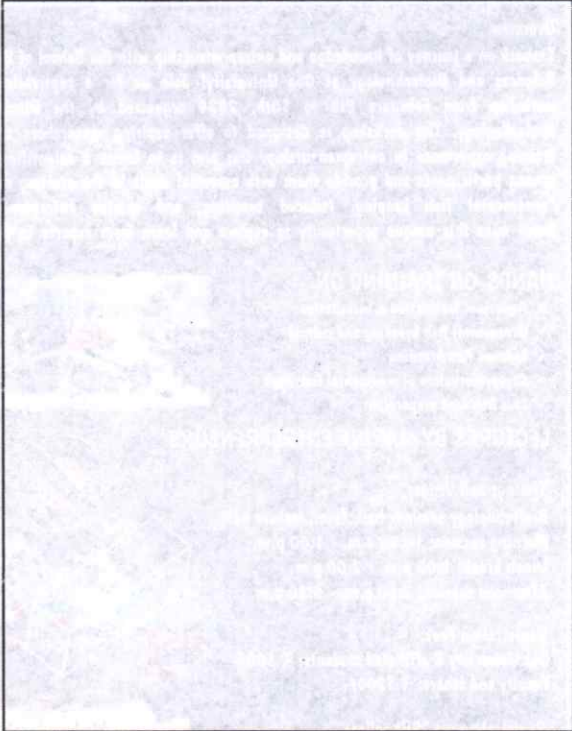
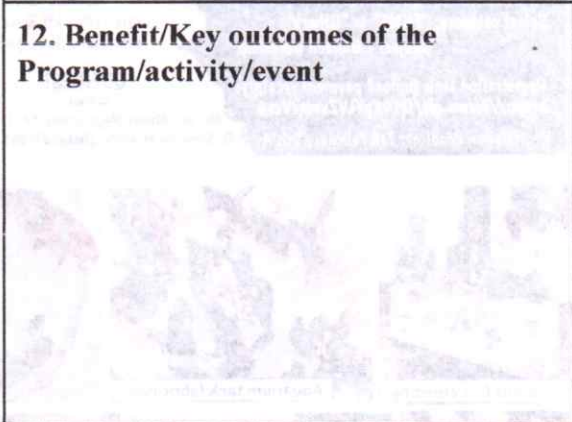
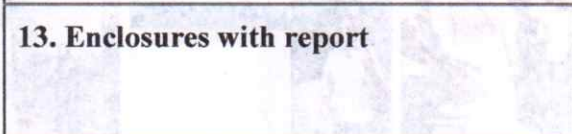
Report on



A Three-day workshop on ORNAMENTAL FISH KEEPING, INDUCED BREEDING AND MARINE ENTREPRENEURSHIP

8th – 10th February 2024, 10:00 a.m. - 5:30 p.m. at Faculty Block E, Goa University

1. Title of the Event/Activity/program	A Three-day workshop on ORNAMENTAL FISH KEEPING, INDUCED BREEDING AND MARINE ENTREPRENEURSHIP
2. Date and Time	8 th – 10 th February 2024, 10:00 a.m. - 5:30 p.m.
3. Mode of conduct (Physical/Online)	Physical
4. School/ Directorate/ Section	The Discipline of Biotechnology, School of Biological Sciences and Biotechnology
5. Collaborating Agency/School/Directorate	Nil
6. Detail of the Resource Person (Brief biodata)	<p>1. Dr. Hrishikesh Pawar, Scientist (Fisheries), Krishi Vigyan Kendra, Goa <i>Lecture and hands-on training on aquarium fabrication & installation.</i></p> <p>2. Ms. Gabriella D'Cruz, Marine Conservationist and Founder - The Good Ocean. Interactive session on "<i>Seaweed futures: Challenges and opportunities of new seaweed businesses in India</i>"</p> <p>3. Dr. Charan Ravi Scientist (ICAR- National Bureau of Fish Genetic Resources, Kochi) <i>Hands-on: Induced ornamental fish breeding</i></p>

	<p>4. Dr. Ashwin Rai (Proprietor, APR Tropical Fish Private Limited; and Aquatic Biosystems Ornamental Fish Farm, Mangalore) <i>Lecture: Ornamental Fish Farming in India – An exciting opportunity for Entrepreneurship</i></p> <p>5. Mr. Sahil Thakur, Proprietor Thakur aquatics <i>Lecture: Ornamental Fish handling and disease control.</i></p>
7. Number of Faculty attended/participated	02
8. Number of Student attended / participated	51
9. No. of external students/faculty/other participants	07
10. The objectives of the Program/activity/event	To foster a scientific mindset among the participants and provide them with essential skills in the exciting realms of “ornamental fish keeping, induced breeding and marine entrepreneurship’ with hands on training for aquarium fabrication and installation, ornamental fish breeding and culture, induced fish breeding, cryopreservation of fish eggs and live fish feed preparation.
11. Description of the Program/activity/event	The workshop started on 8 th February 2024, with the inauguration ceremony by the Chief guest, hon’ble Vice chancellor of our University, Senior Prof. Harilal B Menon. During the inauguration ceremony, Sir mentioned about the importance of the workshop as part of NEP curriculum for enhancement of the skills among students and participants. Dr. Hrishikesh Pawar, shed light on the global and national trend in ornamental fishkeeping. He stressed on the importance of the field and said that such hobby’s popularity has been steadily increasing over the years, driven by factors such as growing interest in aquascaping, advancements in aquarium technology, and the therapeutic benefits of pet ownership. Ms. Gabriella D’Cruz Conducted and Interactive session on “Seaweed futures: Challenges and opportunities of new seaweed businesses in India” Ms. D’Cruz spoke

	<p>about the types of seaweed in world, India and Goa. Dr. Charan Ravi delivered a lecture on why breeding is induced in aquaculture. He also explained the science behind induced breeding with respect to hormones. He gave a detailed information about methods of spawning. on February 9th, 2024, <i>Hands-on training session on Egg collection and transfer was conducted by Dr. Charan Ravi.</i> Mr. Sahil Thakur, Proprietor Thakur aquatics, talked about Ornamental Fish handling and disease control. He elaborated on ornamental fishes and their growth requirements, categories of fish with respect to water layers within the tank, combinations of fishes that are acceptable or not acceptable in an aquarium. He also explained about male to female ratio of oviparous and viviparous fishes, different diseases and their causes, preventive measures and common medications."</p>
<p>12. Benefit/Key outcomes of the Program/activity/event</p> 	<p>Participants received Hands-on training on how to inject fish for induction. The participants understood the evolving landscape of aquaculture and the potential avenues for further growth and innovation. Participants received hands-on training in the cryopreservation technique for collected milt. The knowledge and exciting experience gained by the participants from this workshop benefited them to gain skill on ornamental fish keeping and motivated them to venture and become entrepreneur in the field.</p>
<p>13. Enclosures with report</p> 	<p>Enclosure: Brochure, Geo-tag photos, Attendance of students/faculty/external participants.</p>

Workshop on ORNAMENTAL FISH KEEPING, INDUCED BREEDING AND MARINE ENTREPRENEURSHIP

Organized by
Biotechnology Discipline
School of Biological Sciences & Biotechnology, Goa University

8th - 10th February 2024

Organizing Committee

Patron
Prof. Harilal B. Menon,
Honourable Vice Chancellor, Goa University

Convenor
Prof. Bernard Rodrigues,
Dean, SBSB, Goa University.

Co-convenors
Dr. Sanika D. Samant
Dr. Meghanath Prabha
Prof. S. Krishnan (Vice Dean - Research, SBSB)

Organising Secretary
Prof. Sanjeev C. Ghadi
Vice Dean - Academics, SBSB

Organizing Committee members
Prof. Savita Kerkar
Ms. Diviti Mapari
Dr. Samantha Fernandes
Ms. Sneha Bhomkar
Ms. Saigedha Mayenkar

Overview
Embark on a journey of knowledge and entrepreneurship with the School of Biological Sciences and Biotechnology at Goa University! Join us for a captivating 3-day workshop from February 8th to 10th, 2024 organized by the Discipline of Biotechnology. The workshop is designed to offer aspiring researchers an initial training experience in entrepreneurship. Our aim is to foster a scientific mindset among participants and provide them with essential skills in the exciting realms of "ornamental fish keeping, induced breeding, and marine entrepreneurship". Don't miss this unique opportunity to explore and learn from experts in the field!

- HANDS-ON TRAINING ON**
- Aquarium fabrication & installation
 - Ornamental fish breeding and culture
 - Induced fish breeding
 - Cryopreservation of ornamental fish eggs
 - Live fish feed preparation



LECTURES BY MARINE ENTREPRENEURS

Timings and Venue:
Biotechnology seminar hall, foyer, lecture hall
Morning session: 10:00 a.m. - 1:00 p.m.
Lunch break: 1:00 p.m. - 2:00 p.m.
Afternoon session: 2:00 p.m. - 5:30 p.m.

Registration Fees:
Goa University & affiliated students: ₹ 500/-
Faculty and others: ₹ 1200/-

Registration via "SBI collect"
Select category: "FKME" or "Others"
Subject - Biotech workshop

Registration Link (upload payment receipt!):
<https://forms.gle/Q19XpYLVZxmavVzx6>
Registration deadline: 7th February 2024

Working lunch, registration kit & workshop material will be provided

QUERIES?
Contact:
Ms. Diviti Mapari (Registration): 07721879883
Dr. Samantha Fernandes (Technical): 09923762838



Inaugural function

Indigenous fish breeding

Aquarium tank fabrication

Brooders

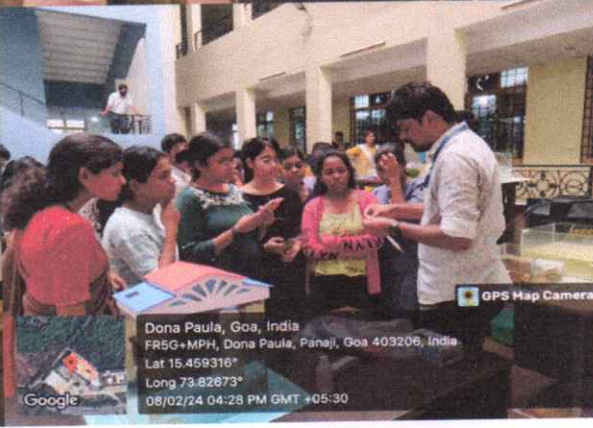
Induced breeding

Hatching Hapa

Cryopreservation

Government schemes

Marine entrepreneurship



A Three-day workshop on ORNAMENTAL FISH KEEPING, INDUCED BREEDING AND MARINE ENTREPRENEURSHIP
 Organized by the Discipline of Biotechnology, School of Biological Sciences and Biotechnology Goa University
 Dr. Hrishikesh Panwar, Scientist (Fisheries), Krishi Vigyan Kendra, Goa
 Lecturer and hands-on training on aquarium fabrication & installation.
 Venue: Biotechnology seminar hall, MDSH foyer (Faculty Block E)

Date: 8th February, 2024 Time: 11:00 a.m. - 1:00 p.m.

Sr.No.	Name of the participant	Institution	Signature
1	G. Anvita	SBSB	[Signature]
2	Gyananagum Anwar	SBSB, Goa University	[Signature]
3	Anshu Janghriya	"	[Signature]
4	Varun Nair Dalal	SBSB	[Signature]
5	Somnath Bhangarkar	SBSB	[Signature]
6	ADARSHAN	"	[Signature]
7	Smriti Mishra	"	[Signature]
8	Shrutha Saha	"	[Signature]
9	Pooja Poojika	"	[Signature]
10	Mehar V. Shastri	"	[Signature]
11	Malavika Mishra	"	[Signature]
12	Meharvanti	"	[Signature]
13	AKASH PATIL	"	[Signature]
14	Swathi Venkatesh	"	[Signature]
15	Srihitha Passi	"	[Signature]
16	Sakshi C	"	[Signature]
17	Miya Ravi	"	[Signature]
18	Saija Babbar	"	[Signature]
19	Rachita Kaviratna	"	[Signature]
20	Arushi V. Bhatnagar	"	[Signature]

21	Ashwita Pednekar	SBSB, Goa University	[Signature]
22	Raveena Shinde	SBSB, Goa University	[Signature]
23	Manoj A. Sathur	SBSB, Goa University	[Signature]
24	ANANDHIA GANAPATHAN	SBSB, Goa University	[Signature]
25	Nikita Somal	"	[Signature]
26	Shruthika Mishra	SBSB, Goa University	[Signature]
27	Sudhakar Banerjee	SBSB, Goa University	[Signature]
28	Arjun Tadao	SBSB, Goa University	[Signature]
29	Mahesh	"	[Signature]
30	Shruti Dhanu	SBSB, Goa University	[Signature]
31	Harshita Mendir	SBSB, Goa University	[Signature]
32	Ranjitha	"	[Signature]
33	Moina Kulkarni	SBSB, Goa University	[Signature]
34	Pannay Palak	SBSB, Goa University	[Signature]
35	Nidha Jayed	SBSB, Goa University	[Signature]
36	Shruthika	"	[Signature]
37	FEARLESS SATHARDEKAR	SBSB, Goa University	[Signature]
38	SAHITA NANI	SBSB, Goa University	[Signature]
39	PANIKY & NARAYAN	SBSB, Goa University	[Signature]
40	SHRUTHI S. SHARMA	SBSB, Goa University	[Signature]
41	Shruthi	"	[Signature]
42	Eloha Michael	"	[Signature]
43	Soham S. Nair	"	[Signature]
44	Shweta Jale	"	[Signature]
45	Aradhya M. Gumpal	"	[Signature]
46	Neelima Mishra	"	[Signature]
47	Shree Suresh Mishra	"	[Signature]
48	Somnath Bhangar	"	[Signature]
49	Devashree Dalvi	"	[Signature]

50	Shruthika	"	[Signature]
51	Manish	"	[Signature]
52	Srija Chafeta	"	[Signature]
53	Dr. Anurag Mishra	"	[Signature]
54	Dr. Sanika Suman	"	[Signature]
55	Mr. Dilli L. Velvikar	"	[Signature]
56	Manoj Jale	"	[Signature]
57	Shruthika	"	[Signature]
58	Trisha J. Mohan	"	[Signature]
59	Rishika S. Sankar	"	[Signature]
60	Tejaswini	"	[Signature]
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[Signature]
 Signature:
 Name of coordinator:
 Designation:
 Date: 22/2/24

[Signature] 26/2/24
 Signature
 Dean/Director/Head
 Seal of the School/Directorate/University
 Dean of School of Biological Sciences
 & Biotechnology
 Goa University, Goa-403206