

US to sail submarine drones in South China Sea

Geoff Dyer in Washington

As it watches China build up its presence in the South China Sea, one reclaimed island at a time, the US military is betting on a new technology to help retain its edge — submarine drones. During the past six months, the Pentagon has started to talk publicly about a once-secret programme to develop unmanned undersea vehicles, the term given to the drone subs that are becoming part of its plan to deter China from trying to dominate the region.

Ashton Carter, US defence secretary, made special mention of drone subs in a speech about military strategy in Asia and hinted at their potential use in the South China Sea, which has large areas of shallower water.

The Pentagon's investment in subs "includes new undersea drones in multiple sizes and diverse payloads that can, importantly, operate in shallow water, where manned submarines cannot", said Mr Carter, who visited a US warship in the South China Sea on Friday.

By lifting the veil on new technologies such as drone subs, some of which it hopes will be operational by the end of the decade, the Pentagon is trying to deter potential rivals such as China and Russia by pointing to its continuing military superiority. The drones are part of a push by the US military into robotics as it tries to keep one step ahead.

"The idea is that if we were ever to get into a bust-up in the South China Sea, the Chinese would not know for sure what sort of capabilities the US might have," says Shawn Brimley, a former White House and Pentagon official now at the Center for a New American Security. "This might have some deterrent impact on the potential for provocative behaviour."

Mr Carter's trip to the USS Stennis on Friday was part of a visit to the Philippines aimed at expanding military co-operation between the two countries that is partly aimed at checking China's growing influence. The Philippines, which will now host US fighter jets, is one of the countries that has contested claims with China for some of the land features and islands in the South China Sea.

"Countries across the Asia-Pacific are voicing concern with China's land reclamation, which stands out in size and scope, as well as its militarisation in the South China Sea," Mr Carter said in Manila on Thursday.

As military competition intensifies in the western Pacific between the US and China, submarines have become one of the key areas. China's heavy investment in missiles has put at risk US land-based forces in the region and some of its surface vessels. As a result the US is investing \$8bn next year in submarines to "ensure ours is the most lethal and most advanced undersea and anti-submarine force in the world", as Mr Carter put it last week.

Small, remotely operated subs have been used for some time in search and rescue and the Navy has been using Remus drones to search for mines. The new investments are in more autonomous vessels that might eventually carry weapons.

Last autumn, the US Navy unveiled a 10-foot, semi-autonomous sub drone known as the large displacement unmanned underwater vehicle , which is due to conduct its first test voyage in open seas in the summer. Officials hope that a squadron will be operating by 2020 if tests go well. As well as being able to operate for 30 days at a time, other distinguishing features of the submarine include being yellow.

The initial function of sub drones is expected to be surveillance, however naval planners believe there are endless potential uses. One model is what one official calls a Russian doll approach – with a mother sub or surface vessel that can then release a series of much smaller drones that could be mines or used to track subs or even launch their own missiles.

Small sub drones would be much harder to monitor using sonar systems that are designed to find large objects in deep waters. It might be possible, for instance, for a vessel to enter an enemy harbour unobserved.

The Pentagon's Defense Advanced Research Projects Agency has been testing a programme it calls upward falling payloads – robot pods that would hide on the ocean floor for years and release sub drones or small surveillance aircraft once activated. Another reconnaissance drone under development is shaped and swims like a small fish.

“The use of undersea drones opens up a whole new area of capabilities,” said Mr Brimley.

The principal obstacles at the moment are providing enough power for the drones so that they can stay underwater for long periods and communicating with them.

Officials are also debating how much autonomy they will want to give sub drones – an issue that will become more difficult if and when they start to carry weapons.

As well as investing in undersea drones, the US is developing unmanned surface vessels. Last week the Pentagon unveiled what it calls the Sea Hunter, the prototype of a sub hunter. Robert Work, deputy secretary of defence, said the vessels could be used in the western Pacific in the next five years.