

# **The effects of climate change on voyage and passage planning**

**By Jimmy Cornell**

## **Tropical storm season tactics**

### **Sail to areas historically not affected by tropical storms**

#### **Caribbean alternatives**

The ABC Islands  
Northern Colombia  
US NE coast

#### **South Pacific alternatives**

Sail to New Zealand or Australia  
Sail to Hawaii

The recently published report by the Intergovernmental Panel on Climate Change is a challenge to the international community to unite in its efforts to bring climate change under control by limiting the increase in global temperatures to 1.5 degrees. Based on more than 6,000 scientific studies, the report was compiled by the world's top climate scientists and its irrefutable conclusion is that the current pace of global warming is the "greatest challenge of our generation". Its message is relevant to every human being on our planet.

## **Global warming and climate change**

- Climate change – is it happening?
- The oceans are getting warmer.
- The Arctic icecap is melting a faster rate than in any recorded times as reported from Greenland this year.
- In recent years the Northwest Passage has been free of ice in late summer and early autumn.
- The tropical storm seasons are less clearly defined and becoming more active.
- Extra-seasonal tropical storms are more common.
- In the NW Pacific typhoons have been recorded in every month so there is no longer a "safe season".
- The Gulf Stream rate is slowing down.
- The coral is dying due to the oceans getting warmer.

## **The oceans are getting warmer**

The astonishing pace of warming in the oceans is the “greatest hidden challenge of our generation”, altering the distribution of marine species from microbes to whales, reducing fishing areas and starting to spread disease to humans, according to the most comprehensive analysis yet of ocean warming.

The report, published by the International Union for Conservation of Nature, says if the oceans had not already absorbed an enormous amount of heat due to escalating carbon dioxide, the atmosphere would be 36 degrees warmer.

## **Tropical storms**

### **North Atlantic hurricane season 2017**

- This was one of the worst hurricane seasons since records began in 1851 with a total of 17 hurricanes recorded
- Three hurricanes (Irma, Jose and Katia) occurring almost at the same time (early September)
- Otto, the first hurricane to affect Costa Rica
- Otto was also one of the latest Caribbean hurricanes occurring on 22-23 November

The North Atlantic hurricane season was a hyperactive and extremely destructive season, featuring 17 named storms, and ranked as one of the most active seasons since records began in 1851.

### **The North Pacific hurricane seasons**

The situation in the North Pacific was just as dire.

In the 2016 Eastern Pacific season hurricane Pali occurred from January 7 to 15 and marked the earliest formation of a tropical cyclone in the Eastern North Pacific. Pali reached a minimum latitude of 2.0°N, making it the lowest latitude tropical cyclone on record.

In the 2017 hurricane season tropical storm Adrian occurred on 10 May as the first hurricane of the season. It was also the earliest-known tropical storm in the Eastern Pacific since the advent of satellite imagery.

The last of the season was tropical storm Selma on 27 October. This marked only the second time that an Eastern Pacific tropical cyclone became a tropical storm east of 90° W. Selma affected Nicaragua, Costa Rica, Guatemala, Honduras and the first to also affect El Salvador.

In the Northwest Pacific both the frequency and force of typhoons is on the increase, with some super-typhoons having gusts of 200 knots or more.

On 15 September 2018 super-typhoon Mangkhut struck the Philippines as a category 5 tropical storm, one of the strongest ever recorded. It continued its destructive path towards Hong Kong and Southern China.

In recent years tropical storms have been recorded in the Northwest Pacific in every month of the year, with a well-defined safe season now sadly a thing of the past.

In the South Pacific the cyclone season (November to April) now lasts longer than in the past, and in the Coral Sea extra-seasonal cyclones have been recorded as late as June and even July.

A late season and unusually strong tropical cyclone formed in the Southwest Pacific Ocean in early May 2017, striking the island nations of Vanuatu and New Caledonia. Cyclone Donna was the strongest May cyclone on record for the entire Southern Hemisphere.

### **The effects of climate change on voyage and passage planning**

How do the current changes affect long-term cruising plans?

- Long-term planning is now even more important than in the past.
- In spite of climate change, tropical storm seasons and critical areas can be avoided by good planning.
- Avoid arriving in the tropics too close to the start of the safe season, and allow a safe margin by leaving before its end.
- Avoid cruising during the critical period or, if you do, keep an eye on the weather and stay close to shelter.
- Preferably, leave the tropics during the critical season to cruise in a safe area or
- Leave the boat unattended in a safe place, but make sure your insurance company agrees with your plans.

### **How do the current changes affect long-term cruising plans?**

- Long-term planning is now even more important than in the past.
- Tropical storm seasons and areas can be avoided by good planning.
- Avoid cruising during critical period or, if you do, keep an eye on the weather and stay close to shelter.
- Leave the tropics during the critical season to cruise in a safe area or
- Leave the boat unattended in a safe place, but make sure your insurance company agrees with your plans.