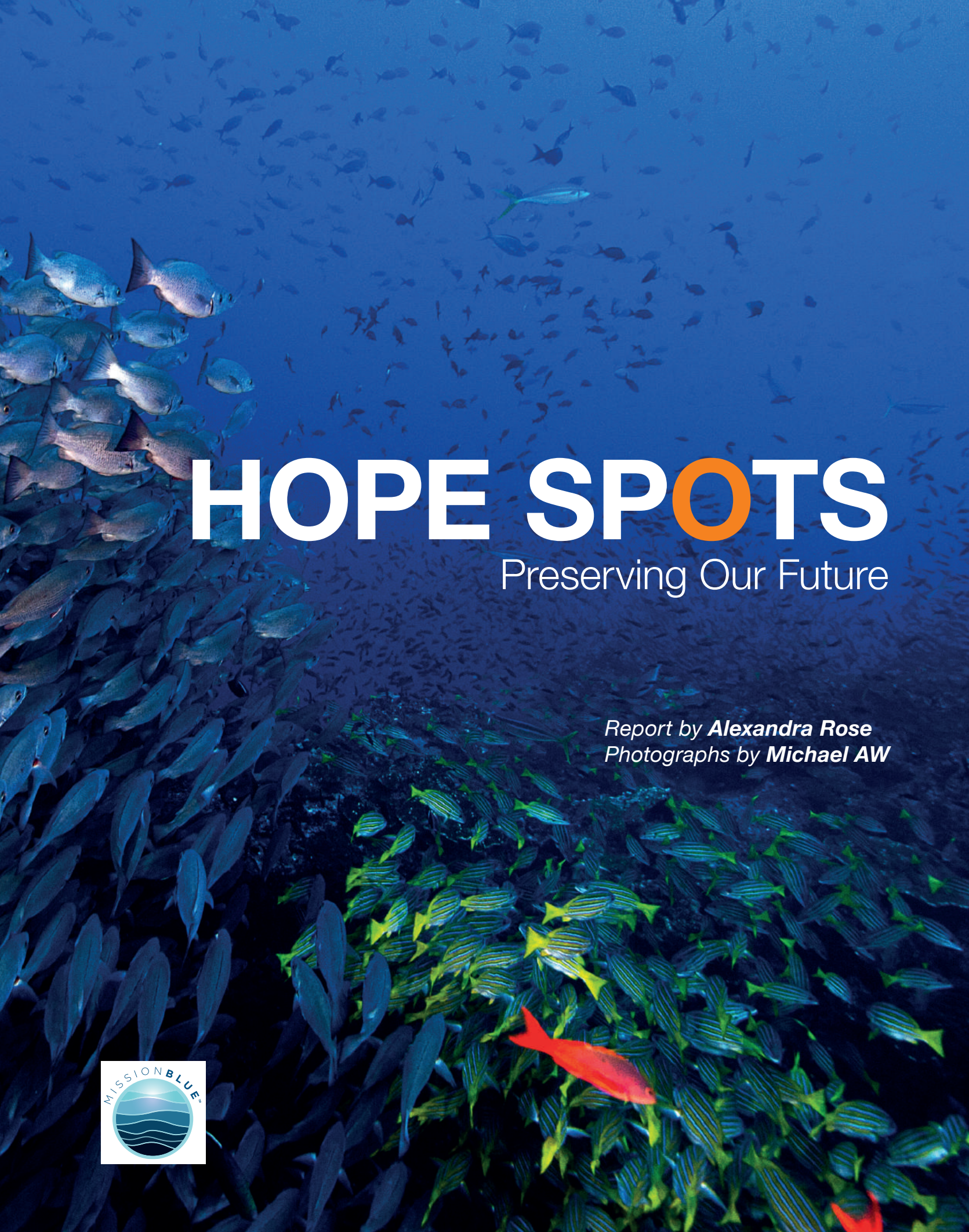

HOPE SPOTS

Preserving Our Future

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MISSION BLUE

Five years ago, the inspiring words of ocean legend and pioneer, Dr. Sylvia Earle, were broadcast to the world in the form of a wish. This wish was for people to "use all means at your disposal—films, expeditions, the web, new submarines—to ignite public support for a global network of marine protected areas, Hope Spots, large enough to save and restore the ocean, the blue heart of our planet." And in response to the 2009 prize-winning TED talk from which this quote came, the Sylvia Earle Alliance (SEA), with the goal of exploring and caring for our world ocean, was formed along with its global initiative, Mission Blue. SEA works to increase public awareness, gain access to important information, and support Marine Protected Areas all over the globe through expeditions, documentaries, traditional and social media, as well as web-based tools such as Google Earth's "Explore the Ocean." Mission Blue, on the other hand, functions as a public forum to raise the level of ocean awareness within the global community while supporting valuable ocean conservation efforts ranging from projects to organizations to exploration.

When SEA and Mission Blue were founded, approximately one percent of the ocean was officially protected; now five years later (much to the credit of these influential organizations), that number has increased to just over two percent. Effective management and full protection of this small but growing portion of the ocean unfortunately does not necessarily apply to much of this two percent. In order to ensure a sustainable future for ourselves and our planet, re-evaluation of implementation procedures and heightened support for these protective measures are needed. Our deep blue life support system is being threatened by anthropogenic factors such as climate change, pollution, and unsustainable fishing practices, and to minimize their potentially deleterious effects, we must drastically increase ocean protection measures on a global scale. Dr. Earle hopes that Mission Blue can facilitate the protection of twenty percent of our world's marine waters by the year 2020, a goal that is attainable with the current momentum generated by exploration and protection of her Hope Spots. Hope Spots are special areas of the ocean that need to be aggressively protected due to their unique and/or important features that are crucial to maintaining the health of our seas.

According to Dr. Earle, the human race is at "a sweet spot in time" - the point at which we both understand what is happening to our beautiful blue marble and know what needs to be done in order to fix these problems. We have already incurred substantial environmental losses due to our own reckless behavior and urgent action is necessary to protect what we have left and restore some of what has already been lost while there is still time. Hope Spots can provide us with this expedient opportunity.

By establishing and defending these Hope Spots we are providing the ocean and its many inhabitants a chance to rest and recover in a safe place that is "off limits" to destructive human activities. These protected areas may be hot spots of unprecedented biodiversity or locations that are home to rare and unfamiliar habitats. They may represent the warm pristine reefs found throughout the Coral Triangle or they may protect the vastly undiscovered depths of the Gakkel Ridge's hydrothermal vents. Some Hope Spots are already marine protected areas (MPAs) and others are just being discovered, but all are places where conservation, research, and sustainable development must interconnect to preserve them for the future. Conscientiously managing our ocean's health requires a unified global effort centered around the continued establishment and unwavering protection of these Hope Spots, some of which will be covered throughout the remainder of this text.

Fifty years from now, if present trends continue, it will be too late to do what is now possible. As never before, this is the time to act to

SECURE AN ENDURING FUTURE

F  **R HUMANKIND.**

— *Sylvia Earle* —

The coral triangle is home to about a third of the world's coral reefs, comprising 75% of all known coral species.

Existing "Reef-Centric" Hope Spots

CORAL TRIANGLE: This part of the western Pacific Ocean encompasses the waters of Indonesia, Malaysia, Papua New Guinea, the Philippines, the Solomon Islands, and Timor-Leste. The Coral Triangle is a global hot spot of marine biodiversity: home to about a third of the world's coral reefs, comprising 75% of all known coral species, at least 3,000 species of fish, and countless invertebrates many of which are new to science. It is the Amazon of the ocean.

A global hot spot of marine biodiversity, it is the Amazon of the ocean.

CHAGOS ARCHIPELAGO: In the middle of the Indian Ocean, this archipelago is the largest coral atoll in the world and is made up of 55 low-lying coral islands. It consists of 60,000 square kilometers of shallow limestone reefs accompanied by hundreds of seamounts as well as abyssal habitats. The Chagos Marine Reserve, established in April 2010, is a fully protected no-take MPA and is the world's largest no-fishing zone.

CORAL REEFS such as these are crucial habitats for maintaining a healthy marine biodiversity.

OUTER SEYCHELLES: This collection of five island groups scattered across the middle of the Indian Ocean, is made up of sand cays and atolls. The Outer Islands are quite different from the Inner Islands which are almost entirely granitic, and are flat islands with elevated coral reefs that are almost entirely uninhabited by humans. These reefs and sea grass beds are crucial habitats for maintaining healthy coastal and marine biodiversity.

MICRONESIAN ISLANDS: These 2,100 remote tropical islands dispersed across the western South Pacific Ocean are home to some of the most pristine and biologically diverse environments on the planet. Many endemic species depend on the resource-rich lands and seas of this area for life, and protection of this unique region is necessary for their continued survival.

"There is just ONE Hope SP  T.
IT IS THE MOSTLY BLUE EARTH"

— *Sylvia Earle* —

JUVENILE HAWKSBILL TURTLE swimming into the blue.

BAHAMIAN REEFS: Just off the southern tip of Florida, the Bahamas comprise the second largest barrier reef (Andros Barrier Reef) in the Western Hemisphere and have the highest concentration of blue holes in the world. This region is made up of over 3,000 low-lying islands covered by habitats ranging from swamps to wetlands to forests, making the landmass above water as diverse and important as what remains submerged beneath the waves.

CORAL SEA: Located off the northeast coast of Australia, the Coral Sea is known and named for the unprecedented diversity of coral species found there. In addition to including the Great Barrier Reef, this marginal sea is made up of remote islands, lush coral reefs, and deep-sea canyons eclipsed by massive seamounts packed with a wide range of living space for a huge variety of creatures, making it one of the most diverse marine ecosystems in the world.

GULF OF MEXICO DEEP REEFS: The reefs and banks of this area are situated along the Continental Shelf of the Gulf of Mexico and provide habitats for almost 100 species of fish including some large, long-living predators such as tuna and orange roughy, as well as both tropical and subtropical invertebrates, and flourishing soft corals. From the sunlit zone down to the non-photosynthetic depths, this unique ocean environment is more than worthy of protection and research, particularly in light of the 2010 BP Deepwater Horizon incident.

MESOAMERICAN REEFS: Located in the Caribbean covering an area just north of the Yucatan Peninsula to the Bay Islands of Honduras, is the largest barrier reef in the Western Hemisphere. Approximately 500 species of fish and 350 species of molluscs as well as five kinds of sea turtles can be found here. The region is also known for attracting one of the largest congregations of whale sharks anywhere in the world.

BERING SEA DEEP CANYONS: Threatened by industrial fishing, this Hope Spot located between Alaska and Russia supports a fantastic amount of unique life in some of the largest submarine canyons in the world. The Bering Sea is home to the planet's most valuable and prolific fisheries and much of this productivity is due to the protective nature of these important deep-water environments. Beautiful cold-water corals, pelagic birds, orcas, king crab, and salmon all depend heavily on this area for survival.

EASTERN PACIFIC SEASCAPE: This expanse of 2,000,000 km^2 runs along the coast of Central and South America from Costa Rica to Ecuador and includes several unique natural habitats of environmental, cultural, and economic importance. This Hope Spot is home to seven UNESCO World Heritage Sites including the Galapagos, the islands of Cocos and Malpelo, and Coiba and is often referred to as the marine equivalent of the Serengeti due to its importance as a migratory route for endangered species.

New "Reef-Centric" Hope Spots

CORAL SEAMOUNT: This Hope Spot is located in the sub-Antarctic waters of the southwestern Indian Ocean and is one of few seamounts in this part of the world known to host deep, cold-water coral reef communities. It is an essential habitat for endemic pelagic fish and bird species that require this region for survival and is particularly susceptible to extreme damage from deep-sea trawling due to the high density of fragile corals.

MALDIVES ATOLLS: The Maldives archipelago is made up of 26 atolls and well over 1,000 islands. This long stretch of coralline islands in the Indian Ocean directly north of the Chagos Archipelago is an area rich in biodiversity ranging from tiny reef-associated fish and invertebrates to giant planktivores such as mantas and whale sharks. Baa Atoll was declared a UNESCO World Biosphere Reserve in 2011.

LORD HOWE RISE: This area is a major submerged plateau between Australia, New Caledonia, and New Zealand. While much of Lord Howe Rise is extremely deep, it also forms a line of seamounts that include Lord Howe Island and Ball's Pyramid that provide reef species with important habitats and breeding grounds. The area surrounding Lord Howe Island Group is a volcanic hotspot that is home to the world's most southerly true coral reef.

GRAND RECIF DE TOLIARA, MADAGASCAR: This barrier reef system in the southwestern Indian Ocean covers an area of about 33 km^2 and is of environmental importance due to the necessity of healthy coral reefs and mangroves as nurseries for many species of marine fish and invertebrates. Chronic fishing pressures and pollution from coastal development threaten this area and have already resulted in extensive loss of coral reef habitat.

ANDAMAN ISLANDS: This group of 572 islands in the Bay of Bengal boasts reefs rich in marine biodiversity. Many of the islands are surrounded by mangrove habitats with fringing reefs on their eastern side and barrier reefs on their western side. The Andaman Islands are home to a high number of economically valuable varieties of molluscs as well as many endemic species of flora and fauna on land.

MERGUI ARCHIPELAGO, SOUTHERN BURMA: This archipelago is comprised of 800 islands off the southern coast of Myanmar and is fairly pristine because of its almost total isolation from the surrounding seas and islands. Unfortunately, unsustainable practices such as dynamite fishing, trawling, and longline fishing all put pressure on this marine habitat, threatening to cause irreparable damage to these beautiful islands.

This list of Hope Spots is not exhaustive. They are all reef habitats because this issue of Ocean Geographic is dedicated to exploring reefs and the amazing diversity of creatures that depend on them for survival. We would encourage you to visit the Mission Blue website to view the full list of 54 existing, new and proposed Hope Spots in order to understand the vast scope of the areas covered and to be jolted into action by the irrefutable sentiments of Dr. Earle that are both honest and encouraging even in the face of an uncertain future. According to Dr. Earle, "There is just one hope spot. It is the mostly-blue Earth. Fifty years ago, we did not appreciate the limits to what we can put into the ocean or the consequences to what we take out. Fifty years from now, if present trends continue, it will be too late to do what is now possible. As never before, this is the time to act to secure an enduring future for humankind."

For more information on Hope Spots, visit:
http://mission-blue.org/hope-spots-new/