



## PRESS RELEASE

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# Could this be the last place on Earth where corals will survive?

**Catlin Seaview Survey brings big data capture survey techniques to a natural world treasure trove – the Coral Triangle in South East Asia.**

09 October 2014: Manado, Indonesia – A team of scientists has begun a wide scale assessment of what could become one of the ‘last refuges on Earth’ for coral reefs, if losses from climate change and human activity continue worldwide. The research, which is sponsored by international insurer Catlin Group Limited, is capturing vital data about the health, species diversity and size of iconic reefs in the Coral Triangle, the global centre of marine biodiversity found in South East Asia.



The SVII camera surveying the reefs of the Coral Triangle – [Full image gallery here.](#)

The scientists from the University of Queensland and local partners\*\* are currently spending almost three weeks surveying in Manado, located in the geographic centre of the Coral Triangle, using the Catlin Seaview Survey’s [SVII camera](#) to record data on an unprecedented scale (*see SVII Technology in Editor’s Notes*).

Professor Ove Hoegh-Guldberg, the Catlin Seaview Survey’s Chief Scientist and Director of the [Global Change Institute](#) at the University of Queensland, said:

*“Regions like Manado in the Coral Triangle could, by the middle of the century, be one of the only places on Earth where coral reefs still exist. Understanding the structure and function of such reefs is of the utmost importance if we are to underpin their resilience to global change. That is what’s driving the largest stocktake of coral reefs in history, which will greatly improve our efforts to understand and protect these wonderful ecosystems.”*

*“Certainly, if we don’t measure these corals, we can’t manage the impact of ocean changes. It is only now, with the technology we deploy, that scientists have the capacity to effectively monitor and measure these reefs, before they are too severely degraded.”*

Global ocean changes are increasingly jeopardising corals. Nearly 40% have been lost in the last 30 years. Research suggests an almost complete loss of coral worldwide by the middle of the century, with huge consequences for the health of the oceans and for people dependent on them for their food and livelihood.

The location of Manado in the Coral Triangle, close to the equator, is thought to have had the ideal conditions for a slow emergence of coral reefs over millions of years to become a ‘treasure trove’ of coral abundance and biodiversity today.

The scientific survey will establish an extensive picture of the coral reefs at Manado. The information obtained by the Catlin Seaview Survey will feed into a broader understanding of the health of other coral reefs around the world. This data will be available to everyone online at the [Catlin Global Reef Record](#).

Richard Vevers, Director of the Catlin Seaview Survey, said: *“The significance of the Survey is that it is applying technology which can at last keep pace with the rate of change on coral reefs. Surveying that would have taken months using standard methods can now be completed in days. Scaling up our efforts in this way is critical to finding ways to protect coral reefs from the predicted impacts of an increasing global population and climate change.”*

Stephen Catlin, Chief Executive of international insurer Catlin Group Limited, which sponsors the Catlin Seaview Survey, said:

*“Conducting a major survey of the Coral Triangle is important in our mapping of the world’s reefs. Globally, coral reefs are worth billions of dollars in fishing, livelihoods, tourism, and as storm barriers along coastlines. Studying coral reefs provides a better understanding of short-term risks on a local scale, but more importantly, gives us better information about the long-term risks of climate change on a global scale. As insurers, we need to be ahead of the game.”*

*“There is still a significant lack of information concerning the health of coral reefs. This information is necessary to make informed decisions about how much, and where, governments should invest to ensure the future well-being of our planet.”*

\*\* The Catlin Seaview Survey research at Manado is being undertaken in collaboration with Sam Ratulangi University and Indonesia’s Institute of Sciences (LIPI), through its Research Centre for Oceanography.

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## IMAGES:

High-resolution photographs are available for download at a Zenfolio site:  
<http://catlinseaviewsurvey.zenfolio.com/northsulawesi>



[Full Coral Triangle image gallery can be accessed here](#)

## ADDITIONAL INFORMATION

### Factual description of the Survey work currently being undertaken at Manado

This expedition aims to conduct up to 40 transects, each up to 2km in length. It aims to complete up to 80 linear kilometres of reef survey. The team uses the SVII camera at an average depth of 8m on these shallow reef surveys. It takes an image every three seconds to create a comprehensive record. Each image is accurately GPS-located, allowing sites to be revisited so that any changes can be assessed over time.

Thousands of images recorded by the camera will be stitched together and analysed by scientists using sophisticated image recognition software. The techniques used in the photographic survey will also allow for the assessment of the 3D structure of the reefs. Understanding the structural complexity of coral reefs is important in monitoring the health of these ecosystems. Reefs that have been impacted by climate change or human activities often lose their structure, which is key to the biodiversity living there, and the ability of reefs to form and maintain ocean barriers and other important structures within the marine environment.

### More about Manado

*Professor Ove Hoegh-Guldberg said:*

*"The region is hugely biodiverse, but also one of the most threatened because of increasing local population pressures on top of its vulnerability to ocean change. These threats represent a turning point, because if we can't protect this iconic area – then it tells us we'll struggle to save coral anywhere."*

*"Two things are essential to the protection of Manado. The first is to empower local people – by showing them the stunning images of what lies in their waters – to better appreciate the wonders beneath the waters on which they rely. The second, is to get the extensive visual record we are producing to the scientists who have joined together to study and understand this iconic ecosystem."*

### The specialist SVII camera technology

The Catlin Seaview [SVII camera](#) does for underwater research what satellites have done for the study of the atmosphere and surface of the Earth. Rapid-fire 360 degree images are taken every 3 seconds whilst traveling at a speed of approximately 4km/h. Images are then stitched together and published online at the [Catlin Global Reef Record](#) for scientists and the public alike to access. Each image is geo-located.

## **Take an Online Dive Experience**

The Catlin Seaview Survey has created reef dive experiences from these images which can be accessed by anyone with a desktop, laptop, tablet or smartphone. They can self-navigate a ‘virtual dive’ in stunning high-resolution. These can be seen on [Google Maps](#).

## **Climate Change and Oceans**

Globally, coral reefs are facing major challenges due to overfishing, pollution, ocean warming and acidification. As a result, coral reefs are deteriorating at the rate of one to two percent per year. Fifty percent of corals have been lost in the last 30 years. (There is more information in our ‘Fast Facts’ sheet)

## **About the Catlin Seaview Survey**

The Catlin Seaview Survey is a pioneering scientific expedition revealing the impact of environmental changes on the world’s coral reefs. The Survey aims to significantly expand the data available to scientists about global coral reef systems. The Catlin Seaview Survey is currently focusing on the Coral Triangle, in South-East Asia, having previously completed groundbreaking scientific studies of the Great Barrier Reef and the Caribbean. The images are captured in order to provide a vital scientific baseline study of the world’s coral reefs. These images monitor change, reveal it to the world through Street View in Google Maps - in partnership with Google. More information about the Catlin Seaview Survey can be found here: <http://www.catlinseaviewsurvey.com>

You can also engage with the Catlin Seaview Survey and its 3.5 million followers on Google+ here: <https://plus.google.com/+CatlinSeaviewSurvey/posts>

## **About Catlin Group Limited**

[Catlin Group Limited](#) is a global specialty property/casualty insurer and reinsurer operating worldwide through six underwriting hubs: London, Bermuda, the United States, Asia-Pacific, Europe and Canada. The Catlin Seaview Survey is the second major scientific project sponsored by Catlin. The Catlin Arctic Survey (2009-2011) investigated the impact of environmental changes in the Arctic. Catlin believes that insurers must take a leading role in improving the understanding of potential changes to our environment, changes that could affect how risks are managed in the future. Catlin’s contribution is to sponsor independent, impartial research that is freely distributed to the world’s scientific community.

## **About The Global Change Institute, University of Queensland**

The [Global Change Institute](#) at The University of Queensland (UQ), Australia, was established in 2010 as an independent source of game-changing research, ideas and advice for addressing the challenges of global change. GCI advances discovery, develops solutions and advocates responses that meet the challenges presented by climate change, technological innovation and population change. UQ is one of the world’s premier teaching and research institutions. It is consistently ranked in the top 100 in four independent global rankings. With more than 48,000 students and 6,500 staff, UQ’s teaching is informed by research, and spans six faculties and eight research institutes.

## **About the Catlin Global Reef Record**

The [Catlin Global Reef Record](#) is a first-of-its-kind global database and standardized online research tool for coral reef ecosystems.

It is a benchmark in coral reef science. Hosting standardized scientific data across important coral reef regions worldwide, it enables scientists around the world to collaborate on understanding changes to coral reefs and related marine environments. The Catlin Global Reef Record will support and host follow-up monitoring programs and provide an important management tool for marine park managers.