



## Goa University

### School of Earth, Ocean and Atmospheric Sciences

#### M. Sc. Marine Sciences Part II

#### Report on visit to an aquaculture facility at Kumta, Karnataka.

1. Title of the Event/Activity/program	Field trip
2. Date and Time	13 October 2023
3. Mode of conduct (Physical/Online)	Physical
4. School/ Directorate/ Section	School of Earth, Ocean and Atmospheric Sciences
5. Collaborating Agency/School/Directorate	Goa University
6. Detail of the Resource Person (Brief biodata)	
7. Number of Faculty attended/participated	2
8. Number of student attended / participated	18; Attendance sheet attached
9. No. of external students/faculty/other participants	15 (M. Sc. / M. A. Environmental Science students; Part I)
10. The objectives of the Program/activity/event	To study about fin fish (sea bass) culture and the operation/management of an aquaculture facility.
11. Description of the Program/activity/event	<ul style="list-style-type: none"><li>• Different tanks viz., nursery, grow-out, etc. in the hatchery were observed.</li><li>• The various operations involved in running the facility smoothly were also studied.</li><li>• Knowledge on maintenance of water quality in the flow through system, disease prevention measures undertaken to prevent any disease outbreaks, live</li></ul>

	<p>/commercial feed given to the juvenile fish during its different growth stages was obtained.</p> <ul style="list-style-type: none"> <li>• It was informed that most breeders preferred induced breeding of the broodstock. The eggs were segregated into fertilized (clear, float) and unfertilized eggs (opaque, sink). Daily routine checks were done of the grow-out tanks and water quality records were maintained.</li> <li>• Information of difficulties that the hatchery operators / farmers faced during the COVID lockdown was provided.</li> </ul>
<p><b>12. Benefit/Key outcomes of the Program/activity/event</b></p>	<ul style="list-style-type: none"> <li>• Students were shown various daily operations in a finfish hatchery.</li> <li>• They observed the culture of seabass from breeding to the juvenile stage.</li> <li>• Challenges faced by the hatchery operators and profits yielded through the business were also discussed.</li> <li>• The facility manager provided his insights on species that can prove to be profitable in the future to succeed in this industry.</li> </ul>
<p><b>13. Enclosures with report</b></p>	<p>Enclosed</p>

Signature:

Name of coordinator: Dr. Sheryl O. Fernandes

Designation: Assistant Professor

Date: 30/10/2023

Signature:

Dean, SEOAS

30.10.2023



## Goa University

### School of Earth, Ocean and Atmospheric Sciences

#### **Report on visit of students from M. Sc. Marine Sciences, Part II, to an aquaculture facility at Kumta, Karnataka.**

On 13-10-2023, students visited the Canares Aquaculture facility where they learnt about development of comprehensive hatchery technology for seed production and larval rearing of the Asian seabass (*Lates calcarifer*). Operation / management of the aquaculture facility was also observed. Executive Director, Canares Aquaculture – Mr. Kaushik Alike briefed the students that the start-up initiative in seed production of Asian sea bass in Kumta was carried out by entrepreneurs Karthik Gowda VS, Sachin V. Savan and himself after graduating from Fisheries College, Mangaluru. They launched the initiative with technical support from ICAR-Central Institute of Brackishwater Aquaculture (CIBA), Chennai thereby establishing the first private seabass fish hatchery in India.

Mr. Alike showed different tanks viz., nursery, grow-out, etc. in the hatchery and explained about the various operations involved in running the facility smoothly. Knowledge on maintenance of water quality in the flow through system, disease prevention measures undertaken to prevent any disease outbreaks, live /commercial feed given to the juvenile fish during its different growth stages was shared. It was informed that most breeders preferred induced breeding of the broodstock. The eggs were segregated into fertilized (clear which float) and unfertilized eggs (opaque that sink). Daily routine checks were done of the grow-out tanks and water quality records were maintained. Information of difficulties that the hatchery operators / farmers faced during the COVID lockdown was provided.

The field trip enabled students to see various daily operations conducted in a finfish hatchery. They observed the culture of sea bass from breeding to the juvenile stage. Challenges faced by the hatchery operators and profits yielded through the business were also discussed. The facility manager provided insights on species that can prove to be profitable in the future to

succeed in this industry. Knowledge on disinfection and waste disposal methods, broodstock maintenance, artificial propagation of seabass, sales and profit margins was imparted.

On the next day, the students accompanied students of M. Sc. / M. A. Environmental Science and the field trip coordinators to the Sharavathi Kandla Mangrove Boardwalk at Honnavar, Karnataka to learn about the importance, diversity, associated fauna and conservation efforts for mangroves. The walkway is designed to offer visitors a close-up view of the vibrant ecosystem without disturbing the fragile balance of the mangroves. The boardwalk helped to emphasize the role of mangrove swamps in the ecology of coastal areas and generated a sense of awareness among the students about the current threats faced by these fragile and sensitive ecosystems.





Gudeangadi, Karnataka, India  
F96H+95R, Gudekoppa Rd, Gudeangadi, Karnataka 581351, India  
Lat 14.460073°  
Long 74.37678°  
13/10/23 03:38 PM GMT +05:30



Gudeangadi, Karnataka, India  
F96H+95R, Gudekoppa Rd, Gudeangadi, Karnataka 581351, India  
Lat 14.46044°  
Long 74.376741°  
13/10/23 04:49 PM GMT +05:30



Google

Kasarkoda, Karnataka, India  
7C6P+MQX, Kasarkoda, Karnataka 581342, India  
Lat 14.262368°  
Long 74.437845°  
14/10/23 10:50 AM GMT +05:30

GPS Map Camera

GOA UNIVERSITY  
SCHOOL OF EARTH, OCEAN AND ATMOSPHERIC SCIENCES  
M.Sc. MARINE SCIENCE PART II (ATTENDENCE)

Field Trip to Kumta, Karnataka 13th - 14th October 2023

SR.NO	NAMES OF THE STUDENT	SIGNATURE	
		13-10-2023	14-10-2023
1	Krutika Kashinath Devashetti		
2	Varsha Kumari		
3	K M Dharani		
4	Da Costa Glennis Joyce		
5	Dipashree Dilip Haldankar		
6	Ceejel Pinto		
7	Prachi Premnath Morje		
8	Mitali Ganpat Priolkar		
9	P Persis		
10	Pednekar Mayuresh Sanjay		
11	Cristopher Fernandes		
12	Abhay Mahesh Patil		
13	Mohammed Irfan Ki		
14	Sumedha Santosh Kamble		
15	Sweeta Rohidas Sawantodkar		
16	Priyanka Rajendra Nagvekar		
17	Saisha Subhash Bandodkar		
18	Shetye Bhagyashri Ganesh		
19	Gaurav S. Gawas		

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Rahul Gaonkar

(Dr. Sheryl O. Fernandes)  
Programme Director,  
M.Sc. Environmental Science

(Dr. Chanda V. Berde)  
Assistant Professor  
M.Sc. Marine Microbiology

(Senior Prof. C. U. Rivonker)  
Dean, SEOAS