Welcome to SCUBA News. You've been writing in about diving qualifications this month - whether it's better to become a PADI or NAUI instructor, and how widely recognised is HSE certification. We've also an article on why you should choose white rather than clear sunscreen.

If you would like to contribute an article to SCUBA News - e-mail news@scubatravel.co.uk.

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What's New at SCUBA Travel?

Dive Centres in Indonesia
Indonesia is the world's largest archipelago, and is in the coral triangle, so it almost goes without saying that it has some great diving. scubatravel.co.uk/indonesia/
**Diving Thailand**

Another country with some lovely diving is Thailand, especially in the Andaman Sea. More recommended dive centres are now listed at [scubatravel.co.uk/thailand/](http://scubatravel.co.uk/thailand/)

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**Diving Sharm El-Sheikh**

Sharm, in the Red Sea, is the jumping off point for some world class diving. You've also been recommending more of its dive centres at [scubatravel.co.uk/redsea/](http://scubatravel.co.uk/redsea/)

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**Letters**

**NAUI or PADI?**

_I had my mind set to make PADI to go as instructor for a new career. Now I was advised to go with the NAUI. What is the major difference? A friend of mine actually labeled the PADI a "cookie cutter course"! This person is NAUI certified. What do I do?_

Horst Jahn

What do you think? E-mail news@scubatravel.co.uk or reply directly to Horst's comment.

**HSE**

_I have many years of diving experience with HSE part 1 11, military advanced diver from Royal Engineers, I have dived and worked all over the world and yet to convert to PADI. It seems all this experience and qualification has no transferable meaning._

Mark Fender

Hello Mark

Many dive shops do recognise HSE. BSAC clubs, for example, recognise HSE part 1 as equivalent to BSAC Sports Diver. If you joined BSAC you could apply for an 'Equivalency Card' from BSAC HQ. This would be recognised by PADI dive shops even if your HSE qualification wasn't. (Although PADI shops should recognise it as equivalent to Rescue Diver.)

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**Clear Sunscreen Bad for Sealife**

Materials commonly used in clear sunscreens harm marine life. Research shows sea urchin embryos, plankton and coral all affected.

**Sea Urchins at Risk**
According to a study published this week, nanoparticles commonly used in sunscreens are making sea urchin embryos more vulnerable to toxins.

Researchers from the University of California showed that Nanozinc oxide (ZnO) made developing sea urchin embryos more sensitive to other chemicals, blocking transporters that would otherwise defend them by pumping toxins out of cells.

Nanozinc oxide is used as an additive not only in sunscreens but in toothpastes and beauty products as well. Another nanoparticle commonly used in sunscreen is titanium dioxide (TiO\(_2\)).

**Plankton also affected**

When people wearing sunscreen go to cool off in the sea, the nanoparticles in sunscreen wash off. Spanish scientists David Sánchez-Quiles and Antonio Tovar-Sánchez have shown that titanium dioxide and zinc oxide nanoparticles from the sunscreen produce significant amounts of hydrogen peroxide, a strong oxidizing agent that generates high levels of stress on marine phytoplankton.

Conservative estimates for a Mediterranean beach reveal that tourism activities during a summer day may release 4 kg of TiO2 nanoparticles to the water, with direct ecological consequences on the ecosystem. The researchers concluded that titanium dioxide from sunscreen was largely responsible for a dramatic summertime spike in hydrogen peroxide levels in
coastal waters.

And Coral

Titanium dioxide nanoparticles also increase stress in reef-building corals. Adding to the warming pressures they already face in parts of the world.

Which sunscreen is the worst?

Zinc oxide and titanium dioxide have been used in sunscreens for decades, but in the form of big particles. They reflect not only ultra-violet light but visible light making them and the sunscreen appear white.

When used as minute nanoparticles, the sunscreen looks clear. This type of sunscreen is popular because it feels lighter and it needs reapplying less frequently. But evidence is mounting of the greater harm it does to marine life.

Further Reading

Sunscreen nanoparticles harm sealife, SCUBA News, 19 May 2015

Diving News From Around the World

Our round up of the more interesting underwater news stories of the past month. For breaking news see our Twitter page or RSS feed

France fishes thousands of used tyres from failed artificial reef off Cannes

A project to create an artificial reef off the French Riviera by dumping hundreds of thousands of used rubber tyres has proved a total flop, prompting the decision to fish thousands out in time for the Cannes film festival.

Underwater graveyard of hundreds of World War Two planes revealed

Scuba diver Brandi Mueller finds more than 150 lost aircraft in the Pacific. New diving destination?

Australia lobbies Unesco to stop it from listing Great Barrier Reef as
Frantic efforts are being made to avoid adverse status for reef which could foil government plans to open up vast region in Queensland for new coal mines.

**Science of Diving: Concepts and Applications**

New 432 page book aims to be the most comprehensive book on diving science. Covers everything which touches diving.

**Ocean’s microbiome has incredible diversity - and human likeness**

We’re a step closer to understanding the microbial community that inhabits the ocean - and it has some striking similarities to the community that lives inside our guts. The microbiome of the world's biggest ecosystem and one of the smallest appear to function in surprisingly similar ways.

**Artificial light may alter underwater ecosystems**

Light from harbours, ships and offshore structures such as oil rigs may be disrupting the lives of marine worms, barnacles, and corals, preventing their wayfaring larvae from finding suitable habitats in which to settle down, according to a new study.

**Dietary supplements help coral health**

Study finds coral species can buffer the effects of climate change by increasing feeding during stressful environmental conditions.

**Octopus has automatic camouflage thanks to its light-sensing skin**

Octopuses are good at changing colour, but for the first time it's been shown that one species’ skin reacts directly to light to cover it in camouflage.

**Sri Lanka first nation to promise full protection of mangroves**

A $3.4 million project will give local women loans and training in exchange for replanting and conserving mangrove forests.
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