

GLOBAL CORAL REEF ALLIANCE

A non-profit organization for protection and sustainable management of coral reefs

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6TH INDONESIAN BIOROCK TRAINING WORKSHOP REPORT GILI TRAWANGAN, LOMBOK, DECEMBER 1-7, 2008

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SUMMARY

The 6th Indonesian Biorock Training Workshop was held at Gili Trawangan, Lombok, from December 1-7, 2008. More than 70 participants acquired training in the theory and practice of Biorock® Technology for coral reef restoration, fisheries habitat restoration, mariculture, ecotourism, and shore protection. They join over 200 participants who were previously trained in workshops in Pemuteran, Bali, in 2000, 2004, and 2005, in Gili Trawangan in 2006, and in Makassar, Sulawesi, in 2007. While participants have come from all over the world, the most have been from Indonesia. This year 20 students and faculty from the University of Mataram, Lombok, participated, and are planning research projects on the impacts of Biodiversity projects on fish populations, shore protection, and growth of corals and other organisms on Biorock.

Thirty-four new Biorock structures were constructed and installed during the workshop, joining the fifteen that had been previously installed in Gili Trawangan. The majority of these were for shore protection, to reverse serious beach erosion problems, and the rest were for ecotourism and fisheries habitat restoration, including Biorock reefs in the shapes of turtles and manta rays.

WORKSHOP STAFF

Lectures:

Biorock theory, and coral reef issues:

Tom Goreau

Guest lecturers:

Arifin Bakti, Arben Virgota, Prawita Tasya Karissa, Suharto "Atto", Zak Kulberg

Practical Hands-on training instructors:

Thomas Sarkisian, Frank Gutzeit, Ari Spenhoff, Komang Astika, Craeg Bennett, Ake Norgren, Delphine Robbe

Follow through maintenance of projects:

Solomon Viitasaari

Film and photograph documentation

Seth Greenpan, Laurent Lavoye, Foued Kaddachi

Gili Eco Trust Coordinator:

Delphine Robbe

SPECIAL FEATURES OF THIS WORKSHOP

- 1) PADI Distinctive Specialty in Biorock launched
- 2) Collaboration with Marine Science Program of Mataram University launched
- 3) Shore protection: New Biorock Anti-Wave shore protection structures designed and 15 installed

GILI ECO TRUST – BIOROCK PROJECTS INSTALLED

GILI TRAWANGAN

1. Vila Ombak Diving Academy and Vila Ombak Hotel:

2 tunnels at 5 meters since November 2004, 2 tunnels at 5 meters November 2006
Big buoyancy dome at 20 meters November 2006
2. Scallywags:

The Fingers structure at 3 meters December 2008
3. Beach house:

1 Dome at 8 meters November 2006
1 chimney and 2 pyramids at 9 meters December 2008
2 structures at 3 meters December 2008

4. Tir Na Nog and Manta dive:

2 structures at 3 meters December 2008
1 manta ray at 8 meters December 2008

5. Big Bubble Dive:

1 tunnel at 12 meters November 2006
1 tunnel at 12 meters December 2008
1 dome and 1 structure at 3 meters December 2008

6. Dream Divers:

1 cone-chimney structure at 16 meters November 2006
1 dome and 1 structure at 3 meters December 2008

7. Blue Marlin dive:

1 tunnel at 8 meters November 2006
1 tunnel at 8 meters December 2008
1 dome and 1 structure at 3 meters December 2008

8. Manta dive:

1 tunnel at 12 meters November 2006

9. Trawangan dive:

1 tunnel at 5 meters June 2005
1 turtle at 5 meters December 2008

10. KoKiTa , Annemarie and Marko

3 waves and 12 wire rock (gabion) baskets at 0.5-1.5 meters December 2008

11. Karma Kayak and Britta:

6 waves anti erosion structures at 0-1 meters December 2008

12. Trawangan Eco Vilas and Bhuvana:

6 waves anti erosion structures at 0-1 meters December 2008

GILI AIR

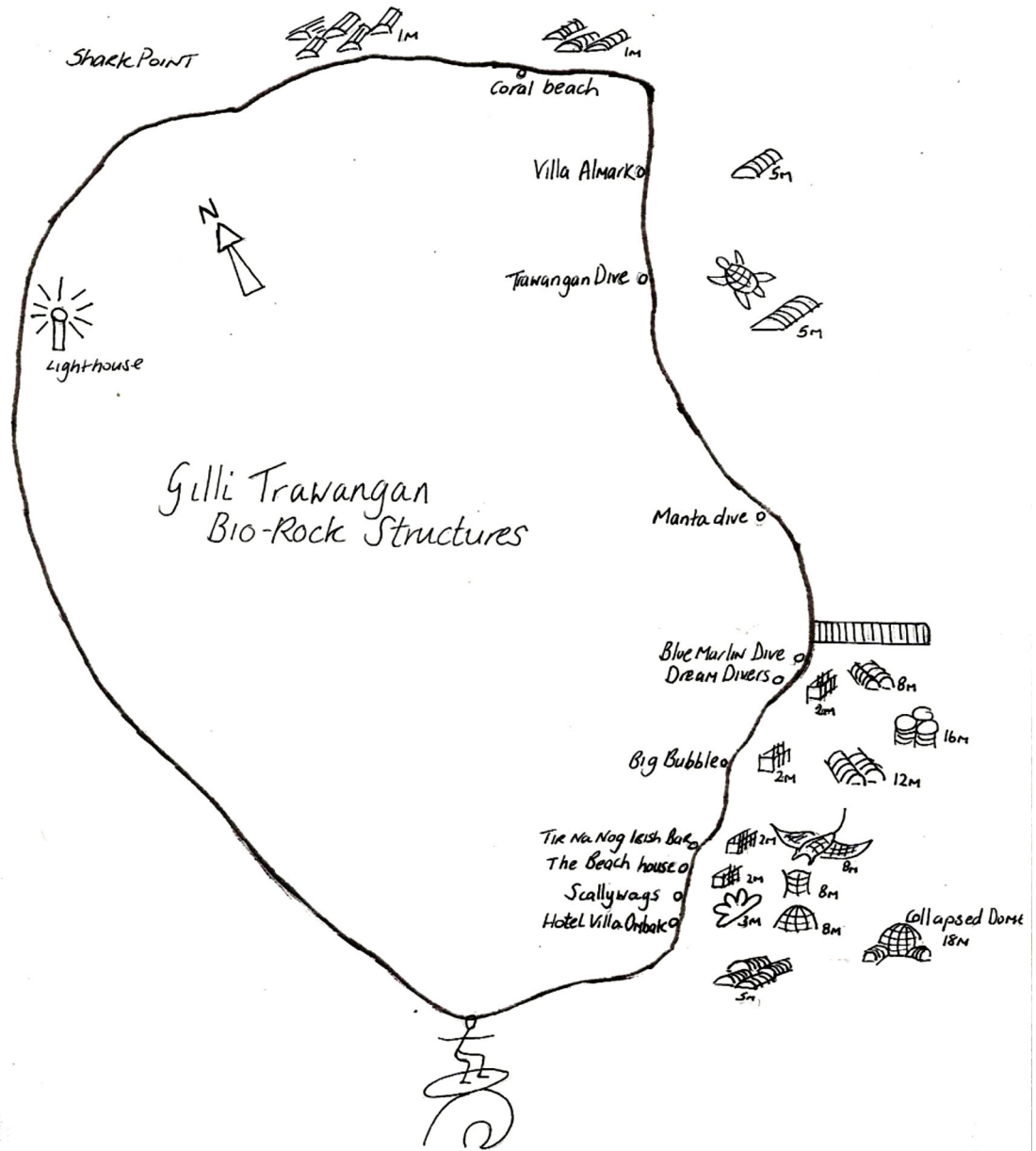
13. Mallia's Child

8 structures at about 4m depth, December 2006

GILI MENO

14. Blue Marlin Dive, sponsored by Jakarta International School

1 structure at 8m depth January 2009



Map of Gili Trawangan project locations drawn by Celia Gregory.

PHOTOGRAPHS

All photographs taken by Foued Kaddachi



1. Tom Goreau (Global Coral Reef Alliance and Biorock SA), Delphine Robbe (Gili Eco Trust), Thomas Sarkisian (Biorock Thailand), and Frank Gutzeit (Sun and Sea eV)



2. Straightening out the steel bars



3. Tying steel bars together to form structures



4. Komang Astika welding



5. Assembling anode stands



6. Grinding parts



7. A finished structure ready to install, with Mount Rinjani in the background



8. Head of the finished Turtle Reef



9. Collecting broken coral to transplant



10. Transporting coral fragments



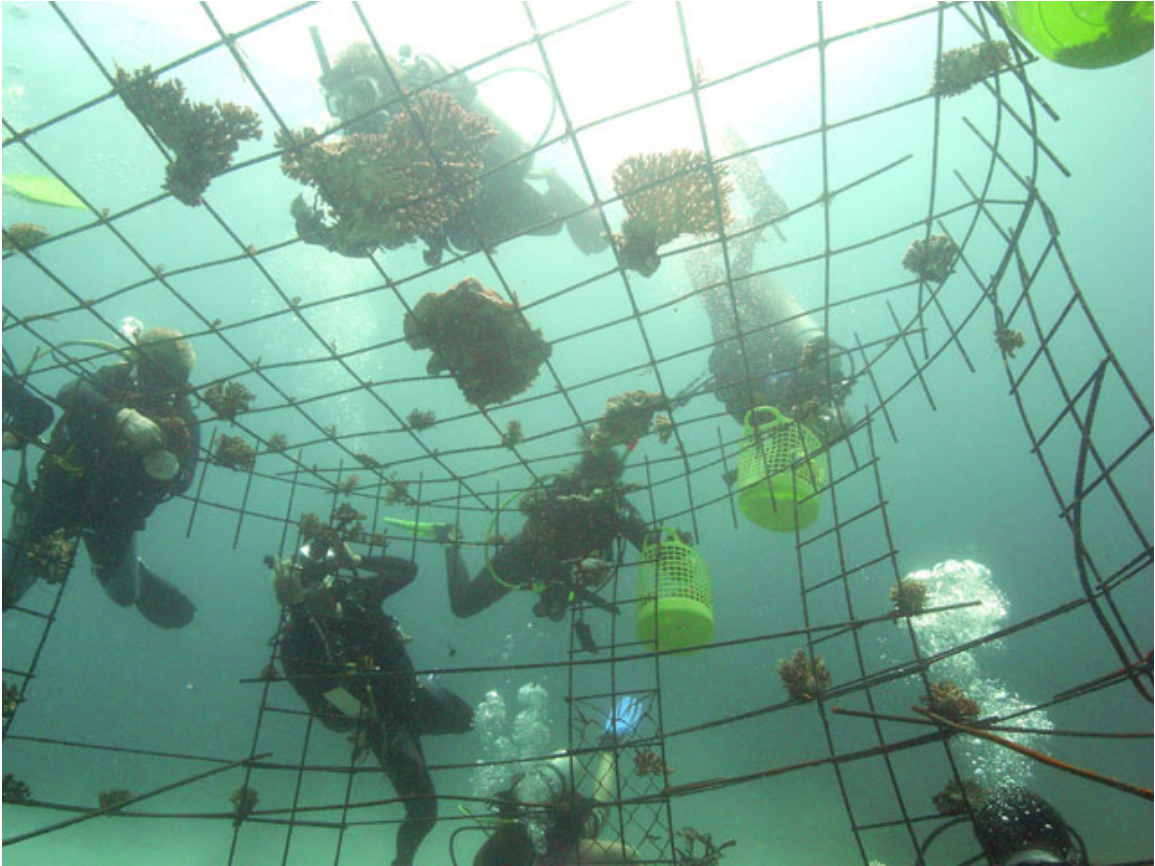
11. Transplanting corals



12. Transplanting corals to new structure, two year old reef in foreground



13. Transplanting corals on another new structure, two year old reef in front



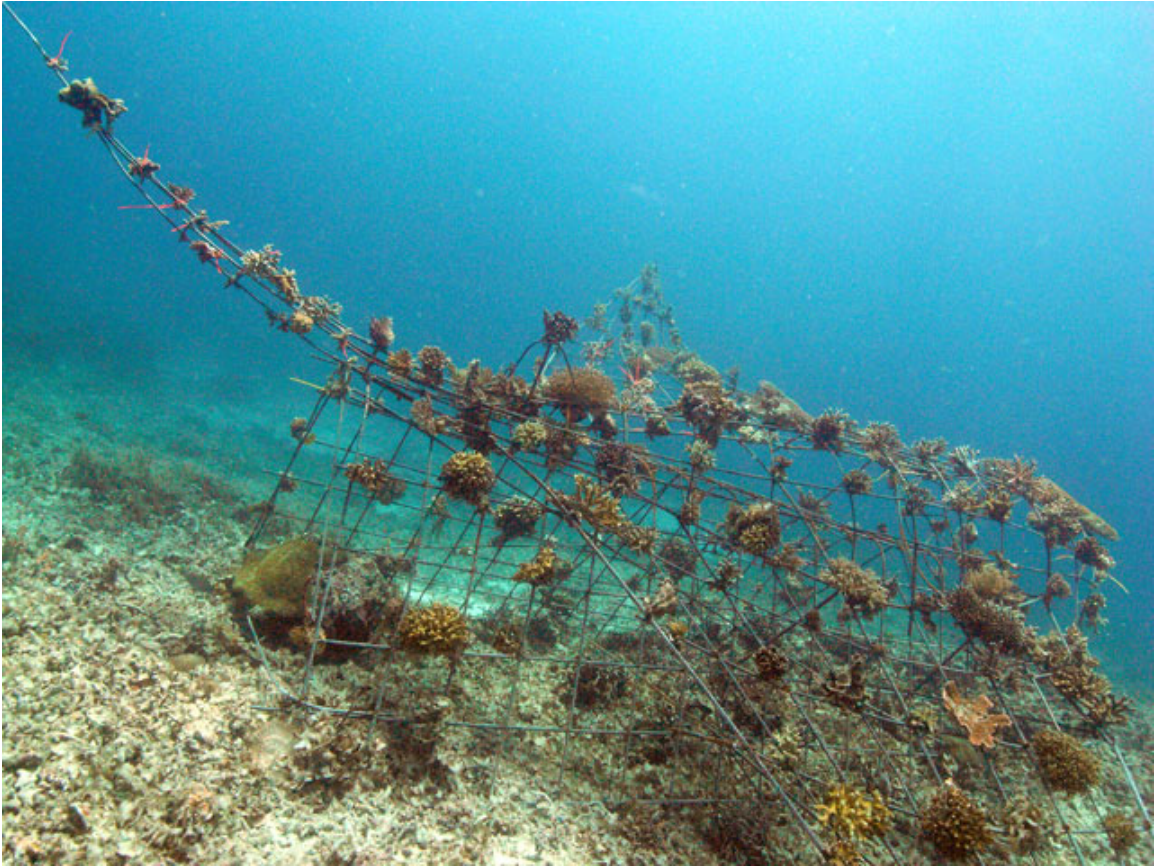
14. New structure being planted with fragments



15. Laying cable



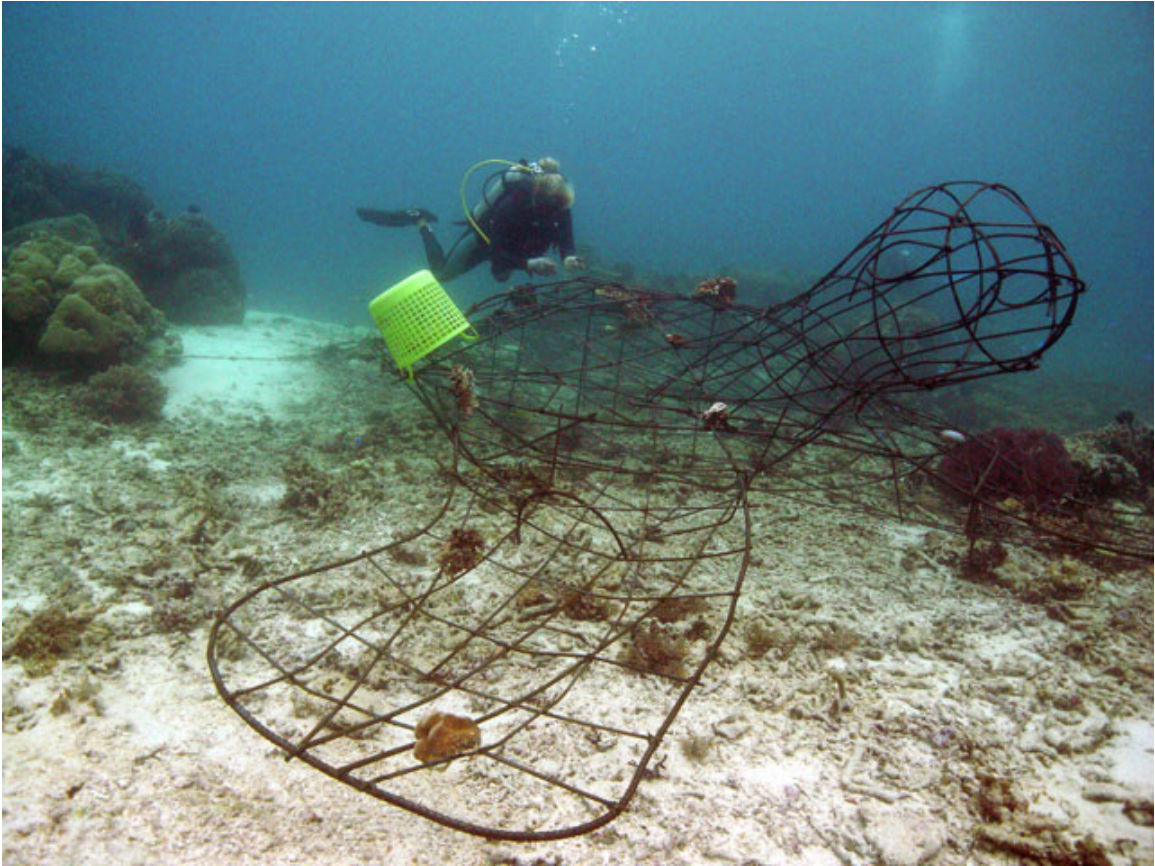
16. The Manta Reef being planted



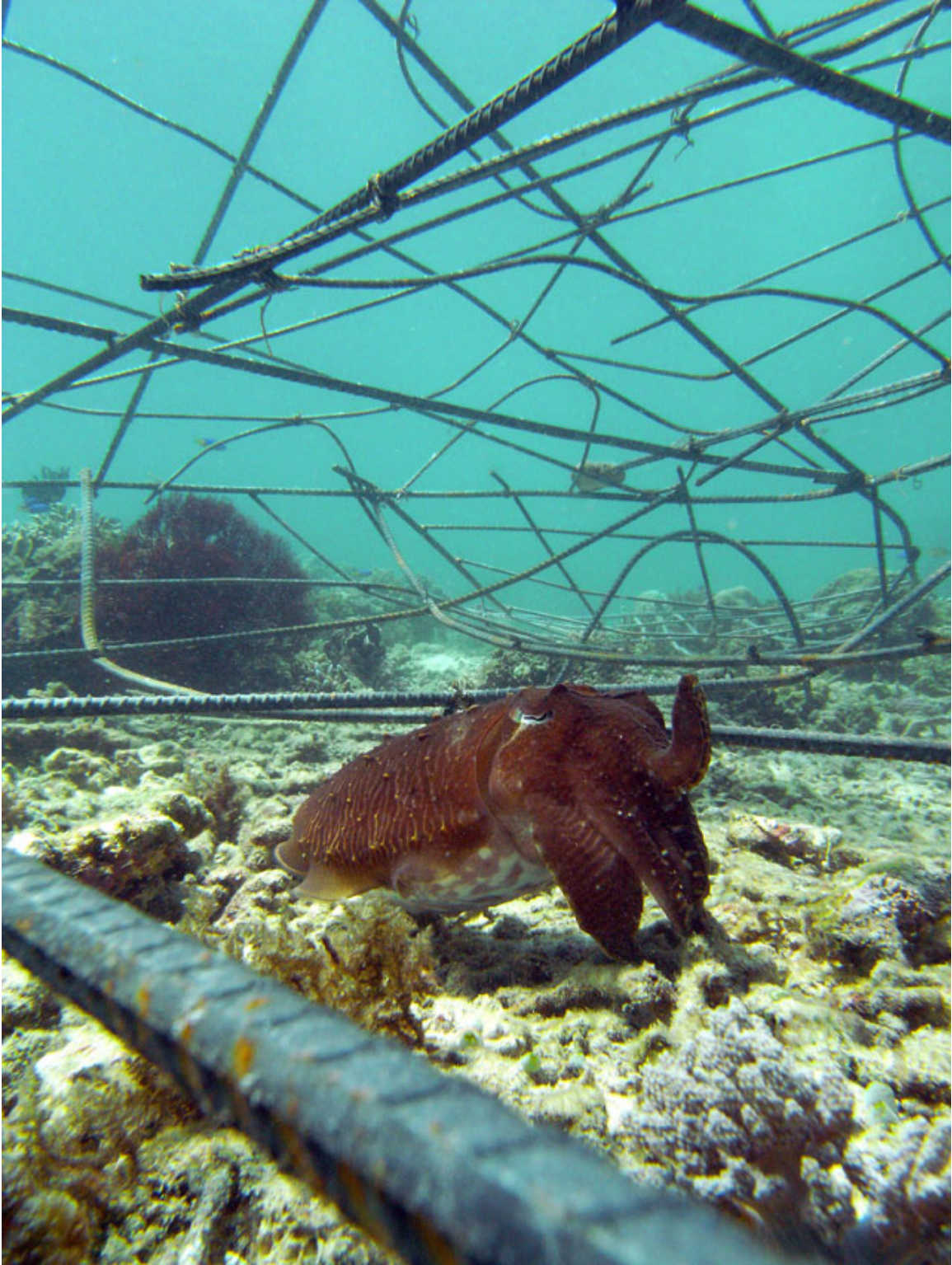
17. Manta Reef after transplantation



18. Turtle Reef just installed



19. Turtle Reef being planted



20. A cuttlefish moved immediately into Turtle Reef



21. Laurent Lavoye swimming past two year old reef

PARTICIPANT LIST

Students:

	Name	Institution	Status	Email
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27	Arben Virgota	Mataram University	Dosen	
28	Khairil Putra Ikraman	Mataram University	Mahasiswa	
29	Supriyadi	Mataram University	Alumnus	
3	M. Sya'roni	Mataram	Mahasiswa	

0		University		
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4 2	Dining Aidil Candri	Mataram University	Dosen	
4 3	Baiq Farista	Mataram University	Dosen	
4 4	Bambang Arwono	Mataram University	Dive Master	
4 5	Dion	Beach House	AOW	
4 6	Chris Moon	Manta Dive	OWSI	

Every OWSI (Open Water Scuba Instructor) has applied to PADI for Biorock distinctive specialty.

	ORGANIZERS OR INVITEES		
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7. "Atto" Suharto	Hasanuddin University	scientist	
8. Komang Astika	Karang Lestari	biorock specialist	
9. Craeg Bennett	welder	Welding specialist	
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11. Seth Greenspan	CNN	Filmmaker	
12. Pak Arifin	Professor	Mataram University	
13. TGH. Zainul Mazdi	Governor of Nusa Tenggara Barat		
14. Ir Badrul Munir	Vice governor of Lombok		
15. Pak Haji Raisman	SATGAS	Gili Eco Trust	
16. Pak Usman	SATGAS	Gili Eco Trust	
17. Pak Bursan	KSDA	Gili Eco Trust	
18. Pak Malik	Gili Eco Trust	Ketua	
19-20. Mathew/Norma	Beach House	Sponsor	
21. Simon	Blue Marlin Dive	Sponsor	
22. Anna	Big Bubble Dive	Sponsor	
23. Nigel	Scallywags	Sponsor	
24. Grace	Karma Kayak	Sponsor	
25. Antony	Manta Dive	Sponsor	
26-27. Chris / Myriam	Tir Na Nog	Sponsor	
28. AnneMaree		Sponsor	
29. Clive	Trawangan Dive	Sponsor	
30-32. Ilan/Blanca/Renaud		Sponsor	
33. Pak Zainudin	Gili Desa Indah	Dusun	
34. Pak Hanaming	Gili Desa Indah	Dusun Gili	

		Meno	
35. Pak Dahir	Gili Eco Trust	Gili Air	
36. Pak Kaseng	Gili Desa Indah	Gili Air	
37. Ake Norgren	Biorock Thailand	Biorock specialist	

SPONSORS LIST / DONATIONS

We thank Gili Eco Trust, PADI, Big Bubble Dive, Scallywags, Annemaree, Dream Divers, Marko Vraz, Blue Marlin, Dive Trawangan, Coco, Trawangan Eco Villas, Beach House, Sander, Leila and Steve, Karma Kayak, Britta, Tir Na Nog, Villa Ombak Hotel, Ombak Villas, Gili Cat, Phil Smith and Island Productions, David Falander and Falander Design Company, and the entire Gili Trawangan community for their donations, in-kind contributions, help, and moral support.

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