



Building a web based information center to share information and experience among coral reef practitioners: towards better management of coral reef in Indonesia

Final Report - A Report to the Rufford Small Grants Foundation

Name of Applicant: Yudi Herdiana

Project Period: June 2008 - February 2010

Team Leader:

Yudi Herdiana

Jl. Mayor Oling 39 - Bojor 5625, Indonesia

Email: yherdiana@gmail.com

Project Team Member

1. Yudi Herdiana
2. Rizal Ardiansyah
3. Irfan Kusfany

This project is funded by:

Summary

This project is intended to assist marine conservation and coral reefs in Indonesia. Through the development of internet-based information center, this project has built a data and information center on conservation of marine and coral reefs of Indonesia, www.maskerbiru.net. Maskerbiru.net built with the aim to disseminate information about marine conservation activities in Indonesia, as the media, public awareness of the importance of protecting coral reefs in Indonesia. Maskerbiru.net also involves dive clubs and operators in disseminating information about the condition of coral reefs in the main locations of diving activities, while promoting dive tourism in Indonesia. A total of 30 diving clubs have participated maskerbiru.net promote to the general public. There have been a lot of people who voluntarily help in conveying information about the condition of coral reefs in places where they dive. Maskerbiru.net also has helped many people to obtain information relating to marine conservation and coral reefs through library facilities. As many as 73 people have been joined together maskerbiru.net in social networking website, and this number expected continues to grow. Maskerbiru.net will continue to run and perform its functions as a medium of dissemination and exchange of information about marine conservation and coral reefs in Indonesia.

1. Introduction

The main output of this project is to build a website as data and information center about marine conservation and coral reefs in Indonesia, www.maskerbiru.net. The website has three major components, as follows:

1. Information sharing and outreach.

A blog type media to share information and experience based on survey, research, or even a dive trip by reef practitioners and individual divers/dive operators. To support this, the project developed a simple methodology of visual assessment of coral reef condition (i.e. percentage live coral, coral damages, coral bleaching, crown of thorn starfish) in order to standardize practice and raise awareness and participation from coral reef practitioners. Information of coral reef condition from particular locations is also displayed spatially in the website using the Google map. Website also provides specific and unique information of dive sites from dive operators and individual divers; this information expected help to promote Indonesian diving tourism.

2. Education and awareness.

Website provides online education and awareness materials for individual or tourism divers, students and the public of how they can participate to save the coral reefs.

3. Data and information centre. (Survey and project reports, e-book, survey manual, guideline, scientific papers, etc.).

2. Project Activities

The major activities of the project are:

1. Website development of www.maskerbiru.net.
2. Develop simple methodology for visual coral reef assessment. Parameters included in the methodology are: percentage of live coral, coral damage, coral bleaching, level of abundance of coral eating 'crown of thorn' starfish, charismatic marine animal napoleon wrasse, grouper, turtle), water condition, and anthropogenic threats (destructive fishing).
3. Produce promotion tools (poster, sticker, leaflet, data sheets and field guide for coral reef assessment).
4. Promote the website and spread the idea of this project to coral reef practitioners. The targeted audiences are: NGOs, coral reef scientists, university, government agency, and dive operators/clubs.

3. Project Outcomes

1. Website Development (www.maskerbiru.net)

As the main output of the project, first phase of the project was developing the www.maskerbiru.net website. The website was developed and running at the first two months of the project. The website consist 4 main elements, as follows:

(a) News

This part is aimed to broadcast latest news, information, or issues related to marine and coral reef conservation in Indonesia. Most of the news was quoted from newspaper, magazine or linked from other websites. Some news and information also submitted by personal volunteers. Maskerbiru.net helps gather latest information related to marine and coral reef conservation issues into specific audiences (Figure 1). Currently there have been 101 of news, blogs, and short story of reef of Indonesia in the website.

(b) Coral Reef Map

This part of the website is consisted data and information of coral reef condition at dive sites in Indonesia. Data and information is voluntarily submitted by dive operators and divers. Currently there are 11 people who contributed to the database. Most of the contributors received the information about the website from the promotion materials that distributed to 31 dive operators and clubs in Java, North Sulawesi, Bali, Lombok, and North Sumatra (Annex 1). The view of the coral reef map presented in Figure 2, and example detailed information of each dive site is presented in Figure 3. Other dive site maps at each region are presented in Annex 2.

Based on the 47 data of dive sites throughout Indonesia from contributors, 28% of the sites are considered in good coral condition (approximately 50 to 75% of live hard coral), 49% in fair condition (25 to 50% of live hard coral), and 23% in poor condition where the live hard coral is less than 25% (Figure 4).

From 31 dive centers that agreed to support this project by promoting the website to divers, we receive positive respond from 11 contributors that voluntarily put information of 47 dive sites throughout Indonesia. From the 47 dive sites, 30% is at North Sulawesi, 21% from Aceh, 19% from

Bali, and the rest are from Central Java, Central Sulawesi, Southeast Sulawesi, and Nusa Tenggara Barat province (Figure 5).

masker biru
Environmental Indonesia

Newsflash
Jaringan MaskerBiru
October 13th, 2009

MaskerBiru.net didasari atas semangat berbagi dan kebersamaan. Berangkat dari sebuah keinginan untuk menyediakan wadah bagi semua orang untuk berbagi, bertukar informasi, bertukar pendapat, menyampaikan ide, maka terbentuklah MaskerBiru.net. Bergabunglah menjadi salah satu dari sekian banyak awak nagen yang peduli dengan terumbu karang Indonesia. Untuk melihat informasi mengenai kondisi terumbu karang Indonesia yang diumumkan secara partisipatif dan sukarela, anda dapat melihatnya pada menu "Coral Reef Map".
Posted in Newsflash

Penelitian Lomba-Lomba Akan Ditingkatkan
Peserta Kalbar Amankan 5.000 Teler Penyus

Ekspedisi Ungkap Kekayaan Laut Indonesia

Hot News
Peserta Kalbar Amankan 5.000 Teler Penyus
May 06, 2010
Ekspedisi Ungkap Kekayaan Laut Indonesia
May 04, 2010
Penelitian Lomba-Lomba Akan Ditingkatkan
April 29th, 2010
PK Uj Maten (U) Pesisir dan Pulau-pulau Kecil
April 29th, 2010
Pusat Pembudidha Leleah dari Satu Spesies
April 29th, 2010
Kearifan Nelayan, Selamatkan Bumi
April 29th, 2010
Indonesia Miliki 500 Situs Bawah Air
April 29th, 2010
Senjata Laut Dokumentasikan 5000 Mikroba
April 29th, 2010

Blogs
Pusat Informasi Pesisir dan Kelautan Aceh (www.aceh-net.org) mulai resmi diaktifkan
April 09, 2010
Dama dan Waduk - Cermin dan Pembuluh Darah
March 10, 2010
Tipe Ikan Penghasil Terumbu Karang
December 27th, 2009
PERUBAHAN BLSM MENYINGKAT TERUMBU KARANG
December 18th, 2009
Karangku Sayang Karangku Madang
November 24th, 2009
Konservasi Terumbu Karang Berbasis Masyarakat untuk Keberlanjutan Wisata Bulbari
November 24th, 2009
Industri Wisata Inisiasi Pengelolaan Terumbu Karang di Anson
November 09, 2009
Berkeselaran dengan Terumbu Karang Indonesia
July 25th, 2009

Latent Data Entry
Schuttberg, H.Z. (ed.), (2000), Coral Bleaching Causes, Consequences and Response, Coastal Resources Center,

User Login
Username:
Password:
Remember me
Login Register Lost password!

Translate to:
English
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Archives
May 2010
April 2010
March 2010
February 2010
January 2010
December 2009
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August 2009
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September 2008
August 2008
July 2008
June 2008
October 1998

Blogroll

JAKARTA, KOMPAS.com — Indonesia akan menyelenggarakan tiga ekspedisi kelautan di perairan Indonesia bekerja sama dengan Amerika Serikat, Australia, Timor Leste, dan Cina. Ekspedisi ini bertujuan mengungkap kekayaan biota laut Indonesia.

Tanya fenomena dan informasi yang akan didapatkan melalui ekspedisi ini. Misalnya dinamika kelautannya, habitatnya, juga biota yang ada," ungkap Kepala Riset Wilayah Laut dan Sumber Daya Non-Hayati Kementerian Kelautan dan Perikanan Budi Sulistyio di Jakarta, Jumat (7/5/2010).

Tiga ekspedisi pelayaran akan dilakukan di perairan laut selatan Jawa, yakni di Samudra Hindia, Laut Arafura di timur Indonesia, dan perairan Sulawesi Utara di sekitar Sangihe Talud. Untuk perairan Sangihe Talud, ekspedisi akan dilakukan kapal riset Indonesia Baruna Jaya IV dan kapal riset Amerika Okeanos.

"Okeanos akan berangkat dari Guam, Hawaii, Amerika Serikat, dan memulai penelitian bersama kita pada pertengahan Juli hingga 8 Agustus 2010 mendatang," jelas Budi.

Ia menjelaskan, perairan Sangihe Talud mempunyai keunikan tersendiri. Di bawah permukaan air di daerah tersebut terdapat gunung berapi yang aktif. "Biota bawah laut perairan Sangihe Talud juga unik, di sana ada udang yang bisa hidup sampai suhu 400 derajat celsius karena adanya gunung berapi. Itu juga yang akan kita riset," tutur Budi.

Ditambahkan, kapal riset Amerika Okeanos mampu merentam kedalaman bawah laut hingga kedalaman 4.000 meter di dasar laut. Tu untuk kemampuan rekam

Figure 1. Snapshot of the news section of the website

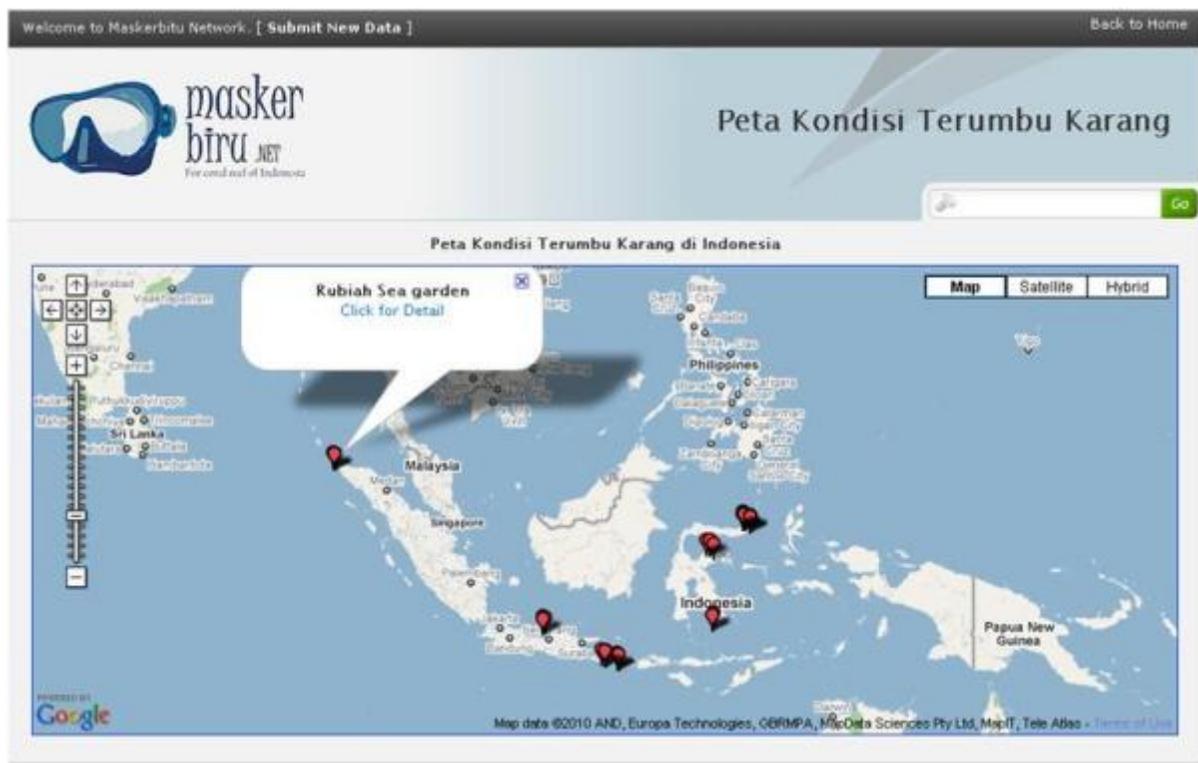


Figure 2. Snapshot of the coral reef map section of the website

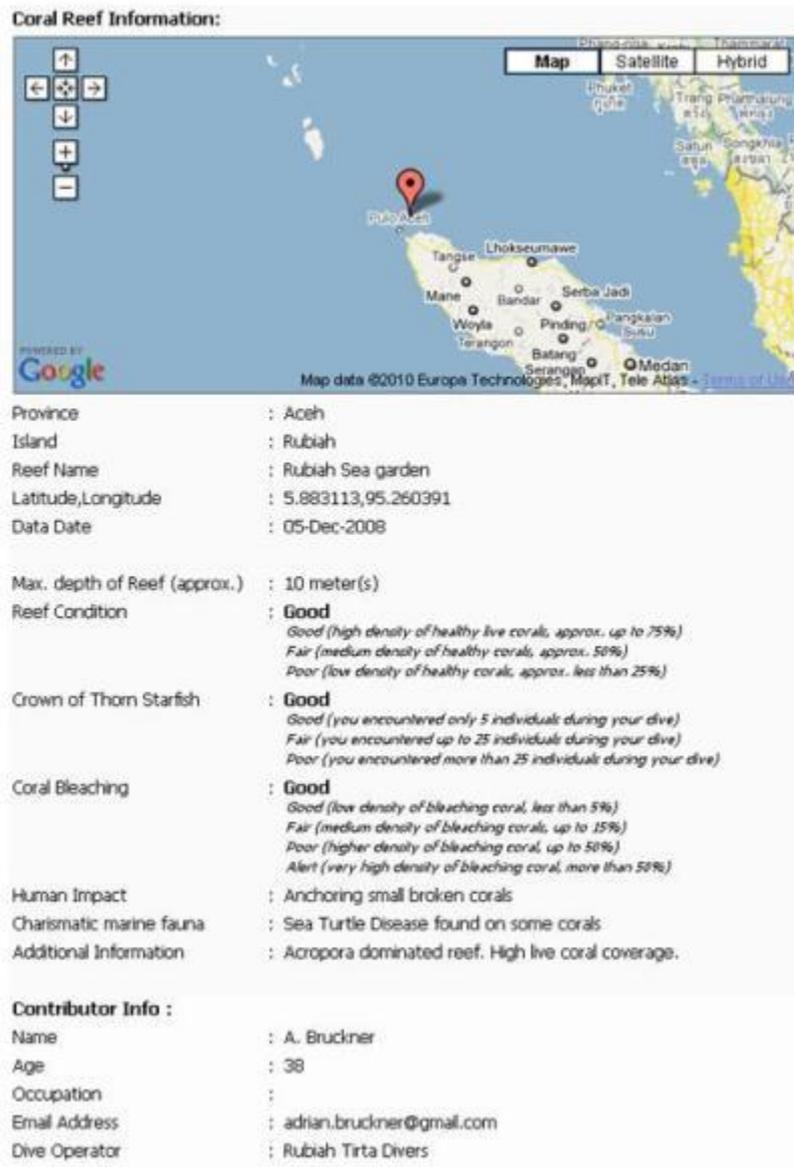


Figure 3. Detailed information of dive site

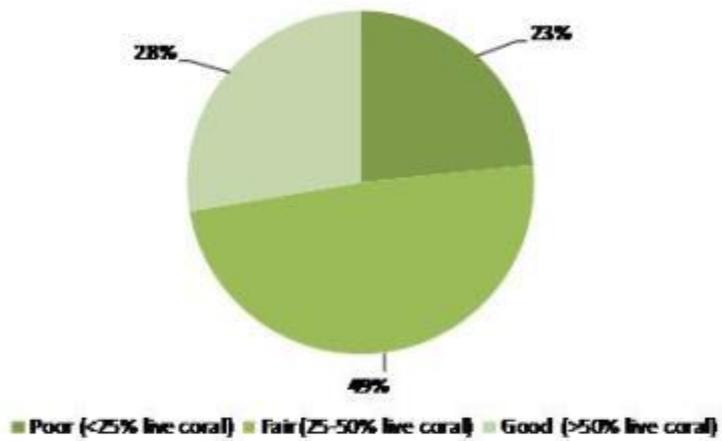


Figure 4. Reef condition reported from 47 dive sites in Indonesia

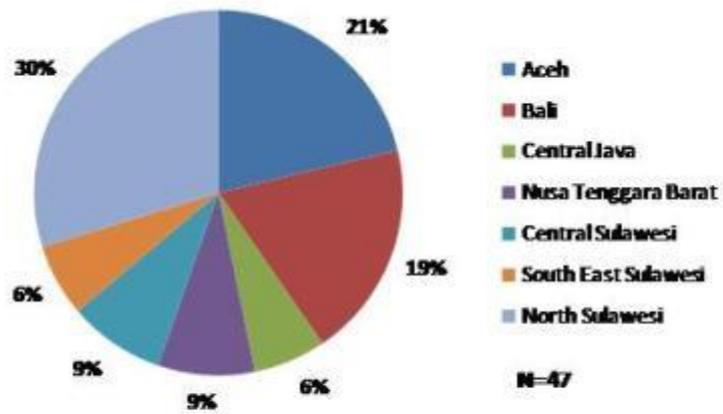


Figure 5. Percentage of dive sites reported in the website

(c) Library

This part of the website is aimed to provide electronic document and other information related to marine and coral reef conservation. The documents are including report, scientific publication, survey guidelines, education related documents, etc. (Figure 6). Most of the documents are sourced from available online documents from websites where freely downloadable. Currently there are 80 electronic documents available in the website.

(d) You can help

This part of the website is aimed to put information of education and awareness to audiences, especially divers. We provide guidance to conduct eco-friendly and responsible diving activities.

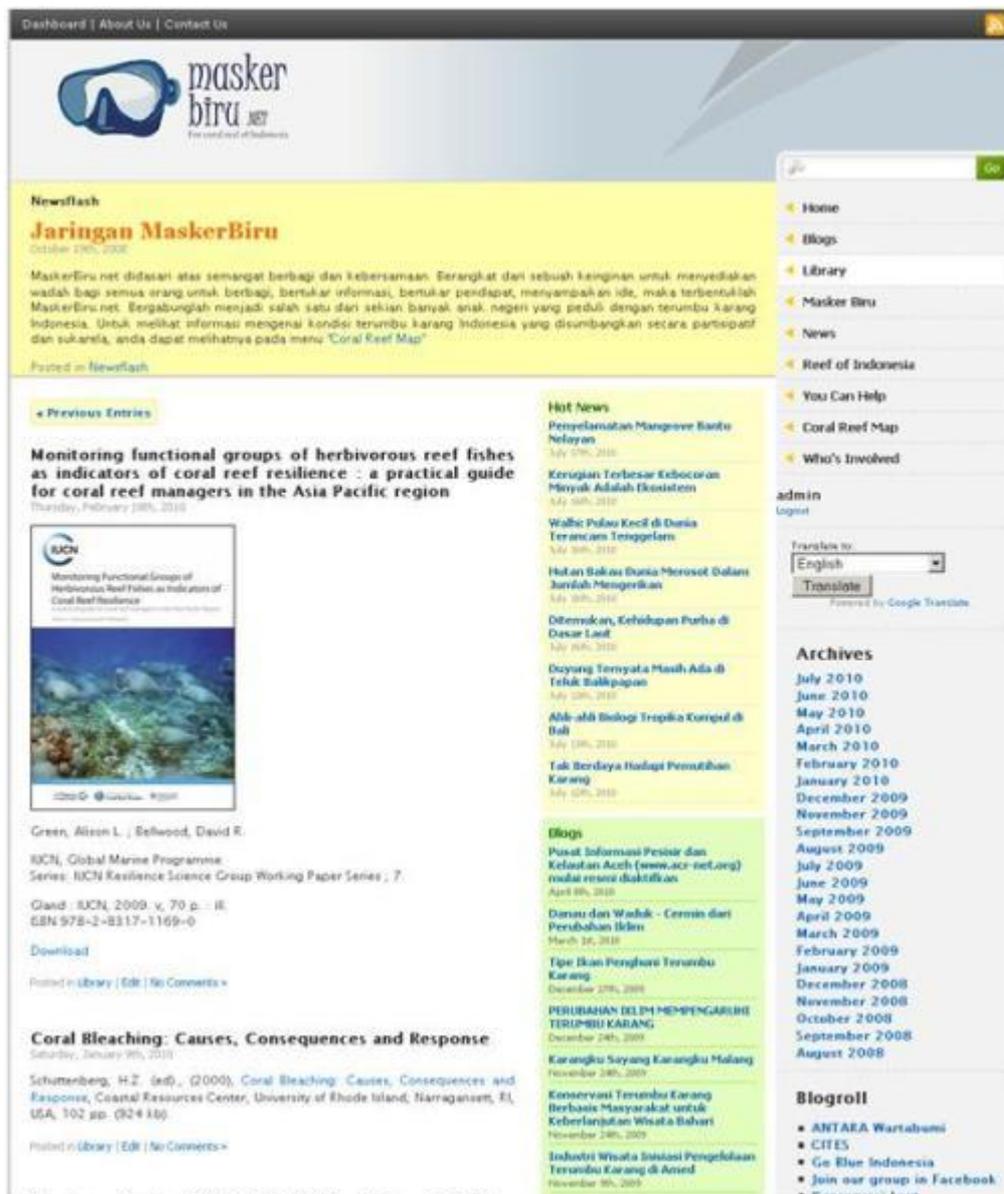


Figure 6. Snapshot of the library section of the website

2. Develop simple methodology for visual coral reef assessment

One objective of the project is to raise awareness among hobbyist divers, to be involved to promote coral reef conservation at dive sites in Indonesia. The divers voluntarily support the website with general data about the site where they dove. Prior to that, the project develop simple methodology that easily applied by divers during their dives. During their dives, divers can collect information easily by eye and memorized it, and then put the information to the datasheets provided; or directly onto the website. Field guide that explain the methodology is presented in the Annex 3.

3. Produce promotion tools

In order to promote the website and the programs we produced promotion materials and distributed to 31 dive clubs and operators (Figure 7). Promotion materials are presented in Annex 4.



Figure 7. Poster at one of the dive club

4. Promote the website and spread the idea of this project

To promote the website, 65 posters, 300 stickers, 150 leaflets, 70 datasheets, and 100 field guides had been distributed. List of dive operators and clubs who received the promotion materials is presented in Annex 1.

Annex 1. List of dive operators and clubs involved in the project

| No | Dive Operator/Club | Address | Area |
|----|---|--|------|
| 1 | Rubiah Tirta Divers | Iboih Beach - Weh Island - Sabang Phone. +62 652 3324555 E-mail: info@rubiahdivers.com | Aceh |
| 2 | Bali International Diving Professionals | JL. Danau Poso No. 26 Sanur 80228 Bali - Indonesia Tel : +62 (0) 361 285065 Fax : +62 (0) 361 270760 E-mail : info@bidp-balidiving.com | Bali |
| 3 | AquaMarine Diving | Jalan Petitenget 2A Kuta, 80361 Bali, Indonesia info@aquamarinediving.com | Bali |
| 4 | Scuba Duba Doo Dive Center | Jl.Legian Kelod 367, Kuta, Bali 80361 Phone & Fax: +62 361 761798 After Hours: +62 81 2388 6881 or +62 81 855 6276 E-mail: info@divecenterbali.com | Bali |
| 5 | Atlantis International Bali Dive Center | Jl. By Pass Ngurah Rai #350 Sanur, Bali Phone : +62-361-284312 Fax : +62-361-282824 Mobile : +62-81-2380 5767 e-mail : info@balidiveaction.com | Bali |
| 6 | Wisnu Dive Center | Banyualit - Lovina - Bali PO.BOX 264 Singaraja Bali Telp: +62 362 42319 or +62 362 24997 Mobile: + 62 (0)81 6470 0936 or +62 (0)81 99981 9728 Email: info@lovinadive.com | Bali |
| 7 | Blue Season Bali | Jalan Danau Tamblingan 59x, Sanur, Bali, Indonesia. Telephone: +62 361 270852 / 282574 Fax: +62 361 270842 Email: bali-diving@baliocean.com Web: www.baliocean.com | Bali |
| 8 | Bali Scuba | Jl. Danau Poso 40, Sanur, Bali 80228, Indonesia, Phone : +62-361-288610 or 271317 Fax : +62-361-271316 or 270862 Email: letsdive@baliscuba.com | Bali |
| 9 | Kapal Selam Dive Club | Jl. Raya Kerobokan 388x Banjar Semer, Kerobokan Kuta 80361 Bali, Indonesia Email: info@kapalselam.org | Bali |
| 10 | ECODIVE BALI | Jemeluk Beach, Amed, Abang Karangasem 80852 - Bali - INDONESIA email: info@ecodivebali.com | Bali |

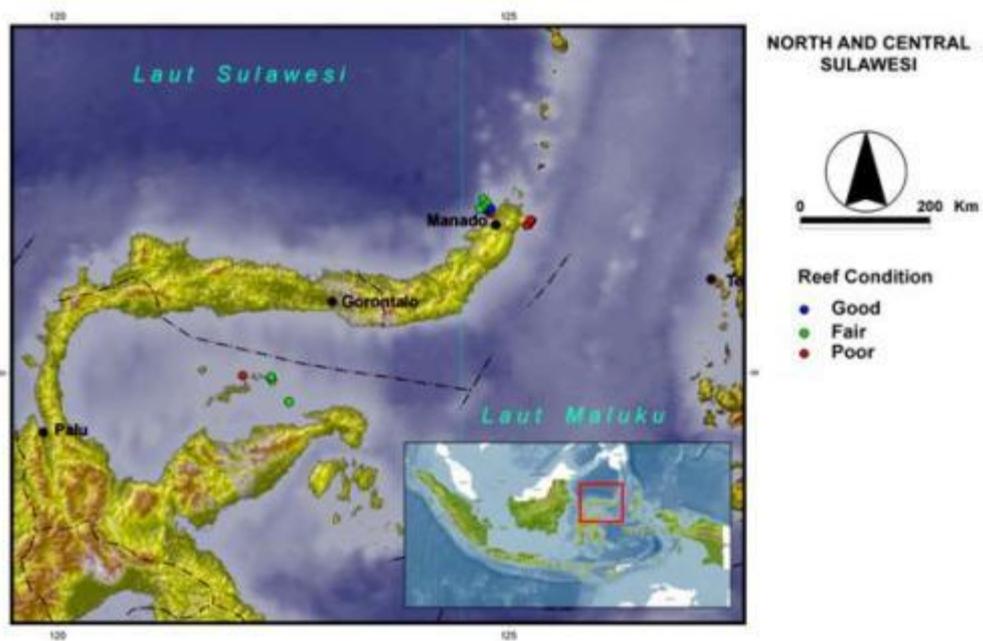
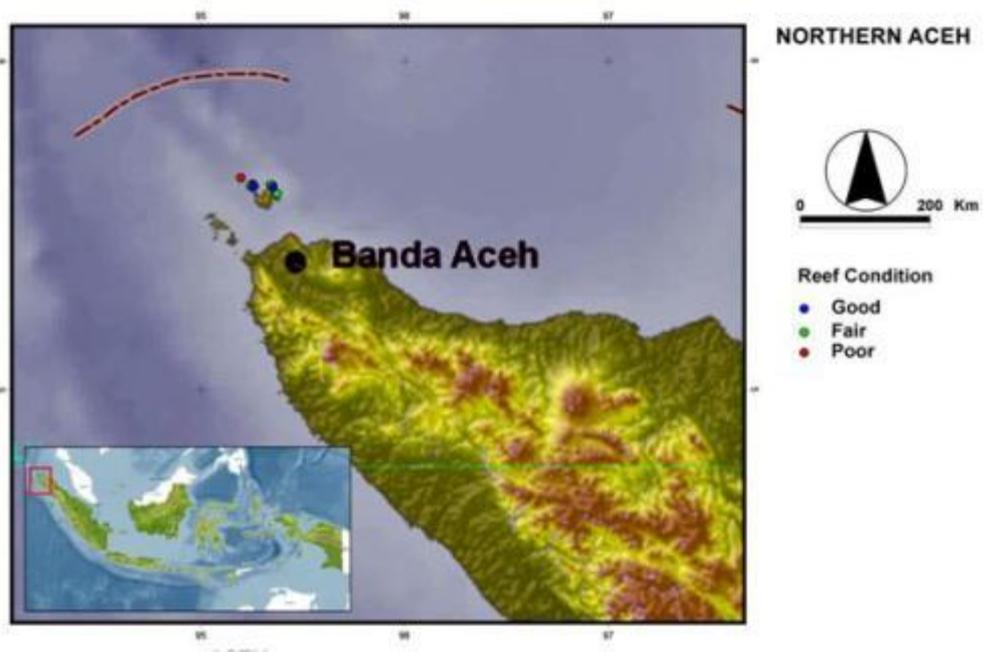
Annex 1. (Cont.) List of dive operators and clubs involved in the project

| | | | |
|----|-------------------------|---|------|
| 11 | Water Worx Dive Center | Jl. Silayukti, Padang Bai 80871 . Bali . Indonesia . Office Phone: +62(0)363-41220 Mobile Phones +62(0)811 375 889 or +62(0)8133 511 056 Web:www.WaterWorxBali.com . E-mail: info@waterworxbali.com | Bali |
| 12 | Bluedivebali | Jl. Tirta Ening No. 2 Sanur - Bali Telephone: +62-361-285725 Email : sales@bluedivebali.com | Bali |
| 13 | Ena Dive | Jl. Tirta Ening # 1 Sanur - Denpasar 80227 / PO. Box 3798. Bali Indonesia Phone : + 62 361 288829 or Fax : + 62 361 287945 E-mail : enadive@dps.centrin.net.id | Bali |
| 14 | Bali Scuba | Jl. Danau Poso 40, Blanjong - Sanur Bali 80228 - Indonesia Tel: +62-361-288610 or +62-361-271317 (open daily 7.00am - 6.00pm) Fax: +62-361-271316 or +62-361-270862 Email: letsdive@baliscuba.com | Bali |
| 15 | Kapal Selam Dive Club | Jl. Raya Kerobokan 388x Banjar Semer, Kerobokan Kuta 80361 Bali, Indonesia Email: info@kapalselam.org | Bali |
| 16 | Bali Diving Academy | Jl. Danau Tamblingan, 51 (Ruko Laghawa) Sanur-Bali-Indonesia Tel. +62 361 270252 www.scubali.com info@scubali.com | Bali |
| 17 | Pigmy Bali Diving | Jl. By Pass Ngurah Rai 99 Jimbaran-Bali-Indonesia Ph. +62 361 778 962 778 320 Fax. +62 361778 963 | Bali |
| 18 | Balidives | Jl GN Agung Gg Indus No.4 Denpasar Bali Indonesia | Bali |
| 19 | Water Worx Dive Center | Jl. Silayukti, Padang Bai 80871 . Bali . Indonesia | Bali |
| 20 | Reef Seen Aquatics Bali | Desa Pemuteran, Gerokgak, Singaraja North Bali, Indonesia Phone: +62 812 3894051 Email: dive@reefseenbali.com www.reefseenbali.com | Bali |

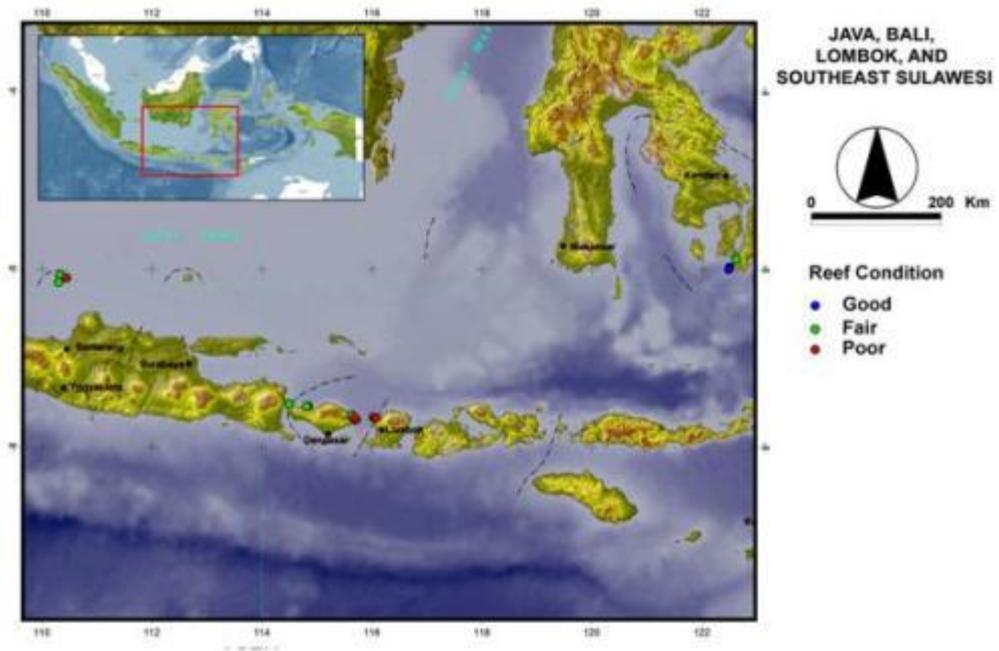
Annex 1. (Cont.) List of dive operators and clubs involved in the project

| | | | |
|----|-------------------------|---|----------------|
| 21 | Fisheries Diving Club | Bogor Agricultural University Indonesia fdcipb@yahoo.com | Java |
| 22 | Blue Coral Diving | Jl. Raya Senggigi - Senggigi Lombok NTB Indonesia 83355 Phone: +62 693441 Fax: +62 693441 Email: bluecoral_diving@yahoo.com www.bluecoraldiving.com | Lombok |
| 23 | Dream Divers | Jl Raya Senggigi kav. 15 83355 Senggigi Lombok NTB - Indonesia email: info@dreamdivers.com | Lombok |
| 24 | Blue Marlin Dive Center | Holiday Resort Lombok senggigi@bluemarlindive.com +62(370)693719 | Lombok |
| 25 | Scuba Froggy | Jalan Raya Senggigi km 9 Lombok Ph: 0370 693901 | Lombok |
| 26 | Lumba Lumba Diving | PO Box 1721, Manado 95017 North Sulawesi, Indonesia Tel. 62 - 431 - 838 440 | North Sulawesi |
| 27 | Two Fish Divers | Jl Sam Ratulangi XIX No. 12A, Manado 95113, North Sulawesi. | North Sulawesi |
| 28 | Eco Divers | Mokupa Jaga I Kec. Tombariri - Manado, North Sulawesi 95351 - Indonesia Phone: (+62) 431 826833 - Fax: (+62) 431 838510 - Email: info@eco-divers.com | North Sulawesi |
| 29 | Lembeh Resort | PO Box 117, Bitung North Sulawesi 95500 Indonesia Phone: 0438 550 3139 | North Sulawesi |
| 30 | Divers Lodge Lembeh | Tromol Pos 54, Kantor Pos, Bitung 95500 Sulawesi Utara Indonesia | North Sulawesi |
| 31 | Bastianos Bunaken | Jln. Cokroaminoto 19 Manado 95122 North Sulawesi, Indonesia Tel. +62.431.864025 info@bastianos.com | North Sulawesi |

Annex 2. Reef condition map of 47 dive sites throughout Indonesia



Annex 2. (Cont.) Reef condition map of 47 dive sites throughout Indonesia



Annex 3. Field Guide



masker
biru
www.maskerbiru.net

FIELD GUIDE

Use your diving capabilities to check on coral reef a few minutes!

Reef Condition



Give a score of 1 to 3 of the coral reef condition, in terms of the coverage or density.

Score 1: Poor Condition, determined by low density of corals. Give this score if you find less than 25% of healthy coral or you find up to 75% of dead corals;

Score 2: Fair Condition, determined by medium density of corals. Give this score if you find about 50% of healthy corals or you find up to 50% of dead corals;

Score 3: Good condition, determined by high density of corals. Give this score if you find up to 75% of healthy corals or you find only 25% of dead corals.

Crown of Thorn Starfish (COTS), *Acanthaster sp.*



Give a score of 1 to 3 of the density of COTS

Score 1: Poor Condition, determined by high density of COTS. Give this score if you find more than 50 individual of COTS during your dive;

Score 2: Fair Condition, determined by medium density of COTS. Give this score if you find up to 25 individual of COTS during your dive;

Score 3: Good condition, determined by low density of COTS. Give this score if you find not more than 5 individual of COTS during your dive.

Coral Bleaching



Give a score of 1 to 3 of the bleaching corals. Bleaching coral determined by its pale or white color.

Score 1: Poor Condition, determined by high density of bleaching corals. Give this score if you find up to 50% of bleaching corals;

Score 2: Fair Condition, determined by medium density of bleaching corals. Give this score if you find up to 25% of bleaching corals;

Score 3: Good condition, determined by low density of bleaching corals. Give this score if you find less than 5% of bleaching corals.

Additional Information



Please note additional information on:

- **Human impact:** please note if you find evidence of human impact on reefs such as: garbage, anchor damage, broken corals in large magnitude and discarded fishing nets on the reefs
- **Charismatic marine fauna:** please note if you encounter any charismatic marine faunas (sea turtle, napoleon wrasse, rays, dolphin)
- **Share your experience:** we are very happy to hear from you about the excitement of your diving experience anywhere in Indonesia

Your participation is very much appreciated..!



Ruffora
www.ruffora.com



masker
biru
www.maskerbiru.net

Annex 4. Promotional materials (Poster)



**masker
biru NETWORK**
Watch Coral Reef of Indonesia

www.maskerbiru.net

**Be a part of world's community
in taking care of
the Indonesian Coral Reef**

Use your diving capabilities to check on coral reef a few minutes!

The Masker Biru (translated as Blue Mask) is a network of people who concern to the coral reef of Indonesia, from any background. We involve reef scientists, practitioners, managers, students, and also recreational divers. The aims of this network are:

- Information sharing.** To share information and experience of condition of coral reef in Indonesia based on survey, research, and a dive trip by reef practitioners and individual divers.
- Education and awareness.** To raise awareness of world's community and provide information on how we can participate to save the coral reefs of Indonesia.

How to participate

1. Spend a few minutes to CHECK on the reef environment while you're diving, to gather the following information:

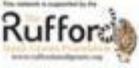
| | |
|--|--|
| <p style="text-align: center;">Reef Condition</p>  <p>Give a score of 1 to 3 of the coral reef condition, in terms of the coverage or density.</p> <p>Score 1: Poor Condition, determined by low density of corals. Give this score if you find less than 25% of healthy coral or you find up to 75% of dead corals.</p> <p>Score 2: Fair Condition, determined by medium density of corals. Give this score if you find about 50% of healthy corals or you find up to 50% of dead corals.</p> <p>Score 3: Good condition, determined by high density of corals. Give this score if you find up to 75% of healthy corals or you find only 25% of dead corals.</p> | <p style="text-align: center;">Crown of Thorn Starfish (COTS), Achantaster sp.</p>  <p>Give a score of 1 to 3 of the density of COTS.</p> <p>Score 1: Poor Condition, determined by high density of COTS. Give this score if you find more than 50 individual of COTS during your dive.</p> <p>Score 2: Fair Condition, determined by medium density of COTS. Give this score if you find up to 25 individual of COTS during your dive.</p> <p>Score 3: Good condition, determined by low density of COTS. Give this score if you find not more than 5 individual of COTS during your dive.</p> |
| <p style="text-align: center;">Coral Bleaching</p>  <p>Give a score of 1 to 3 of the bleaching corals. Bleaching coral determined by its pale or white color.</p> <p>Score 1: Poor Condition, determined by high density of bleaching corals. Give this score if you find up to 50% of bleaching corals.</p> <p>Score 2: Fair Condition, determined by medium density of bleaching corals. Give this score if you find up to 25% of bleaching corals.</p> <p>Score 3: Good condition, determined by low density of bleaching corals. Give this score if you find less than 5% of bleaching corals.</p> | <p style="text-align: center;">Additional Information</p>  <p>Please note additional information on:</p> <ul style="list-style-type: none"> • Human Impact: please note if you find evidence of human impact on reefs such as: garbage, anchor damage, broken corals in large magnitude and discarded fishing nets on the reefs. • Characteristic marine fauna: please note if you encounter any characteristic marine faunas (sea turtles, Napoleon wrasse, ray, stingray). • Show your experience: we are very happy to hear from you about the excitement of your diving experience anywhere in Indonesia. |

2. Contact your dive operator or guide to get the FORM to record all your findings

3. Visit www.maskerbiru.net for more information or to involve more in this network

**Your participation is
very much appreciated..!**

This network is supported by the





Annex 4. (Cont.) Promotional materials (Leaflet)



masker
biru NETWORK
Watch Coral Reef of Indonesia

www.maskerbiru.net

The MaskerBiru (translated as Blue Mask) is a network of people who concern to the coral reef of Indonesia, from any background. We involve reef scientists, practitioners, managers, students, and also recreational divers. The aims of this network are:

1. **Information sharing.** To share information and experience of condition of coral reef in Indonesia based on survey, research, and a dive trip by reef practitioners and individual divers.
2. **Education and awareness.** To raise awareness of world's community and provide information on how we can participate to save the coral reefs of Indonesia.
3. **Data and information center.** To provide information related to marine and coral reef conservation.

**Be a part of world's community
in taking care of
the Indonesian
Coral Reef**



masker
biru NETWORK
www.maskerbiru.net
maskerbirunetwork@gmail.com

Annex 5. Photo documentation



Annex 5. (Cont.) Photo documentation



Annex 5. (Cont.) Photo documentation



Annex 5. (Cont.) Photo documentation



Annex 6. List of member

Back to Home



Who's Involved

Bergabunglah menjadi salah satu dari sekian banyak anak negeri yang peduli dengan terumbu karang Indonesia

| No. | User Name | Email | URL |
|-----|-------------------------------|-----------------------------|---|
| 1 | iwansenaya | iwansenaya@yahoo.com | http:// |
| 2 | eponky | eponky@yahoo.com | http:// |
| 3 | rudirawan | rudirawan2000@yahoo.co.id | http:// |
| 4 | abruckner | adrian.bruckner@gmail.com | http:// |
| 5 | NataliaO'Neill | christinatortes@mail15.com | |
| 6 | Bayu Sumantri | sumantribayu25@yahoo.co.id | |
| 7 | AprilSFOLEY | kathygray@mail333.com | |
| 8 | DEANNAHARRELL18 | elizabethmartin@mail15.com | |
| 9 | MoniqueDouglas22 | saraward@mail333.com | |
| 10 | Kukuh Kande | kotakani_koeh@yahoo.co.id | |
| 11 | Bali Diving Academy Pemuteran | bidap@icubali.com | |
| 12 | eksplo | eksplo@yahoo.com | |
| 13 | animwidodo | animwidodo@yahoo.co.id | http:// |
| 14 | mwall | michael-walls@live.com | http:// |
| 15 | ketutaryana | ketutaryana@gmail.com | http:// |
| 16 | zalazul | rizalayah@yahoo.co.id | |
| 17 | nse | teh.ero.gelis@yahoo.co.id | |
| 18 | joe | john@cheti.oe.tv | |
| 19 | Gunawan | gurs_oi_dive@yahoo.com | |
| 20 | Gunawan Sugiyanto | diver_gurs@hotmail.com | http://gunawansugiyanto.wordpress.com |
| 21 | ricksmith | rick.smith@hotmail.com | http:// |
| 22 | mariane | marianne2000@windowdive.com | http:// |
| 23 | riantian | riantiajah@hotmail.co.id | http:// |
| 24 | markuncero | markuncero@gmail.com | http:// |
| 25 | dendiderdi | dendiderdi@gmail.com | http://www.facebook.com/home.php?fb/profile.php?ref=profile&id=100000506520548 |
| 26 | arifsudtomo | arif_sudtomo@hotmail.com | http:// |
| 27 | csdiver | cragsmithdiver@hotmail.com | http:// |
| 28 | Smith Jessiv | jessivsmithreef@gmail.com | http:// |
| 29 | renahmadi | ronnblood@gmail.com | |
| 30 | bodianarto | the.banants@gmail.com | http:// |
| 31 | lisabedriana | lisabedriana@gmail.com | http:// |
| 32 | inwansyaharief | inwansyaharief@gmail.com | http:// |
| 33 | n_khoirya@yahoo.com | n_khoirya@yahoo.com | |
| 34 | dudung | ifandermail@yahoo.co.id | http://www.dreamstudio.com |

| Id | Province | Island | Reef Name | Lat | Lon | Date | Depth of reef |
|-----------|-------------------|---------------|---------------------------------------|------------|------------|-------------|----------------------|
| 1 | Aceh | Weh | Canyon | 5.922045 | 95.196533 | 2008-12-04 | 60 |
| 2 | Aceh | Weh | Batee Tokong | 5.89131 | 95.253525 | 2008-12-04 | 15 |
| 3 | Aceh | Weh | Benteng | 5.883796 | 95.353088 | 2008-12-03 | 25 |
| 4 | Aceh | Rubiah | Rubiah Sea garden | 5.883113 | 95.260391 | 2008-12-05 | 10 |
| 5 | Sulawesi Utara | Sulawesi | Batu Hitam | 1.568103 | 124.790955 | 2009-04-04 | 20 |
| 6 | Sulawesi Utara | Bunaken | Lekuan | 1.601049 | 124.763489 | 2009-04-05 | 40 |
| 7 | Sulawesi Utara | Bunaken | Bunaken timur | 1.613404 | 124.782715 | 2009-04-05 | 30 |
| 8 | Sulawesi Utara | Bunaken | Fukui Point | 1.616836 | 124.73465 | 2009-04-06 | 25 |
| 9 | Sulawesi Utara | Bunaken | Mandolin Point | 1.618895 | 124.727783 | 2009-04-07 | 40 |
| 10 | Bali | Bali | Amed Wall | -8.3963 | 115.708008 | 2009-04-10 | 40 |
| 11 | Bali | Bali | Batu Klebit, Tulamben | -8.320212 | 115.631104 | 2009-04-08 | 15 |
| 12 | Bali | Bali | Coral Garden, Tulamben | -8.29847 | 115.631104 | 2009-08-11 | 20 |
| 13 | Bali | Bali | Amed Coral Garden | -8.385431 | 115.716248 | 2009-04-11 | 12 |
| 14 | Bali | Bali | Gili Selang | -8.341953 | 115.686035 | 2009-04-12 | 25 |
| 15 | Sulawesi Tenggara | Buton | Kolagana, Batu Buti, Nirwana, Bau-Bau | -5.451959 | 122.626648 | 2005-06-15 | 15 |
| 16 | Sulawesi Tenggara | Liwutongkidi | Liwutongkidi | -5.592751 | 122.507172 | 2006-01-05 | 15 |
| 17 | Sulawesi Tenggara | Siompu | Tongali | -5.646052 | 122.486572 | 2006-01-07 | 17 |
| 18 | Sulawesi Tengah | Togian | Pulau Puah | -0.532829 | 122.563477 | 2009-05-11 | 10 |
| 19 | Sulawesi Tengah | Togian | Milli`s Reef | -0.285643 | 122.382202 | 2009-05-12 | 30 |

| | | | | | | | |
|----|-----------------|---------------------|--------------------|-----------|------------|------------|----|
| 20 | Sulawesi Tengah | Togian | Malingi | -0.236205 | 122.052612 | 2009-05-12 | 15 |
| 21 | Sulawesi Tengah | Togian | Bullocki | -0.252685 | 122.365723 | 2009-05-11 | 20 |
| 22 | Bali | Menjangan | Pulau Menjangan | -8.0973 | 114.498138 | 2009-07-10 | 60 |
| 23 | Bali | Bali | Napoleon Reef | -8.135367 | 114.842834 | 2009-07-13 | 30 |
| 24 | Bali | Bali | Close Encounters | -8.143524 | 114.820862 | 2009-07-13 | 30 |
| 25 | Bali | Bali | Deep Reef | -8.144883 | 114.813995 | 2009-07-11 | 40 |
| 26 | Jawa Tengah | Karimunjawa Islands | Taka Menyawakan | -5.736243 | 110.335693 | 2009-05-20 | 30 |
| 27 | Jawa Tengah | Karimunjawa | Kapal Karam Biblis | -5.790897 | 110.45105 | 2009-05-21 | 20 |
| 28 | Jawa Tengah | Karimunjawa Islands | Karang Kapal | -5.872868 | 110.308228 | 2009-05-22 | 35 |
| 29 | Sulawesi Utara | Lembah | Angel`s windows | 1.495344 | 125.2565 | 2009-05-18 | 30 |
| 30 | Sulawesi Utara | Lembah | Mawali Wreck | 1.45004 | 125.231781 | 2009-05-19 | 30 |
| 31 | Sulawesi Utara | Sulawesi | Police Pier | 1.441117 | 125.202942 | 2009-05-20 | 15 |
| 32 | Sulawesi Utara | Sulawesi | Hairball | 1.49798 | 125.245514 | 2009-05-19 | 25 |

| | | | | | | | |
|----|---------------------|------------|--------------------|-----------|------------|------------|----|
| 33 | Sulawesi Utara | Mantehage | Barracuda Point | 1.732829 | 124.719543 | 2009-05-06 | 35 |
| 34 | Sulawesi Utara | Mantehage | Bango | 1.686158 | 124.760742 | 2009-05-06 | 40 |
| 35 | Sulawesi Utara | Manado Tua | Pangulingan | 1.644977 | 124.71405 | 2009-05-07 | 35 |
| 36 | Sulawesi Utara | Manado Tua | Muka Gereja | 1.620267 | 124.678345 | 2009-05-07 | 40 |
| 37 | Sulawesi Utara | Siladen | Siladen | 1.625758 | 124.806061 | 2009-05-08 | 30 |
| 38 | Aceh | Weh | Iboih | 5.884479 | 95.244598 | 2010-04-27 | 4 |
| 39 | Aceh | Weh | West Rubiah | 5.881064 | 95.256271 | 2010-04-27 | 6 |
| 40 | Aceh | Weh | East Rubiah | 5.88243 | 95.261765 | 2010-04-27 | 8 |
| 41 | Aceh | Weh | Benteng | 5.844179 | 95.374374 | 2010-04-28 | 12 |
| 42 | Aceh | Weh | Sumur Tiga | 5.889261 | 95.344849 | 2010-04-28 | 12 |
| 43 | Aceh | Weh | Ujung Kareung | 5.875941 | 95.353432 | 2010-04-28 | 15 |
| 44 | Nusa Tenggara Barat | Lombok | Coral garden | -8.339915 | 116.028671 | 2009-07-10 | 15 |
| 45 | Nusa Tenggara Barat | Lombok | Meno Wall | -8.343312 | 116.049271 | 2009-07-10 | 20 |
| 46 | Nusa Tenggara Barat | Lombok | Air Wall | -8.363013 | 116.074677 | 2009-07-11 | 30 |
| 47 | Nusa Tenggara Barat | Lombok | Pelabuhan Gili Air | -8.35588 | 116.088753 | 2009-07-11 | 8 |

| Reef condition | COTs | Coral Bleaching | Human Impacts | Another Human Impacts | Charismatic Megafauna |
|----------------|------|-----------------|---|------------------------------|-----------------------------------|
| Poor | Good | Good | | | Napoleon Wrasse,Sea Turtle |
| Good | Good | Good | | | Sharks,Rays/Manta |
| Good | Good | Good | Net fishing | | Sea Turtle |
| Good | Good | Good | Anchoring | small broken corals | Sea Turtle |
| Poor | Good | Good | Waste/debris | | |
| Good | Good | Good | | | Napoleon Wrasse,Sea Turtle |
| Good | Good | Good | | | Napoleon Wrasse,Sea Turtle |
| Good | Good | Good | | | Napoleon Wrasse,Sea Turtle |
| Good | Good | Good | Waste/debris | | Sea Turtle |
| Fair | Good | Good | | | Napoleon Wrasse,Sea Turtle,Sharks |
| Fair | Good | Good | | | Sea Turtle |
| Fair | Good | Good | | | Sharks |
| Poor | Good | Good | Waste/debris | Damage occured long time ago | |
| Poor | Good | Good | | | Napoleon Wrasse,Sea Turtle,Sharks |
| Fair | Good | Good | Large magnitude of broken corals,Anchoring,Waste/debris,Net fishing | | Sea Turtle,Dolphin |
| Good | Good | Good | Anchoring,Cyanide fishing,Net fishing | | Sea Turtle,Dolphin,Rays/Manta |
| Good | Good | Good | Large magnitude of broken corals,Anchoring,Blast fishing (dynamite),Cyanide fishing,Net fishing | | Sea Turtle,Sharks,Rays/Manta |
| Fair | Good | Good | | | |
| Fair | Good | Good | | | |

| | | | | | |
|------|------|------|--|--|----------------------------|
| Poor | Good | Good | | | |
| Fair | Good | Good | | | |
| Fair | Good | Good | | | Napoleon Wrasse,Sea Turtle |
| Good | Good | Good | | | Napoleon Wrasse,Sea Turtle |
| Fair | Good | Fair | | | |
| Fair | Good | Good | | | Napoleon Wrasse,Sea Turtle |
| Fair | Fair | Good | Large magnitude of broken corals,Anchoring | | Sea Turtle |
| Poor | Good | Good | Waste/debris | | |
| Fair | Fair | Fair | Anchoring | | Sharks |
| Poor | Good | Good | Waste/debris | | |
| Poor | Good | Good | Waste/debris | | |
| Poor | Good | Good | Waste/debris | | |
| Poor | Good | Good | Waste/debris | | |

| | | | | | |
|------|------|-------|--------------|--|-----------------------------------|
| Fair | Good | Good | | | |
| Fair | Good | Good | | | Napoleon Wrasse,Sharks,Rays/Manta |
| Fair | Good | Good | | | Napoleon Wrasse,Sharks |
| Fair | Good | Good | | | Napoleon Wrasse |
| Good | Good | Good | | | Sea Turtle,Rays/Manta |
| Fair | Good | Alert | | | |
| Fair | Good | Alert | | | |
| Good | Good | Alert | | | |
| Fair | Good | Poor | | | |
| Fair | Good | Poor | | | |
| Good | Good | Poor | | | |
| Fair | Good | Good | | | Sea Turtle |
| Fair | Good | Good | | | Sea Turtle |
| Fair | Good | Good | | | Sea Turtle |
| Poor | Good | Good | Waste/debris | | |

| Another Charismatic Megafauna | Additional Info | Contributors | Age | Occupation |
|--|--|-------------------|-----|-----------------------------|
| | A stiff wall dive site, not a dense reef assemblage, but with lot of fishes. One of best dive spot in Aceh | A. Brucukner | 38 | |
| | Dive site in Weh Island where you can find shark (mostly black teep reef shark) | A. Bruckner | 38 | |
| Large trevaly schools | Good dive site in Aceh. Strong current, good visibility. Diverse type of corals | A. Bruckner | 38 | |
| Disease found on some corals | Acropora dominated reef. High live coral coverage. | A. Bruckner | 38 | |
| Slugs | A muck diving site. Lots of cryptic organism. Low live coral assemblage | Lisa Tedriana | 28 | Hobbyist |
| Bumpedhead Parrotfish, Lion fish | Beautiful dive site, wall diving | Lisa Tedriana | 28 | Hobbyist |
| | Lots of soft corals Some tourists reported Killer Whale | Lis Tedriana | 28 | Hobbyist |
| Morray Eels, Groupers | | Lisa Tedriana | 28 | Hobbyist |
| Maori wrasse, Bumpedhead parrotfish, Goupers | Beautiful wall diving site | Lisa Tedriana | 28 | Hobbyist |
| | Wall diving with lots of sea fans; If we`re lucky, we can find the Sunfish (Mola mola) | Marianne | 24 | |
| Barracuda | | Marianne | 24 | |
| Blue Ribbon Eels, Bumpedhead Parrotfish | A health coral reef area | Marianne | 24 | |
| | A shallow reef, good for snorkeling | Marianne | 24 | |
| White tip shark, grey shark, giant snapper | | Marianne | 24 | |
| | Patch Reef Dominan | Gunawan Sugiyanto | 29 | Freelance Scientific Diving |
| Eagle Rays, crocodile fish, frog fish | Fringing Reef | Gunawan Sugiyanto | 29 | Freelance Scientific Diving |
| | Pinnacle | Gunawan Sugiyanto | 29 | Freelance Scientific Diving |
| Sponges | The reef is quite flat with sandy areas between the beautiful coral gardens consisting mainly of huge table corals. I was very impressed by this dive site mainly because of the incredible large sponges that can be found here. We swam over them and tried to measure them - some must have easily been 3m or more! I have no idea why they grow so large here, large sponges are typical of the Togian islands, but at this dive site they are even bigger than usual. | Jessy Smith | | |
| | At this dive site we found an amazing amount of nudibranchs and slugs. Most species were quite known to me like Chromodoris willani and kunei. At the top of the reef are huge fields of staghorn corals and on the steep wall are nicely covered with hard corals. | Jessy Smith | | |

| | | | | |
|--|--|---------------|----|--------------|
| | A wall with many low growing hard corals and a few small gorgonian fans, we saw some flatworms, nudibranchs and morray eels. | Jessy Smith | | |
| | Similar condition to the adjacent site, the Milli's reef | Jessy Smith | | |
| | A steep wall diving, sometimes overhanged wall. Good visibility, relatively strong current, reef up to 60 meters. Diverse assemblages of reef, sponges, soft corals. | Ketut Aryana | 34 | Consultant |
| | A gently slopes down on each side, has three underwater peninsulas Amazing variety of corals including giant table corals, gorgonian fans, colorful soft and hard corals. | Ketut Aryana | 34 | Consultant |
| Groupers and Snappers | A slope dive site, with steep wall in the eastern side. Rich assemblages of coral and fish. Sometimes a little bit strong current. Coral garden at 3-5 meters | Ketutr Aryana | 34 | Consultant |
| | Reef is found from 12 to 40 meter deep. Amazing assortment of corals and invertebrates, including table corals, giant leather corals, sponges. Somtimes eagle rays often sighted around this reef. | Ketut Aryana | 34 | Consultant |
| Giant clam, Anemones | An exciting dive site,an submerged reef about 4 meters below sea surface. Good reef cover on some of the edge of the reef. | Rudi Irawan | 31 | Hobbyist |
| Large groupers | An iron ship wreck in shallow water, where bottom of the ship is at 17 meters. Interesting dive site in Karimunjawa. Large groupers found inside the wreck | Rudi Irawan | 31 | Hobbyist |
| Bumphead Parrotfish, White tip | An interesting dive site, a large submerged reef. We can encounter Bumphead parrotfishes in large size and small schools. Dense reef with different type of corals. White tip shark sometimes can be encountered | Rudi Irawan | 31 | Hobbies |
| Trevally, snappers | Unique dive site, not a coral assemblages area, bottom mostly sand. At some spots dominated by sponges and soft corals. Nice place to find cryptic marine animals. | Michael Walls | 37 | Construction |
| Lionfish | Dive a Japanese World War II steel cargo ship wreck. Lies in water from 15 to 30 m. We can see encrusted crinoids, black corals and soft corals. You should dive this site when you're in Lembeh. | Michael Walls | 37 | Construction |
| Banggai cardinal fish, moray ell, snake eels, lionfish | A muck diving site. The bottom composition is a dull gray mass. Lots of interesting cryptic marine animals. | Michael Walls | 37 | Construction |
| Frogfish, seahorse | Another muck diving site. Lots of different species of frogfish. | Michael Walls | 37 | Construction |

| | | | | |
|--|--|-------------|----|----------------|
| barracuda, groupers, snapper, bump head parrotfish | A beautiful dive site, drop off wall. Hard corals at the shallow, and a lot of sponges, soft corals, whip corals in the deep. Groupers and snappers, bump head parrotfish, black fin barracudas. | Anis Widodo | 33 | Dive Hobbieist |
| Hammerhead | Good coral cover, mainly soft corals. Slopes and then walls. Interestingly we can find some caves. We can encounter a Napoleon wrasse, eagle rays and hammerhead sharks!! | Anis Widodo | 33 | Dive Hobbieist |
| tuna | A dive site with good coral formation with sandy slopes and big rocks. Sometimes strong current occurs. We can find Napoleon wrasse, Grey shark, and tunas. | Anis Widodo | 33 | Hobbieist |
| Barracuda | We dive right in front of a church. A steep wall with vertical canyons. Corals is quite good and there is a nice cave at 20 meters. We can find barracudas and napoleon wrasse. | Anis Widodo | 33 | Hobbieist |
| | A healthy coral reef area, with hard and soft corals. Many giant clams were encountered. Also moray eels, stingrays and turtles. | Anis Widodo | 33 | Dive Hobbieist |
| | Mass bleaching event occurred. The site is dominated by Acropora. | E. Muttaqin | 27 | Researcher |
| | Mass bleaching event occurred | E. Muttaqin | 27 | Researcher |
| | Mass bleaching event occurred | E. Muttaqin | 27 | Researcher |
| | Bleaching event occurred to most Acropora species in this area. | E. Muttaqin | 27 | Researcher |
| | Bleaching event occurred, impacted most of the Acropora species, and some Porites | E. Muttaqin | 27 | researcher |
| | Mass bleaching event (Acropora, Pocillopora and some Porites pecies). | E. Muttaqin | 27 | researcher |
| | This is the garden of soft corals, not many hard corals. Very colorful soft corals and reef fishes. | Iwan Senaya | 30 | Insurance |
| | Reef can be found up to 20 meter. Dominated by soft corals and gorgonians. We can see hawksbill and green turtles. Hard coral is not so good | Iwan Senaya | 30 | Insurance |
| | It is a beautiful wall diving, max. depth about 30m. Hard coral assemblages can be found up to 20m. Lot of reef fishes | Iwan Senaya | 30 | Insurance |
| | A sandy area with some really interesting cryptic animals. Lazy dive and good for macro photography. | Iwan Senaya | 30 | Insurance |

| Email | Dive Operator |
|------------------------------|--------------------------------------|
| adrian.bruckner@gmail.com | Rubiah Tirta Divers |
| lisatedriana@gmail.com | Bastianos |
| lisa.tedriana@gmail.com | Bastianos |
| lisatedriana@gmail.com | Bastianos |
| lisatedriana@gmail.com | Bastianos |
| lisatedriana@gmail.com | Bastianos |
| marianne2000@windowslive.com | BIDP |
| marianne2000@windowslive.com | Blue Season |
| marianne2000@windowslive.com | Blue Season |
| marianne2000@windowslive.com | BIDP |
| marianne2000@windowslive.com | BIDP |
| diverguns@gmail.com | DiverGuns@Company |
| diverguns@gmail.com | DiverGuns@Company |
| diverguns@gmail.com | DiverGuns@Company (Lembaga Napoleon) |
| jessysmithreef@gmail.com | |
| jessysmithreef@gmail.com | |

| | |
|-----------------------------|-----------|
| Jessysmithreef@gmail.com | |
| jessysmithreef@gmail.com | |
| ketutaryana@gmail.com | WDC |
| ketutaryana@gmail.com | Reef Seen |
| rudi.irawan2000@yahoo.co.id | - |
| michael-walls@live.com | Bastianos |

| | |
|------------------------|--------------------|
| aniswidodo@yahoo.co.id | Lumba-lumba Diving |
| eponky@yahoo.com | |
| iwan.senaya@yahoo.com | Scuba Froggy |
| iwan.senaya@yahoo.com | Scuba Froggy |
| iwan.senaya@yahoo.com | |
| iwan.senaya@yahoo.com | Scuba Froggy |