

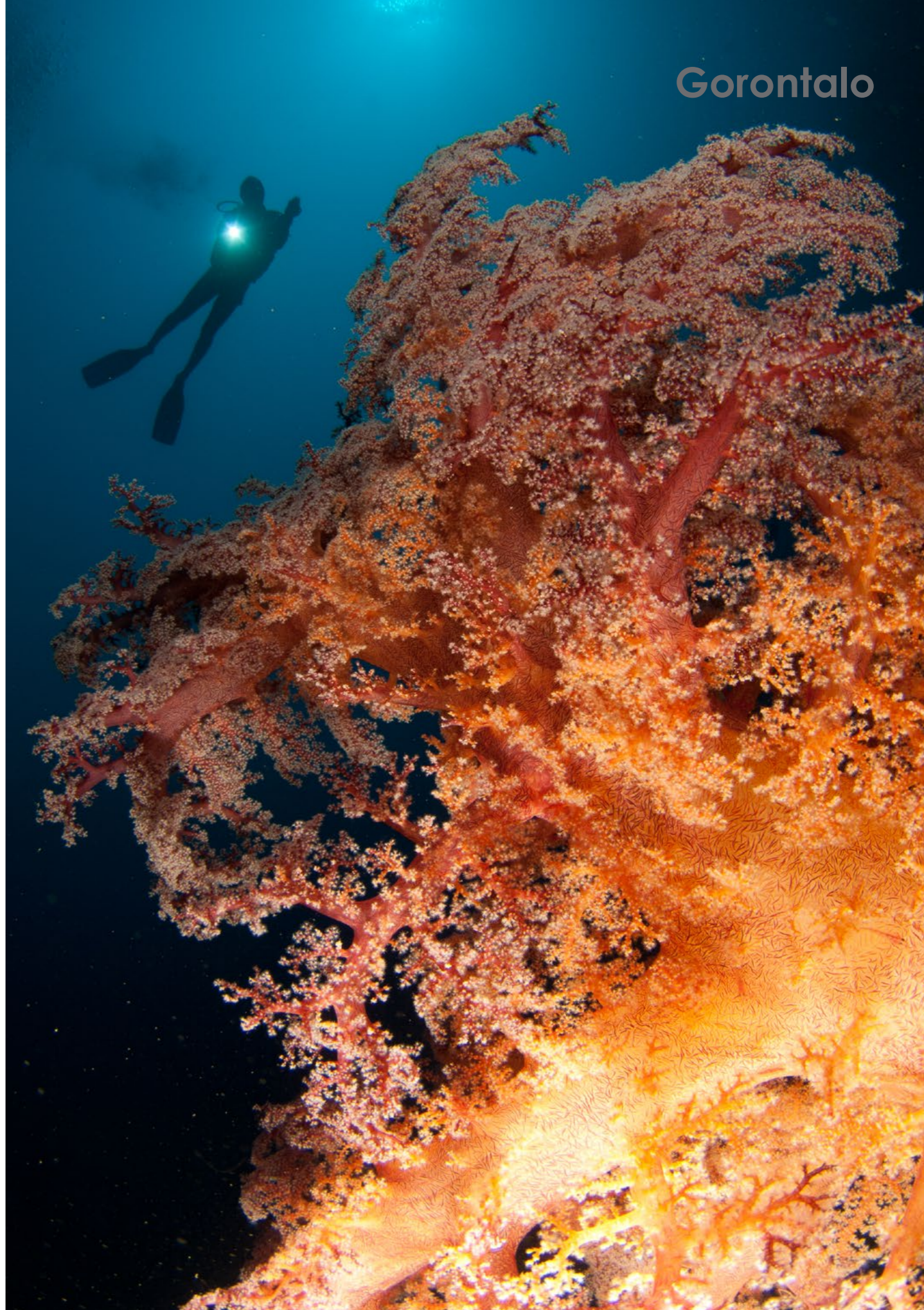


*The Surreal Shores of*  
**Gorontalo**  
*Indonesia*

Text and photos by Steve Jones



Scenes from Gorontalo, Sulawesi, Indonesia. Spotted porcelain crab, *Neopetrolisthes maculatus*, in anemone (left); Side view (above) of squat anemone shrimp, *Thor amboinensis*; Close-up detail of tree soft coral, *Dendronephthya* sp., with diver (right). PREVIOUS PAGE: A very rare blue sea fan, *Acanthogorgia* sp., found below 45 metres depth, with diver, Gorontalo, Indonesia



Text and photos by Steve Jones  
www.millionfish.com

**Barely beaten tracks are an increasingly rare find for travellers in this ever more accessible world. Yet on the shores of Tomini Bay on the Indonesian Island of Sulawesi, one such place still exists. Here the lesser explored waters teem with the intensity of the biodiversity found in this part of the world. The name of this place is Gorontalo, an oasis often bypassed as visitors descend on the world famous destinations of Bunaken and Lembeh Strait further up the Sulawesi coastline.**

Gorontalo Province lies on a peninsula extending from the northeast of the flower-shaped island of Sulawesi, reaching out towards the Philippines. This peninsula, known as the Minahasa, is bounded by the Celebes Sea to the north and the Gulf of Tomini to the south, and it is on this southern ocean boundary that the provincial capital, Gorontalo City, lies. The term *City*, however, is deceptive, since Gorontalo is more akin to a rural town, where chickens risk all as they cross roads that are traversed by over-laden scooters and motorised rickshaws, known locally as *bentor*.

Along the main streets, double-parked horse-drawn carts contrast sharply with shops that hint at influences of the modern world—the mobile phone accessory outlets that fuel Indonesia’s fascination with mobile communications. This is an obsession that has led the country to become the world’s fourth largest user of cellular phones. Yet, despite

these few signs of the emergence of modern day culture, Gorontalo City remains distinctly traditional and a world away from the usual hustle and bustle you expect to find in an Indonesian city.

Legend has it that when the seas subsided, Gorontalo appeared on a plateau amongst three surrounding mountains. Whether the legend is true or not, there is no denying that the landscape here is ruggedly beautiful, comprising steep cliffs and valleys that channel fresh water on a downward journey toward the sea, cutting swathes through the soft limestone on the way. It is at the coastline where the vulnerability of limestone to natural erosion is most strongly evident and the impact on the underwater topography is dramatic.

To the east and west of Gorontalo City, steep cliffs plummet vertically into the sea and underwater channels and gulleys lead the way to the extreme depths of the bay. These are



Diver (left) looks into cavern at sponge; Diver (above) with one at the Salvador Dali sponges (*Petrosia lignosa*) which only grow with this intricate swirling surface pattern in Gorontalo waters. These sponges grow to up to 3m in length. Anemonefish in anemone (right)

often beautifully interlaced with catacombs of chimneys, caverns and tunnels, providing refuge for some of Gorontalo's numerous species, some of which are endemic.

Tomini Bay is over 4,000 metres deep, and the seabed drops so rapidly that it is common to see open ocean species such as whales, dolphins and strange pelagic invertebrates close to the shoreline. A plummeting seascape so close to land also has other benefits, in providing a near-shore habitat for sessile species that would otherwise be vulnerable to shallow water wave action and therefore in the depths they can thrive.

digestive system and rely on their collar cells to force water through their structures, bringing in nutrients and oxygen and taking away carbon dioxide. Here in Gorontalo's depths they are able to grow to enormous sizes.

Amongst Gorontalo's healthy sponge population, a phenomenon has occurred that illustrates perfectly how local conditions can influence evolution. The sponge in question is *Petrosia lignosa*, a species found only in Sulawesi and the Philippines and first described by renowned zoologist Henry Van Peters Wilson in 1925.

In Gorontalo waters it grows with an intricate, deep swirling pattern etched on its surface, which so far has only been observed here. Local dive pioneer Rantje Allen was the first man to document this unusual morphology and has christened the species with a name befitting the bizarre patterns—"Salavador Dali"—named of course after the surrealist Spanish painter.

These sponges come in various shapes



Peacock mantis shrimp

### Giant sponges

Descending past 20 meters, you enter the domain of the giant sponges, firmly gripping the porous limestone while the nutrient rich currents wash over them. Simple multi-cellular animals rather than plants, there are around 8,000 described species of sponge, with the total number of species thought to be upward of 15,000<sup>[1]</sup>, classified collectively under the scientific phylum Porifera, which means "pore bearing".

Filter feeders, they also lack any distinct



and sizes, the largest can be over three metres in length. All of them display the distinctive patterns, from juveniles of only 20cm in length to those that have reached gargantuan sizes. The Salvador Dali's have been observed in two colours, a dark shade of brown, sometimes with a green tint, or light grey for the ones that dwell out of direct sunlight. Allen has christened this variety the albino Salvador.

The larger sponges extrude

into the bay from Gorontalo's ocean facing walls in a seeming act of defiance against the currents, however living in such an exposed location is not without its hazards. Occasionally even the mighty Dali succumbs to the rigours of ocean life, lose their grip on the wall and tumble away to the depths.

Sadly, once fallen onto the sea floor, these giants can no longer filter enough nutrients to survive. Within a few weeks the

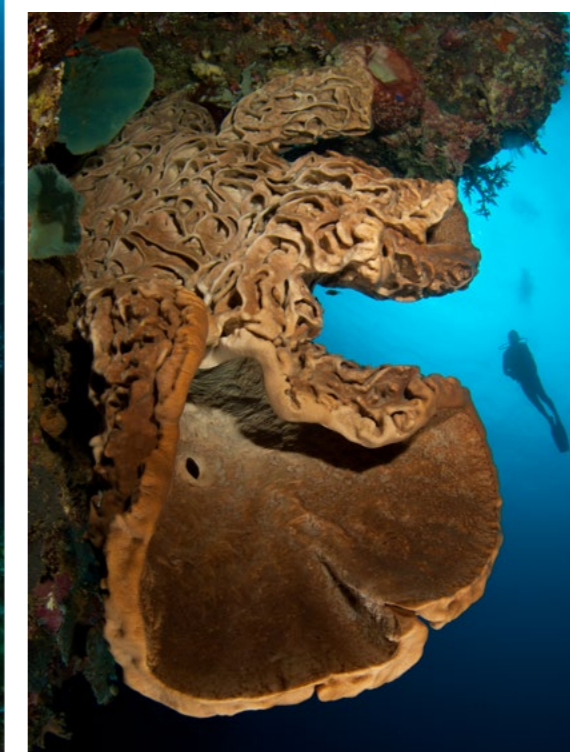


once rock-hard sponge begins to crumble, dissolve into dust and disappear without a trace.

Emphasising just how unexplored these waters are, no one has yet documented how far along the coastline this phenomenon occurs on this species.

However, it is known that by the time you reach Lembeh Strait or even the nearby Togian Islands, the morphing of *Petrosia lignosa* cannot be observed.

Allen recalls in his highly acclaimed book, *Gorontalo: Hidden Paradise*, of when he first



THIS PAGE:  
Several versions of the huge Salvador Dali sponges, with their unique swirling patterns, only found in Gorontalo

*“When I paint, the ocean roars. Others merely paddle in their bath.”*

*Salvador Dali*



Gorontalo



Broadclub cuttlefish

TOP LEFT TO RIGHT: Diver and giant stonefish; Diver and ornate ghost pipefish on volcanic debris; Rare Coleman's coral shrimp

confirmed the identity of the species.

"Even though I was calling it the 'Salvador Dali sponge,' I suspected it had to have a proper name. So, we sent samples from two sponges to Nicole J. de Voogd of the Institute for Biodiversity and Ecosystem Dynamics, Zoological Museum, University of Amsterdam. After looking at the maze of spicules under a microscope, she was able to identify it as *Petrosia lignosa*. Our sponge expert says that the genus is aptly named since petrosia means 'stony hard' and



Spinecheek anemonefish

all Petrosid sponges are hard and rock-like. This particular sponge species is peculiar to vertical walls in Indonesia. The wildly carved surface is a morphology only known to Gorontalo. Divers can only see the Salvador Dali sponge here."<sup>[2]</sup> said Allen.

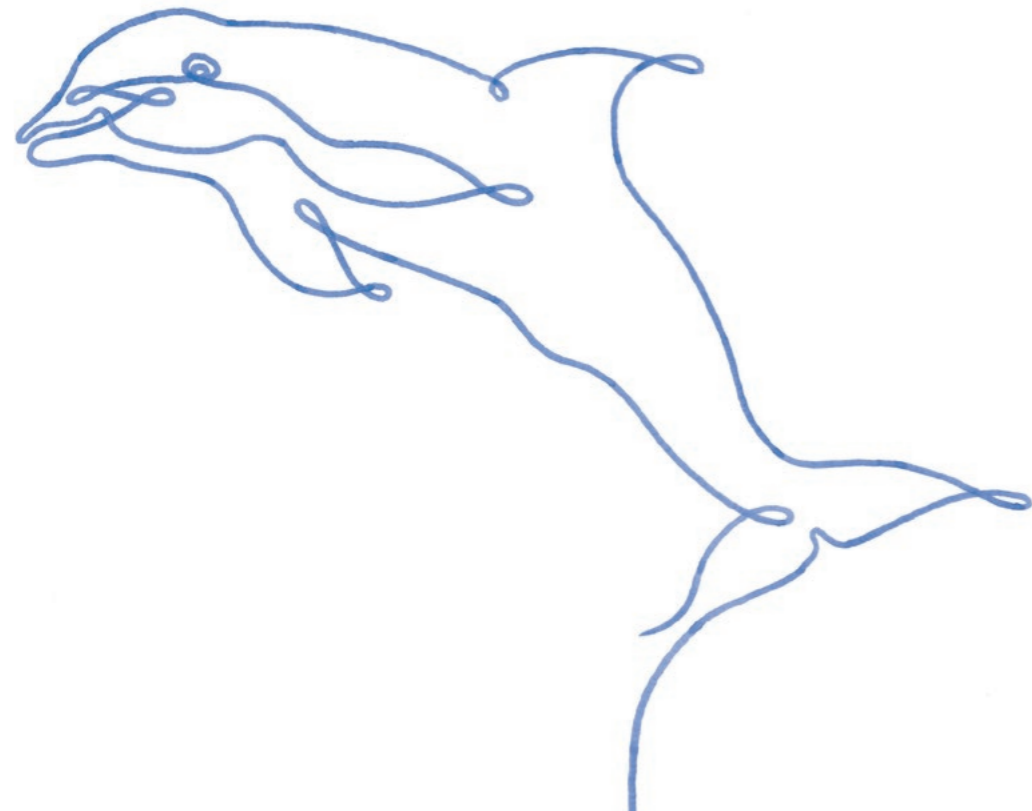
**Local stewardship**

The steep drop of the seabed has had another significant benefit, in helping to preserve Gorontalo's pristine reefs and coastline. The fishermen here are able to deploy handlines from their traditional outrigger canoes and wrestle with species normally found offshore, such as the yellowfin tuna. Coupled with a lack of horizontal reef





silver



cinema of dreams



www.seacam.com



Gorontalo



Diver and grand sea whip (above); Shorthead sabretooth (fang) blenny peering from a discarded plastic bottle (left)

surface area, this has negated the appeal of enormously destructive practices such as blast fishing, a scourge of reefs in some parts of Indonesia.

The fish stocks are also protected by the huge waves that come when the winds change from westerlies to easterlies between May and October, imposing natu-

ral no-take zones as much of the coast-line becomes inaccessible.

Finally, the reefs of Gorontalo have found ally in a group of forward thinking individuals who recognize that educa-

campaigns to deliver one simple message: "No coral, no fish, your choice." The message has hit home with many of the villages now showing evidence of a deep-rooted respect for the marine environment on which they are so

tion is the best long-term defence against poor fishing practices. For the last ten years this group, which comprises representatives of the local government, students, and staff from Miguel's Diving Centre, have conducted regular public education



Pair of robust ghost pipefish on volcanic sand





Peacock razorfish



CLOCKWISE FROM ABOVE: Ornate anemone shrimp in anemone; Diver and bright red soft coral and sponge hanging from roof of cave; Sarasvati anemone shrimp; Diver and cabbage coral mountain

dependent.

Nowhere is this more evident than in the villagers of Olele who have really taken governance of the reefs to their hearts. Having already established a village level Marine Park, they guard and police their own reef, driving away any unwelcome visitors, sometimes even confiscating their equipment.

The recent expansion of the parks boundaries has been observed to have led to a noticeable rise in the number of large groupers, particularly coronation lyre-tailed and tiger, plus large midnight snappers. Populations of schooling fusiliers have increased also, further re-enforcing the value of good marine stewardship.

Finding a balance between long term sustainability and short term gain will continue to be a challenge for many other parts of Indonesia, yet the developed world has failed on a far grander scale to get to grips with this dilemma. Whilst modern fishing fleets efficiently

vacuum the oceans, industry policing groups all too often prove ineffective in leading positive change. Often heavily influenced by commercial agendas, their mandates are frequently distorted by those pushing for short term profit rather than leaving a world that is fit for our descendants to inhabit.

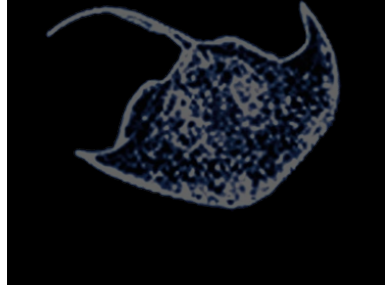
Curiously, the human race continues to behave in a way that is at complete odds with one of our strongest individual natural instincts, that of protecting our children at all costs. Yet on the surreal shores of Olele village in Gorontalo, the enlightened community has taken a huge step towards finding that balance. □

The author wishes to thank Rantje Allen, the staff of Miguels Diving Centre, Gorontalo, ([www.miguelsdiving.com](http://www.miguelsdiving.com)) and the people of Olele village. More of Steve Jone's work can be seen at [www.millionfish.com](http://www.millionfish.com)

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- [1] HOOPER, J. N. A. & VAN SOEST, R. W. M. (2002) SYSTEMA PORIFERA. GUIDE TO THE SUPRASPECIFIC CLASSIFICATION OF SPONGES AND SPONGIOMORPHS (PORIFERA). PLENUM, NEW YORK.
- [2] ALLEN, RANTJE. GORONTALO: HIDDEN PARADISE, ISBN: 9789810561291

# fact file



## Indonesia



SOURCES: U.S. CIA WORLD FACTBOOK, NORTH-SULAWESI.ORG, D. SILCOCK

**History** Moslem merchants from Persia began visiting Indonesia in the 13th century and established trade links between this country and India and Persia. Along with trade, they propagated Islam among the Indonesian people, particularly along the coastal areas of Java. In 1511, the Portuguese arrived in search of spices after their conquest of the Islamic Empire of Malacca. They were followed by the Spaniards. Both began to propagate Christianity and were most successful in Minahasa/North Sulawesi and Maluku, also known as the Moluccas. However, it wasn't until the arrival of the Dutch in the early 17th century that Christianity became the predominant religion of North Sulawesi. From 1942 to 1945, Japan occupied Indonesia. Shortly before Japan's surrender in WWII, Indonesia declared its independence. However, it took four years of often brutal fighting, sporadic negotiations, and mediation by the United Nations before the Netherlands finally agreed in 1949 to transfer sovereignty. Strife continued in Indonesia's unstable parliamentary democracy until President Soekarno declared martial law in 1957. Soekarno was removed from power following a fruitless coup in 1965 by alleged Communist sympathizers. President Suharto ruled

Indonesia from 1966 until 1988. Suharto was toppled in 1998 following a round of riots, and in 1999, free and fair legislative elections took place. Indonesia is the world's third most populous democracy, Government: Republic. Capital: Jakarta.

### Geography

Located in Southeastern Asia, Indonesia is an archipelago situated between the Indian and Pacific Oceans. Coastline: 54,716km. Terrain consists primarily of coastal lowlands, with interior mountains on larger islands.

**Climate** Tropical, hot and humid, with more moderate climate in the highlands. The water temperature is normally 28-29°C (84-86°F) year round, with an occasional "chilly" 27°C (82°F) spot. Most divers use 1mm neoprene suits. However, some people prefer 3mm.

### Environmental issues

Challenges include industrial waste water pollution, sewage,

urban air pollution, deforestation, smoke and haze due to forest fires. Logging—the rainforests within the combined West Papua/Papua New Guinea land mass are second in size only to those of the Amazon, making it 'the lungs of Asia'. In 2001, there were 57 forest concession-holders in operation around the country and untold other forest ventures operating illegally. Mining—tailings from copper, nickel, and gold mining are real threats.

**Economy** A vast polyglot nation, Indonesia has experienced modest economic growth in recent years. Economic

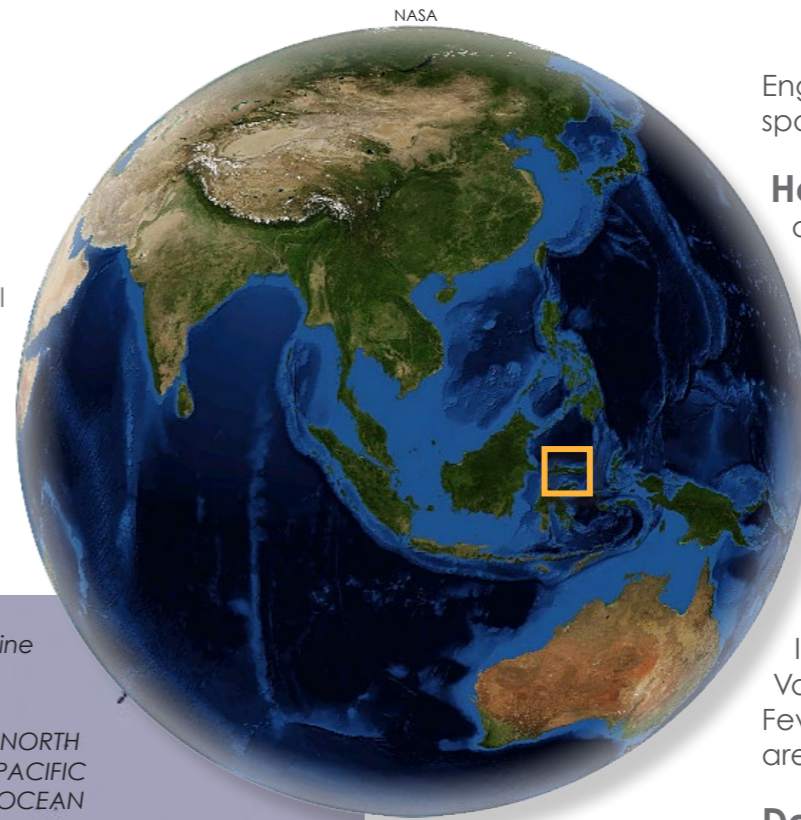
advances were made with significant financial reforms. In 2009, when the global financial crisis hit, Indonesia fared well compared to its regional neighbors. It was one of the only G20 members posting growth in 2009, alongside China and India. However, the government still faces ongoing challenges of improving the country's insufficient infrastructure, labor unrest over wages, and high oil prices affecting fuel subsidy programs.

**Currency** Indonesian Rupiah (IDR). Visa cards, Euros and U.S. Dollars (large bills issued after 1999) are widely accepted. ATM

251,160,124 (July 2013 est.) Ethnic groups: Javanese 40.6%, Sundanese 15%, Madurese 3.3%, Minangkabau 2.7%, Betawi 2.4%, Bugis 2.4%, Banten 2%, Banjar 1.7% (2000 census). Religions: Muslim 86.1%, Protestant 5.7%, Roman Catholic 3%, Hindu 1.8% (2000 census). Note: Indonesia is the largest Muslim country in the world. Visitors are encouraged to respect local traditions and dress modestly. Internet users: 20 million (2009)

**Language** Bahasa Indonesian is the official language, plus English, Dutch and local dialects are spoken. In tourist areas,

RIGHT: Global map with location of Gorontalo  
BELOW: Location of Gorontalo on map of Indonesia  
BOTTOM RIGHT: Lionfish, Gorontalo, Indonesia



machines in tourist areas offer the best exchange rates, Travellers cheques are becoming quite difficult to use except at banks. Exchange rates: 1EUR=12,723IDR; 1USD= 9,737IDR; 1GBP=15,127IDR; 1AUD= 9,972IDR; 1SGD= 7,908IDR

### Population

English, Spanish and German are spoken.

**Health** There is a high degree of risk for food or waterborne diseases such as bacterial diarrhea, hepatitis A and E, and typhoid fever, as well as vectorborne diseases such as chikungunya, dengue fever and malaria. Check with WHO or your dive operator for prophylaxis recommendations. Larium is not effective. Bring insect repellents containing DEET. International Certificate of Vaccination required for Yellow Fever if arriving from infected area within five days.

### Decompression chamber

Manado: Malalayang Hospital tel: +62 0811 430913  
Makassar: Rumah Sakit Umum Wahidin Sudirohusodo tel: +62 0411 (584677) or 584675

### Travel/Visa/Security

Passport valid for six months beyond intended stay is required. There is a Visa-On-Arrival for 35 countries including USA, UK, most European and Asian countries. It is US\$25 for a stay of up to 30 days. Although there is an active independence movement in Papua, tourists have not been impacted.

### Web sites

Indonesia Travel  
[www.indonesia.travel/en](http://www.indonesia.travel/en)

