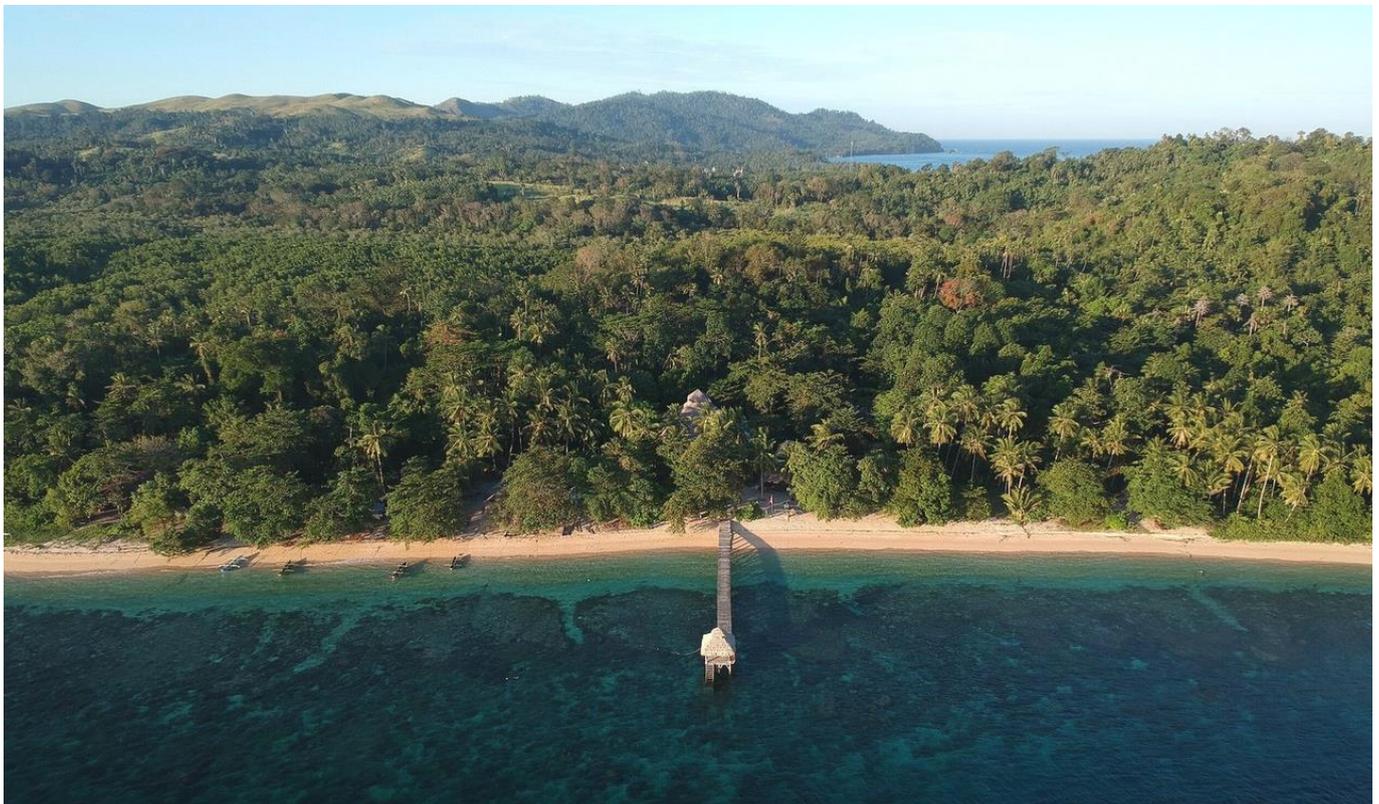




Methods in tropical reefs monitoring 9th Reef Check course at Bangka Island

Bangka Island, north Sulawesi, Indonesia, 2-9 July 2023



Reef Check Italia and Coral Eye organise an international field course on coral reefs monitoring approaches opened to both marine biology students and diver volunteers from around the world. The course, taught in English, aims to:

- provide the basic knowledge for the identification of hard corals and their diseases
- present an overview of the well-established coral reefs monitoring approaches
- learn and apply different methods underwater, including Reef Check and Coral Watch protocols
- contribute to the monitoring and conservation of the coral reefs at the Bangka outpost



Lectures and seminars will be alternated with day and night dives, as well as practical sessions in the lab. At the end of the course, it is expected that the participants demonstrate what they learned and discuss the results achieved. Participants will obtain the international tropical **EcoDiver certification** issued by the **Reef Check Foundation**.

Venue



Coral Eye (<https://www.coral-eye.com>) is a unique Boutique Resort on Bangka Island, North Sulawesi in Indonesia. Originally founded as an outpost for marine studies, today Coral Eye Bangka is a melting pot of passionate travellers, dive enthusiasts, underwater photographers, and marine biologists. Coral Eye was designed to place the guest at the centre of the space, creating a unique environment that favours socialisation and communication between people united by a common passion for the sea.

The project came to life in 2009, as four young marine biologists decided to pursue their dreams & passions and set up a marine outpost on Bangka Island, North Sulawesi - Indonesia, right in the

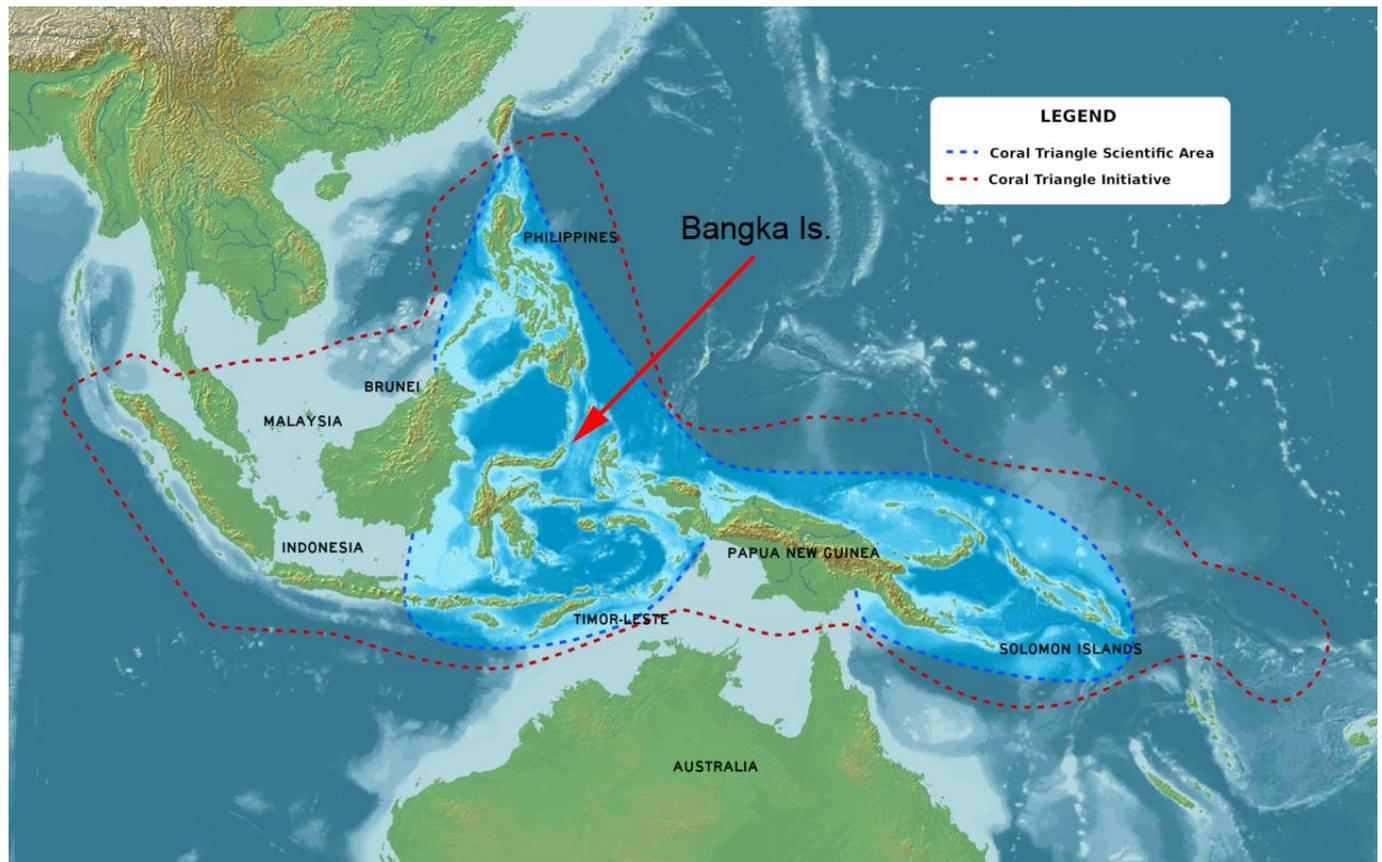
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heart of the Coral Triangle. The original idea was to create a co-working outpost where universities and students could exchange ideas and develop their projects on tropical marine environments. In 2013, following the construction of the diving centre and lots of hard work, Coral Eye opened its doors to tourism as an alternative to mix science with passion and love for the sea. Through the new concept we were able to finance environmental projects, offer scholarships to students and better support local communities.

In 2022 Coral Eye joins forces with the Siladen Resort and Spa to form a new partnership and elevate the resort to a new level of comfort for guests. While keeping the original community spirit of Coral Eye and the characteristics that have distinguished it from other resorts since its founding, the new partnership adds a touch of luxury with 7 new private beach view villa's and an upgrade of the existing rooms and general guest services.



Participants

Although it is not required any scientific qualification, participants should be confident with the main groups of marine invertebrates and possibly have some experience in tropical dives. They should hold at least a 2nd level international dive certificate (allowing diving to 30 m depth), a minimum of documented 30 dives, a medical certificate allowing to safely dive (written in English, Italian or Bahasa Indonesia) and international dive insurance (e.g., DAN, DiveAssure, AquaMed). Each participant must carry his/her full diving equipment, except scuba tanks and weights, provided on-site (equipment rental must be arranged in advance with the resort).

The number of participants is limited to 12



Costs

1. **Course fee**, including Reef Check Italia membership, lectures, teaching materials and Reef Check Tropical EcoDiver certificate, is **€ 300.00** and must be **paid to Reef Check Italia** as a non-refundable deposit, either by credit card (using PayPal, to postmaster@reefcheckitalia.it) or by bank transfer (to Reef Check Italia onlus, BPER Banca S.p.A., IBAN: IT25C0538713319000042076506 BIC/SWIFT: BPMOIT22XXX).
2. **Full board accommodation** (8 days/7 night) and **dives** cost **€ 999.90** and must be **paid to Coral Eye upon arrival**. This includes:
 - 7 days full board in triple room
 - 8 boat dives
 - 2 jetty dives
 - 1 jetty night dive
 - House reef & mangrove snorkelling
 - Transfer from/to Manado airport and Bangka Island

You may pay by cash (Euro or IDR), however prepayment by bank transfer is recommended.

BANK ACCOUNT:

EURO - US\$

Bank: PT. Bank DBS Indonesia

Beneficiary Name: Pt Coral Eye Bangka

Swift Code: DBSBIDJA

Address of Beneficiary Bank: Kawasan Ruko Mega Mas Blok 1 C1 No. 1 Jl Piere

Tendean - Boulevard Manado, 95111

Acc. N. # 20 600 78 80

Always specify what currency you are transferring

If you like to pay the accommodation by Credit Card, since not always working on the Island, please ask in advance (to info@coral-eye.com). Soft drinks/beers, additional excursions, upgrade to single or double room accommodation, dive equipment rental and extras are not included.

Transfers from Manado airport to Bangka and return is managed by Coral Eye and included in the accommodation costs. To properly organise transport from/to Bangka, every participant must arrive at Manado airport within **2nd July 2023, at 9 o'clock**, and leave from Manado airport not before the **9th July 2023, at 16 o'clock**. Transfers from hotels in Manado or Bitung to Bangka and return can be arranged on request. Please note that a longer stay at Bangka must be agreed with Coral-Eye well in advance.

Booking & Confirmation

Subject to availability, booking is available for every participant starting from 1st of March 2023 by filling the application form including the required attachments (available at <https://www.reefcheckmed.org/italiano/reef-check-tropical/bangka-2023/>). Based on first come first served, only requests comprehensive of all requested documents and the **non-refundable course/deposit fee (€ 300.00** to Reef Check Italia) will be confirmed.

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Scholarships

Reef Check Italia offers **6 scholarships, € 600 each**, to partially cover the accommodation costs to the most deserving undergraduate students and young (<28 yrs.) graduate biologists or naturalist based on their CV, including scholastic merits, diver qualifications and previous volunteer experiences.

Scholarships applications must be submitted within the **31st of March 2023** by filling the application form including the required attachments (available at <https://www.reefcheckmed.org/italiano/reef-check-tropical/bangka-2023/>). Scholarships selection results will be communicated by email and published on the website within the **17th of April 2023**. Scholarships winners must send all the required documents and paying the non-refundable deposit fee of € 300.00 to Reef Check Italia within the **30th of April 2023** either by PayPal (to postmaster@reefcheckitalia.it) or by bank transfer (to Reef Check Italia, IBAN: **IT45V0538713312000042076506** BIC/SWIFT: **BPMOIT22XXX**). In case of withdrawal, the scholarships will be assigned to the next one on the waiting list.



Important dates and deadlines

March 1, 2023	Opening booking and scholarships applications
March 31, 2023	Deadline scholarships applications
April 14, 2023	Scholarships ranking publication
April 30, 2023	Deadline for accepting scholarships and payment of the deposit fee
May 30, 2023	Deadline for payment of the deposit fee for any other admitted participants (first come first served)
July 2, 2023	9 am, pick-up of participants at the Manado airport (1 hour earlier at the hotels in Manado)

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Course contents

This intensive course, at its 9th renewed edition, combines different aspects of coral reef conservation. It includes basic knowledge in corals identification and their diseases, the pollution risks and many approaches to coral reefs monitoring. In particular:

Reef Check Tropical EcoDiver Program



The Reef Check EcoDiver program allows anyone with an interest in the ocean to learn more about tropical coral reefs. Reef Check combines **education** with **action** to give volunteers a unique experience while taking an active role in conserving the world's reefs. The EcoDiver program allows participants the rare opportunity to work with teams of scientists throughout the world to combat the crises affecting our reefs today. The world's reefs are changing fast, and it is up to us to ensure that reefs are around for future generations. Using the globally standardised scientific protocol, the Reef Check EcoDiver program collects valuable data to establish the status of coral reefs world-wide. The data are analysed and used locally by marine park managers, nationally by fisheries

and environment managers and internationally by organisations including **United Nations** agencies to help better track and care for coral reefs.

Become certified to conduct your Reef Check surveys and take an active role in conserving your favourite coral reefs. This course is designed to teach you everything you need to know to conduct full-scale Reef Check surveys. In this program, you will learn all about the globally standardised Reef Check methodology as well as how to identify key indicator fish, invertebrates and substrates selected by Reef Check for global monitoring and conservation of coral reefs! This course will allow you to join the Reef Check monitoring team and assist in underwater surveys around the world.

Methods include substrate, fish and invertebrate transects coupled with a socio-economic survey.

Materials: Reef Check EcoDiver Kit for Indo-Pacific, including data board.

Testing and Certification: PowerPoint ID test (80% to pass) and field ID test (90%) to obtain regional certification. Certification qualifies the holder to participate in Reef Check surveys in the region and to submit their data to the global database.

More info: <http://reefcheck.org/ecodiver/about-ecodiver/>

CoralWatch Protocol



CoralWatch is a citizen science project based at The University of Queensland, in Brisbane, Australia. CoralWatch helps non-scientists around the globe understand and support effective reef management by using engaging tools that provide people with accessible information and hands-on-experience collecting scientific data about the health of corals using the Coral Health Chart. This chart standardises changes in coral colours and provides a simple way for people to quantify coral health and contribute to the CoralWatch global database. The Coral Health Chart is used by dive centres, scientists, school groups, and tourists.

Materials: an underwater kit with Coral Health Chart and data board.

More info: <http://www.coralwatch.org>

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Teaching staff

Prof. Massimo Ponti, benthic ecologist at the University of Bologna



Massimo is a marine ecologist, associate professor, and Director of the MSc in Marine Biology at the University of Bologna (Italy), president of the Italian association of scientific divers, diving master instructor and vice-president of the Reef Check Italy no-profit association. His research experiences range from temperate to tropical benthic ecology, mainly focusing on species diversity, habitat-species interactions, human disturbances, global climate change, marine protected areas, and biodiversity conservation.

Dr. Gianfranco Rossi, marine biologist and Reef Check Tropical Trainer



Franco is graduated in Marine Biology with a thesis on "The involvement of Recreational Scuba divers in the Monitoring of Coastal Environment". Scuba Instructor. Author of the book "Corals - A guide to the identification of the main genera of coral reef builders of the Indo-Pacific Region" and founder of the "Coral Eye Museum" a collection of hard corals from Coral Triangle. He holds seminars on Scleractinians ID (Coral Reef Builders) at the Polytechnic University of Marche (Italy). He is also expert in coral killing sponges. He is member of the steering board Reef Check Italy no-profit association.

Dr. Eva Turicchia, benthic ecologist at University of Bologna and environmental educator



Eva is a benthic marine ecologist, post-doc fellow and adjunct professor at the University of Bologna, Italy. She is a diving instructor and board member of both the Italian Association of Scientific Divers and the non-profit Reef Check Italy. Her research experiences range from temperate to tropical benthic ecology, primarily focusing on marine biodiversity conservation, biotic indices, marine citizen science, and the effects of human disturbances and climate change at community and population levels. She deals with sustainable marine tourism, ecological shifts associated with the mass mortality events triggered by marine heat waves, bioconstruction/bioerosion processes in coralligenous habitats and the development of innovative approaches for studying and monitoring coastal marine habitats.

Dr. Marco Segre Reinach, marine biologist and CORAL EYE manager



Marco has a degree in marine biology and oceanography. He developed a direct knowledge of the marine environment while sailing and diving for many years around the world, as crew of regatta and cruises boats. In 2009 after three years around Indonesia, Marco joined up the team, managing the start-up of Coral Eye outpost and after many years he still here...



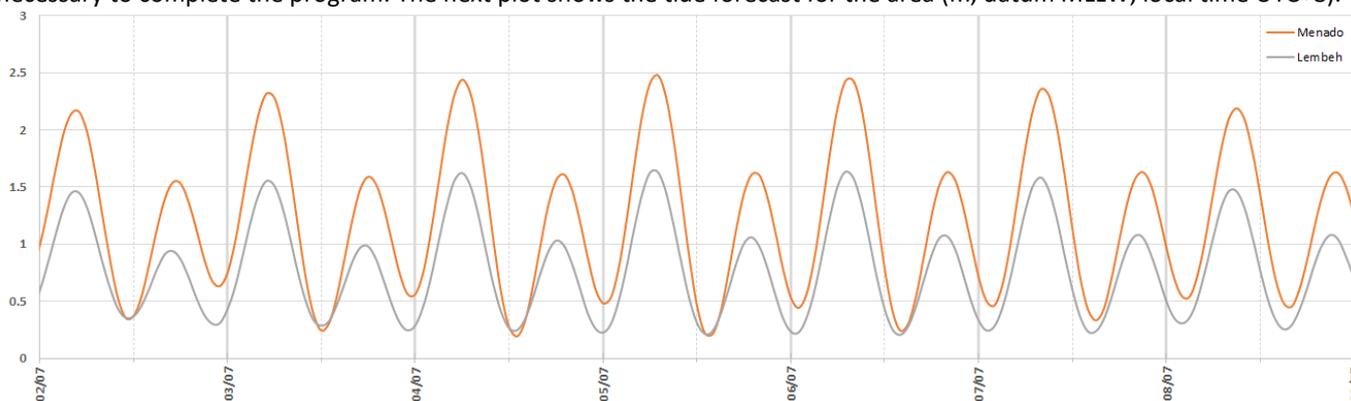
Preliminary schedule

1) Sunday	02/07/2023	morning	Participants arrivals (transport to Bangka) Course presentation and organisation
		afternoon	Check dive ¹
		evening	Introduction to Reef Check method
2) Monday	03/07/2023	morning	Reef Check method (Fish) Fish identification (snorkeling) ¹
			Reef Check method (Invertebrate)
		afternoon	Invertebrate identification (snorkeling) ¹
		evening	Night dive (group A) ¹
	after dinner	Reef Check method (Substrate 1 st part)	
3) Tuesday	04/07/2023	morning	Reef Check method (Substrate 2 nd part) Coral Watch method
		afternoon	Inter-calibration dive ¹ & debriefing
		evening	Night dive (group B) ¹
4) Wednesday	05/07/2023	morning	North Sulawesi Ecology, Tourism impacts
		afternoon	1 st & 2 nd monitoring dives (Kinubuhutang garden & Kahuku)
		evening	Data entry & student workgroups
5) Thursday	06/07/2023	morning	Monitoring programs & Coral Diseases
		afternoon	3 rd & 4 th monitoring dives (Gangga Village & Jetty)
		evening	Data entry & student workgroups
6) Friday	07/07/2023	morning	Reef Check exams (1 st part)
		afternoon	5 th & 6 th monitoring dives (Tanjung Husi II & Bisabora Timur)
		evening	Data entry & student workgroups
7) Saturday	08/07/2023	morning	1 st & 2 nd Leisure dives
		afternoon	Mangrove exploration (snorkeling)
		evening	Reef Check exams (2 nd part)
		after dinner	Student presentations
8) Sunday	09/07/2023	morning	Awarding of diplomas, group picture Departures

After dinner seminars could be arranged, activities at sea are indicated in blue.

¹ House reef at Coral Eye

Note: program can be changed according to weather conditions, leisure dives may be changed in monitoring dives if necessary to complete the program. The next plot shows the tide forecast for the area (m, datum MLLW, local time UTC+8).



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