

Scientific cooperation in the South China Sea

Another lever for China?

96

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Many publications present the South China Sea as a constant source of security issues, whereas analysis of scientific cooperation in those waters is rare, thinly spread and short. However, scientific cooperation in maritime matters does take place in this highly contested theatre; it's even considered by neighbouring nations as a means of coming together—a functional bridge—and indispensable in depoliticising recurring tensions. Some projects, especially those run in the name of environmental protection have contributed, through hundreds of meetings, to an atmosphere of *entente cordiale*, from a very basic level all the way up to the political and diplomatic levels. When disputes between parties continue to poison bilateral relations, when negotiations on a code of conduct are hampered and tested by significant political tensions, scientific cooperation is therefore a field worth exploring, especially as 2015 has been designated as the Year of ASEAN–China Maritime Cooperation.

This interest in developing research programs that directly or indirectly link complex maritime questions, resource management and the fragile ecological balance is a long-term asset for all participants, and creates opportunities for mutually beneficial interdependencies. Not surprisingly, some may benefit more than others.

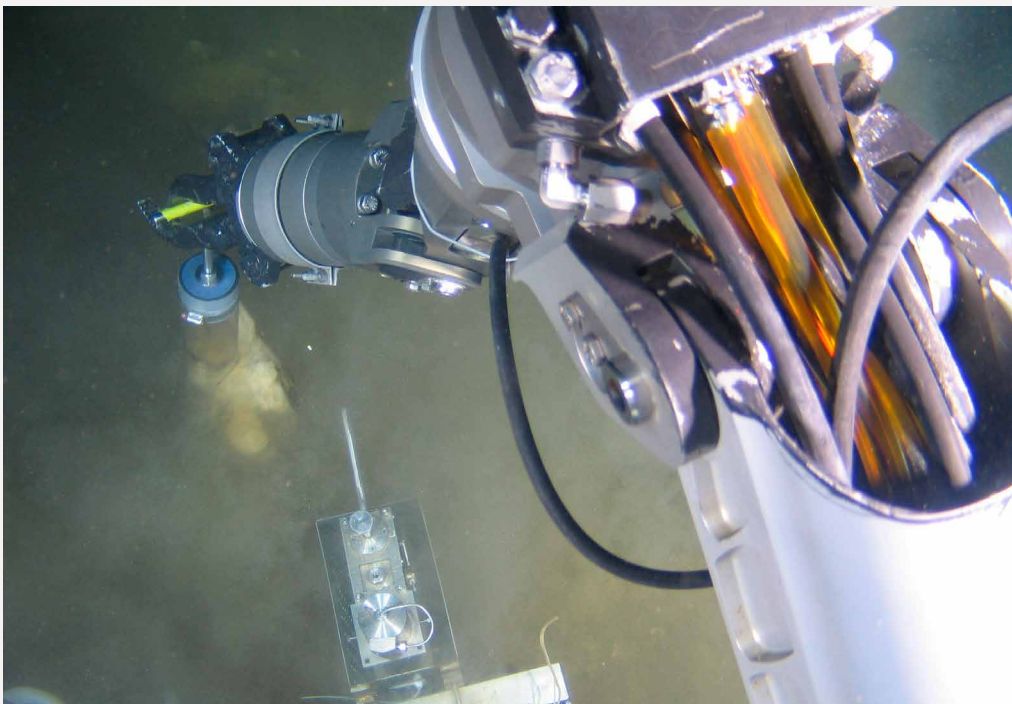


Photo taken on 30 June 2012 shows China's manned submersible *Jiaolong* working in the Mariana Trench. © PHOTOMALL/Xinhua Press/Corbis

Shared priorities

If there's one region that has developed the 'maritimisation' of the world economy, it's certainly East Asia. Surprisingly, despite the size of the South China Sea (3.5 million square kilometres) and its central importance for the future of its bordering countries, global commerce and the strategic balance, it remains poorly understood by oceanographers, geologists, meteorologists and seismologists.¹ Many areas of research, such as tectonics, currentology,² sedimentology and marine geology, are still embryonic. Until recently, marine charts were inaccurate, adding to the confusion about territorial claims. The quality of underwater charts, often established from meso-data, is questionable. Similarly, the regional hydrology is barely understood. However, the South China Sea also constitutes an ideal laboratory for understanding the processes of continental break-up, the forming of the maritime basin,³ its evolution and continent-ocean interactions.

The turmoil and ructions of recent political history, coupled with the sensitivity of sovereignty issues and—until the 1980s—the neglect of the maritime sphere, partially explain the delay in scientific research.

Indeed, it was only after the UN negotiated the Convention on the Law of the Sea (UNCLOS) that discussions about research cooperation began. Article 123 encourages the 'cooperation of nations bordering closed and semi-closed seas'. From 1995, the joint Committee for Science and Technology was established between China and ASEAN to plan, scope, coordinate and evaluate cooperation programs.⁴ Initiatives have since multiplied⁵ proportionally to the interest shown in this maritime space.

Objectively, these efforts serve the interests of both China and the Southeast Asian countries at the same time: for each of them, the sea is a communication route and vital artery for trade and economic prosperity, as well as a zone rich in exploitable resources. It's an asset for growth.⁶

Current (2015) estimates indicate that 90% of regional trade outside China transits through the South China Sea, while almost 60% of economic activity in Southeast Asia is linked to the sea. China is already the world's largest importer of oil. Since 1999, it has also had the largest fishing fleet in the world. Thirteen of the 20 biggest ports in the world are Chinese; Singapore is in 2nd place and Port Klang in Malaysia in 12th (2013). In Vietnam (which has 3,400 kilometres of coastline), maritime activities make up half of the nation's GDP. Today, China is the world leader for naval construction, while the Philippines and Vietnam are also well placed in 4th and 5th positions. 'The South China Sea has become a space of vital exchanges and daily life; the essential hub of Asia's industrialisation,' according to David Rosenberg.⁷ For all the region's regimes, maintaining growth is a major political challenge and depends on import and export capabilities. Because China faces sustained resource pressure (food, energy and water), it's turning more and more towards the sea by exploring all areas that might be exploitable; the 12th Chinese Five-Year Plan (2011–2015) devotes a whole chapter to the promotion of the maritime economy. Furthermore, a little more than 500 million people, or 7% of the world's population) live less than 160 kilometres from the coasts of the South China Sea, and that number is constantly rising.

Managing and reducing the effects of these flows and preparing for the future are essential to the neighbouring countries' economic development, political stability and power projection. Areas of cooperation aren't lacking, but require regional level solutions: commercial routes (more than 50% of the global annual merchant tonnage); fisheries (20% of global fish stocks, producing 26 million tonnes annually); sea and mineral resources; hydrocarbon extraction⁸; genetic resources; polymetallic sulphurs, nodules and other metals; tourism; natural disaster alleviation; piracy; and illegal trafficking. Working groups within or outside international institutions are numerous—the Food and Agriculture Organization for fishing, APEC for commercial traffic, the UN Environment Programme for ecology and the ASEAN Regional Forum for piracy and trafficking—but the most dynamic projects are basically those launched by China.

China's leading role in launching scientific programs

China is the main initiator and orchestrator of regional scientific cooperation programs, which began when Beijing decided to claim its 'historical' rights and flaunt its ambitions at sea. To become, as it proclaimed recently, a major sea power, Beijing needed to better chart, catalogue and control the South China Sea; for example, it's only recently that a complete survey of the sea's islands has been carried out.⁹ Knowledge is a source of power: the aim is to defend joint cooperation while keeping the lead on programs through agenda setting, project management, team building or funding.

Chinese proposals are numerous at every level and in every domain, but the contrast between this proliferation of initiatives and the scarcity of substantial information on the content of the projects can be surprising. What we can say is that the number of actors seeking a better understanding of the terrain (in marine research, maritime economics, maritime security and so on) has grown exponentially. In June 2012, the Chinese Government launched its Framework Plan (2011–2015) for international cooperation in the South China Sea and adjacent seas. The first China–ASEAN ministerial meeting was held in that year, covering science and technology questions. With the 'Maritime Silk Road' in mind (the idea was introduced during a visit to ASEAN countries by President Xi in October 2013), Vice Prime Minister Zhang Gaoli said that the Year of ASEAN–China Maritime Cooperation would reinforce coherence in maritime economy, marine science and technology, protection of marine ecology and connectivity. Beijing proposed to initiate new projects sponsored by the China–ASEAN Maritime Cooperation Fund (established in 2011 and financed by China to the tune of 3 billion yuan, around US\$482 million). The fund's priorities are marine research, environmental protection, offshore exploration and navigational safety: Malaysia, Cambodia, Thailand and Indonesia have already responded favourably.

The numerous projects initiated demand time (they run over several years) and a substantial financial investment. They can only start once all parties (including those currently in conflict) are in agreement, to avoid risk to their smooth running. China therefore needs formal agreement from neighbouring countries that then discover, as they go along, the operational limits of their participation. At the same time, it's difficult for those countries not to respond to generous and repeated 'scientific' invitations from their Chinese partners; for example, the 'best' students are selected for training in China and given lucrative financial incentives in the form of scholarships.

In the domain of scientific cooperation, as in others, China plays on the weaknesses of its adversaries.

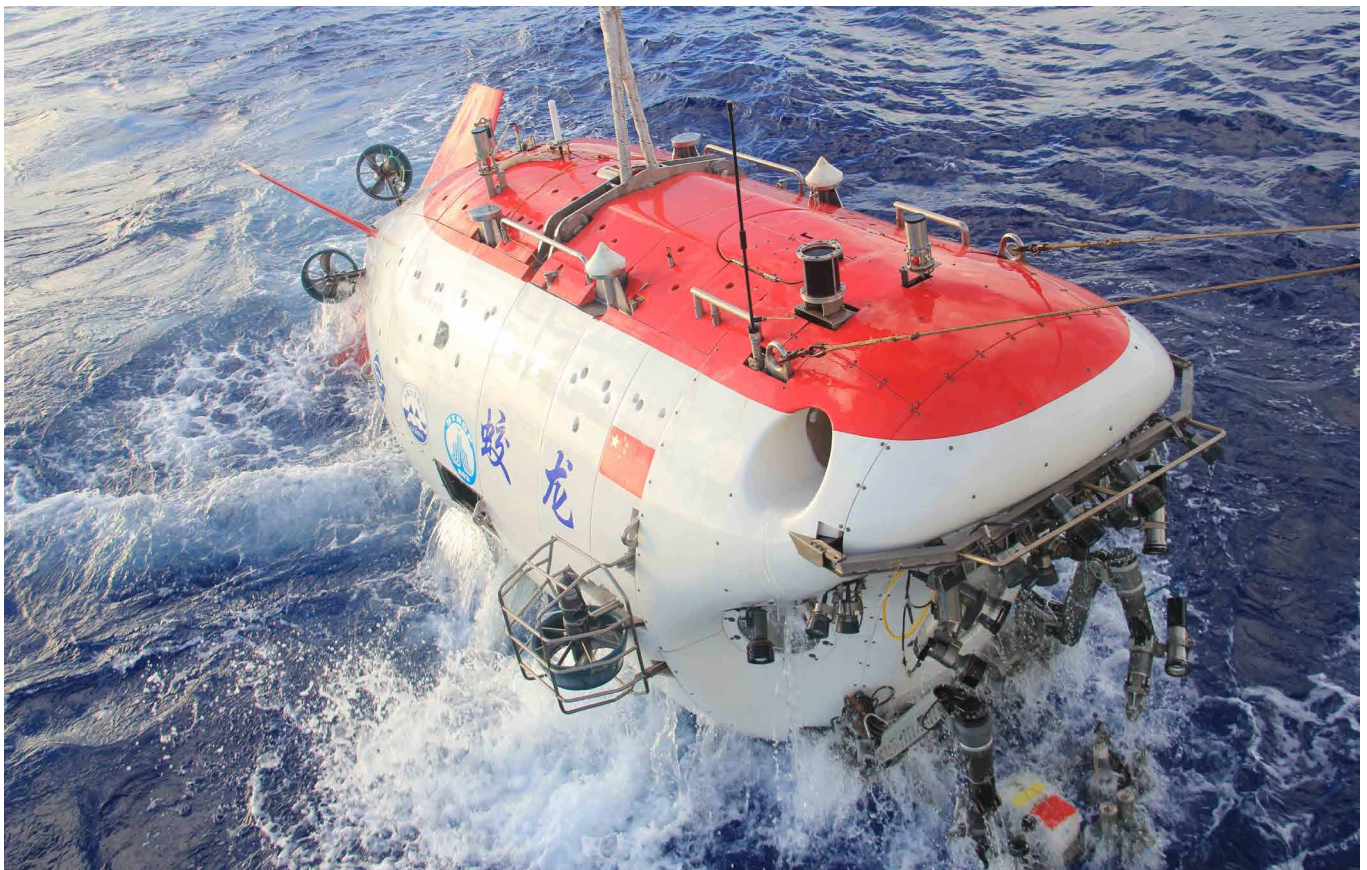
In the domain of scientific cooperation, as in others, China plays on the weaknesses of its adversaries. Disorganisation, lack of means or the absence of ambitious scientific projects in most Southeast Asian countries virtually give China free rein. China has never before joined a serious scientific proposal put forward by ASEAN, or by any of ASEAN's member countries, thus creating an imbalance in its favour. Finally, scientific cooperation endorses the reality of the relationship, which is that of 'unequal interdependence'; under the facade of 'cooperation', China uses it as an instrument of power, a positioning tool.

For a number of practical reasons, regional scientific cooperation continues to be driven mostly by Chinese researchers. 'In South-East Asia, notably amongst the neighboring nations, we have neither the academic and financial capability, nor the technologies, to initiate large-scale projects. Straightaway we are lagging behind,' admits an expert from Chulalongkorn University, Thailand. In China, scientific research on marine issues is supported by some 190 oceanographic research organisations employing around 13,000 specialists in universities and research institutes affiliated to the Chinese Academy of Sciences,¹⁰ the State Oceanic Administration (SOA), the Chinese Academy of Fishery Sciences and the departments of the environment and agriculture. The universities that study sciences relevant to maritime affairs have their own research vessels, as do the provincial governments.

With determination, China's scientific lag in the marine domain, which is estimated at about 12 years by interviewed engineers, is about to be overhauled. In 2002, China established a research project using the *Jiaolong* ('Fabulous Sea Dragon', or 'the submarine of the abyss'), which is capable of descending to depths of up to 7,000 metres and navigating horizontally at that depth. The submersible had already planted a flag on the seabed of the South China Sea in 2011 in a gesture considered provocative by China's neighbours but which illustrated Chinese scientific superiority and the political misappropriation that Beijing can be tempted to favour. The project accomplished six dives in the Mariana Trench. In 2015 and 2016, further dives are planned to conduct research on underwater samples.

In April 2012, the SOA announced the establishment of a national oceanic research flotilla; the flotilla's mission is to 'conduct broad-reaching oceanic studies and complete large national research projects which would enable creation of a platform for sharing oceanographic information'.¹¹ Moreover, China is also pursuing the development of complex high-resolution exploration systems using surface ships with multifaceted capabilities, underwater observatories, intelligent remote-controlled robots, and projects in the areas of satellite gravimetric and altimetry analysis. These are all areas in which technological exploration and exploitation requirements are enormous, requiring commensurately gigantic investments. In March 2014, the University of Xiamen announced the construction of a 3,000-tonne oceanographic research ship capable of permanently embarking around 40 scientists to do geology, meteorology, hydrology and underwater chemistry.

To move on to the next stage, in 2014 China launched the Western Pacific Ocean System (WPOS) project. WPOS is the largest-ever international cooperation project, with financial backing of US\$165 million and with the expected collaboration of some 1,000 researchers. Over five years, the project should be able to establish the causal links between the sea and the climate. The Chinese Academy of Sciences' Institute of Oceanology (based at Qingdao) has suggested to Malaysian and Indonesian teams that they work with its researchers; rising seawater temperatures are most pronounced just off the coast of those two countries.



China's manned submersible, the *Jiaolong*, emerges from the sea surface after its fourth dive into the Mariana Trench in the Pacific Ocean, 24 June 2012. © Luo Sha/Xinhua Press/Corbis

Therefore, a robot vehicle, *Haima* ('Seahorse'), capable of reaching depths of 4,500 metres, will be used to take pictures, collect samples and gather positioning data. The next step should be the establishment of a China–ASEAN Oceanographic Institute.¹²

The gap in scientific knowledge that's now being created between the neighbouring countries of Southeast Asia is obviously worrying. When the Philippines and Vietnam began to collaborate scientifically between 1996 and 2006 in the Joint Oceanographic and Marine Scientific Research Expedition in the South China Sea, that effort could never compete. The program covered marine biodiversity, geology and pollution, but couldn't go far without China's support. In March 2008, a decision was taken to open up discussions with Beijing. After three preparatory meetings, further meetings were suspended for political reasons and Phase 2 of the project was stopped.

Whatever the realm of cooperation, China is the leading and decisive partner. Beijing wants access to scientific information, as well as the possibility of participating in the discussions and, therefore, the recommended solutions. The tectonic research program is a case in point. The South China Sea is at the convergence of three large tectonic plates (the Eurasian, the Indo-Australian and the Philippine–Pacific), and understanding tectonic and geological evolution is crucially important for the exploration of oil and gas resources in basins where the geology is complex. This research also enables the selection of the best sites and improves efficiency by allowing the rejection of less well stocked sites.

The China National Offshore Oil Corporation (CNOOC) and China's other oil conglomerates have a very strong hand that neighbours find it difficult to compete with¹³: while Malaysia (with Petronas) can claim to operate alongside the best of them, Vietnamese and Filipino companies are limited to joint ventures.¹⁴ On many occasions, the countries of Southeast Asia have noted that keeping facts secret is a well-honed Chinese technique: 'They take everything we give them but never give anything serious back,' said one Filipino diplomat, on condition of anonymity.¹⁵ Blockages and tensions have prevented further exploration campaigns due to the fear of important deposits being discovered by those perceived as competitors. This explains why most of the exploration has so far been in the region's non-contested zones, notably along the coasts.

The Chinese alternate their methods: on the one hand, they try to intimidate oil companies that work with other local nations (in Vietnam, some companies, such as BP, have suspended their research); on the other hand, they regularly make friendly approaches. In non-hydrocarbon prospecting, such as for polymetallic nodules, cobalt-rich crusts and hydrothermal sulphides, prospecting campaigns are currently organised by the China Ocean Mineral Resources Research & Development Association (COMRA) in association with some of its neighbours. China is the only country able to explore the depths for those three resources.

A win–win bargain for the environment?

The more years pass, the more the interdependent ecosystem is declared to be 'a common asset to be protected'—a shared objective needed to justify cooperation, or at least rhetorical posturing. So it's no surprise that the ecological domain is where cooperation is most active. It's perhaps the only domain where 'the ASEAN countries demand much of Beijing; conflict resolution will take years and it is critical to stem the current pollution' confirmed a diplomat based at the ASEAN Secretariat in Jakarta. In contrast to cooperation in resource exploitation, the protection of the marine environment doesn't come under any commercial agreement, so countries feel free to participate in different initiatives without worrying about a possible weakness being exploited by the other participants.

Accelerated and intense industrialisation, environmental warming, water pollution¹⁶ and mass tourism have direct effects on the ecological balance of this unbelievably diverse natural space (it has more than 550 coral species, which are vital to the survival of an even broader spectrum of marine species). However, marine and coastal fauna and flora are now subject to accelerated degradation; for example, the area of mangroves has fallen by 70% over the past 50 years, and the coral reefs have been reduced by 80% since the 1950s.¹⁷

Consultation hasn't stopped increasing since the 1990s, even if the experts say that it remains 'insufficient'¹⁸ to protect the ecosystems. Two institutions were established: the Coordinating Body for the Seas of East Asia (COBSEA), which had barely

15 programs, and Partners in Environmental Management of the Seas of East Asia (PEMSEA). One of the PEMSEA flagship projects was the South China Sea Project (2002–2009), which was an intergovernmental initiative involving seven countries (Cambodia, China, Indonesia, Malaysia, the Philippines, Thailand and Vietnam). Established by the UN Environment Programme and financed by the Global Environment Facility, PEMSEA initially conducted an evaluation of environmental degradation before drawing up a program of ‘strategic actions’ to reverse degradation in the South China Sea and the Gulf of Thailand.

In matters of environmental protection, Jakarta is China’s preferred partner, as if to signal to other countries in direct conflict with Beijing that large-scale cooperation is possible and beneficial. A memorandum of understanding signed in 2007 established a technical cooperation committee. In 2010, the Indonesian–Chinese Centre for the Ocean and Climate was established by China’s SOA and the Indonesian Ministry for Marine Affairs and Fishing’s Centre for Research and Development of Coastal and Marine Resources, and in April 2011 the Oceanic Observation Station was established in the port of Bungus at Padang in western Sumatra.¹⁹ In 2012, a dedicated fund was set up for Chinese–Indonesian maritime cooperation.

From 2009, China and Malaysia committed to a cooperation agreement on marine science and technology covering marine environmental protection and scientific research. In 2013, Xiamen University announced a branch school in Kuala Lumpur and the establishment of the China–ASEAN Ocean College, financed by the China–ASEAN Maritime Cooperation Fund. The two buildings should be completed by the end of 2015.

In December 2011, China’s SOA and Thailand’s Department of the Environment signed a memorandum of understanding on marine cooperation; in 2013, a joint project team based at the Phuket Marine Biology Centre was set up to study marine ecosystems and the climate and, specifically, the protection of marine biodiversity.

Beyond these bilateral initiatives, many agreements have been put in place. Success has been mixed because their implementation has inevitably run up against sovereignty issues. For Sherry Broder of the University of Hawaii, ‘this cooperation was normally a failure, well below what one would expect.’²⁰ For example, the protected marine zones should cover around 10% of the South China Sea by 2020, but the coverage was just 0.31% in 2013.²¹

Despite this investment in research relationships and despite mutual interests, the results in the environmental field have been mediocre. For example, the South China Sea workshops that have been held in Indonesia since 1990 and are a big part of Track 2 diplomacy haven’t advanced as promised, and isolated scientific research projects in environmental science, ecology, marine studies and marine resource management have had no great consequences.²² Serious and proven ecological damage didn’t stop China from extending its reclamation activities. This destructive process has continued despite warnings from China’s own marine scientists.²³

Scientific cooperation as a power vector?

Scientific cooperation is part of an assertive diplomacy that enables China to be part of existing international networks, and to promote the concept of ‘peaceful development’ while working out the necessary detail for articulating its military strategy to protect what it considers to be its national space and to ‘proactively’ defend that space. As Chinese geostrategic culture develops this holistic approach, scientific research naturally finds a place in that culture. It’s reasonable to question the link between understanding the maritime space and using that understanding to gain power.

China’s now at ease in developing its program of military modernisation and doesn’t hesitate to use joint scientific research programs for its own strategic purposes. A more precise knowledge of the South China Sea and better control have allowed it to use a more assertive strategy. China’s naval and air projection capabilities, and its intelligence-gathering activities, give it a perhaps decisive advantage.

It’s interesting to note that China started discreetly at Fiery Cross Reef in the Spratlys in 1988, when it participated in the construction of a marine observation station for UNESCO. Then China constructed a helicopter pad, a quay, buildings and even a greenhouse. Today, 200 soldiers are permanently stationed there. According to Mark Valencia, we’re seeing only the tip of an

iceberg that promises to be more dangerous once the Chinese have deployed their submarine flotilla in the South China Sea: 'It's the underwater battle which will be the most decisive.'²⁴ The military submarine race in the region has been going for 10 years. The advantage in power projection and surveillance, including in antisubmarine operations, will go to the nation that has the most accurate knowledge.

Thus, through an efficient use of its soft power, China gives itself the means to maintain an inflexible stance towards its neighbours, send a clear message to its own public and hold a competitive advantage in future operational missions, even in times of crisis or conflict. Indeed, scientific research responds to three primary objectives:

- control the data to enhance all the options
- use research as a demonstration of power (the *Jiaolong* submersible is an example)
- reaffirm Chinese sovereignty by holding on to selected scientific data or, potentially, make concessions in certain areas after confirming that those areas have little strategic import.

Because some of China's scientific cooperative efforts have great political and strategic relevance, some of them are selected by a select group under the authority of Xi Jinping.²⁵ That group launched an international cooperation program in the South China Sea in June 2012, and in adjacent seas from 2011, in order to 'support efforts regarding marine cooperation' with the authorities and institutions of Southeast Asia and to finance studies done in China by students and experts in maritime fields. China's SOA²⁶ positions itself astride two domains; research, and strategy and policy. This dual structure, civilian and military, adds to the confusion, according to Linda Jakobson.²⁷ The Coast Guard, a vector of Chinese naval 'soft power', can use some well-equipped ships for humanitarian missions or scientific research. A large number of Chinese fishing vessels with impressive radar coverage can also contribute to 'taking care of the maritime domain', to potentially justify territorial claims, to protect oil exploration platforms ('mobile platforms of sovereignty', according to one Chinese Government official) and, more mundanely, to collect information.

China's international scientific cooperation underscores its ideas about 'unrestricted warfare' and enables it to develop an approach that doesn't antagonise the US.

China's international scientific cooperation underscores its ideas about 'unrestricted warfare' and enables it to develop an approach that doesn't antagonise the US. It increases China's prestige and ascendancy as a major regional power without generating direct friction. It meshes with the wider regional diplomatic effort, largely through the Treaty for Cooperation and Friendship, which explicitly calls for cooperation in the South China Sea and closer engagement between China and ASEAN.

In this Chinese perspective, hard and soft power merge in a concern for efficiency.²⁸ China uses its rapidly developing scientific and military potential to dissuade rivals, give credibility to its arguments and secure its regional space and its energy supply routes. The need for scientific research was one of the arguments used to justify the launch of China's aircraft carrier, *Liaoning*. After the disappearance of the flight Malaysia Airlines Flight 370 in March 2014, it put forward proposals to establish a maritime search and rescue centre in the Spratlys.²⁹

In this context, other countries' intelligence services are particularly interested. Experts don't underestimate the uses of scientific cooperation in revealing data and discoveries, which is evidently part of China's strategy to develop its discrete, continuous and process-driven capabilities.

Chinese naval exercises in the South China Sea are becoming longer and more frequent. In 2013, a 37-day exercise organised around the aircraft carrier *Liaoning* included aircraft, surface ships and submarines. According to the captain of the *Liaoning*, ‘the exercise served to evaluate the training and combat capability of the aircraft carrier during a period of scientific research.’³⁰ The same types of drills were conducted in 2014 and 2015.

After more than 20 years of scientific research programs in the South China Sea, the research space is increasingly well controlled, but that control isn’t the product of scientific cooperation. It’s the result of China leading research programs and banging the research drum. Scientific cooperation hasn’t reduced mistrust, and common interests don’t prevail. In relations between Southeast Asia and China, the fulcrum is asymmetry. The differences in scientific cooperation noted in this paper demonstrate that asymmetry and its serious long-term consequences for neighbouring countries.

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Notes

- 1 Satellites using powerful altimetry instrumentation (CryoSat 2 from the European Space Agency and NASA’s Jason 1) have recently (October 2014) yielded a much more precise image of the depths of the South China Sea and other seabed information. Although it’s unsurprising that we know so much more about the depths of the Pacific, one would think that the South China Sea would be better known.
- 2 Exploiting gas reserves, oil and methane hydrates would require the construction of underwater pipelines capable of withstanding the force of ocean currents.
- 3 The underwater mountains that protrude from the centre of the South China Sea are likely to be of volcanic origin.
- 4 This committee meets every two years, alternatively in China or in one of the ASEAN countries.
- 5 For example, since the middle of the 1990s, projects between ASEAN member countries and the South China Sea Oceanology Institute (founded in 1959 at Guangzhou under the auspices of the Chinese Academy of Sciences) have multiplied, reaching a total of 160 projects in 2014.
- 6 For 15 years, the importance of the Chinese maritime economy has been the subject of in-depth research; discussion with Kate Walsh, US Naval War College, 21 October 2014; see also Kathleen Walsh, ‘China’s blue economy: ambitions and responsibilities’, in Melanie Hart (ed.), *Exploring the frontiers of US–China strategic cooperation: roles and responsibilities beyond the Asia–Pacific region*, Center for American Progress, November 2014, as well as the activity report presented by Li Keqiang in March 2014.
- 7 David Rosenberg, ‘The paradox of the South China Sea disputes’, *The China story*, Australian Centre on China in the World, Australian National University, Canberra, 23 April 2013.
- 8 According to a report from the Chinese National Energy Administration (December 2012), the South China Sea should become the principal offshore exploration ground for natural gas, producing several billion cubic metres. The American Energy Information Agency believes that the South China Sea holds some 11 billion barrels of oil and 190 trillion cubic metres of natural gas.
- 9 It was only in February 2014, after three years work, that the State Oceanic Administration published a ‘complete’ chart (that is, detailed topography) of some 10,500 islands considered ‘Chinese’; see ‘China gathers high-tech surveillance data on its islands’, *Xinhua*, 1 March 2014.
- 10 Qingdao Institute of Oceanology, Guangzhou Institute of Oceanology of the South China Sea, Yantail Research Institute for Coastal Areas and Wuhan Institute of Hydrobiology.

- 11 Around the National Maritime Information Centre.
- 12 This information, found in an article published online by the University of Xiamen, has never been confirmed; see 'XMU starts building an oceanic scientific research vessel', 7 March 2014, [online](#).
- 13 In 2009, CNOOC announced its intention to invest \$30 billion over 20 years in South China Sea exploration. Construction of a second deepwater foraging platform is planned for 2016.
- 14 Vietnam has secured joint ventures with Russian, Indian, Malaysian, American and European companies.
- 15 Discussion with a Filipino diplomat, who wished to remain anonymous, Manila, 12 May 2014.
- 16 A million tonnes of untreated and non-sanitised used water is fed into the South China Sea every year; Hai Dang Vu, *Marine protected areas network in the South China Sea: charting a course for future cooperation*, Koninklijke, Leiden, Netherlands, 2014, p. 22.
- 17 The study conducted by the SOA between 2004 and 2012 was not published but is mentioned frequently in the media.
- 18 Hai Dang Vu, *Towards a network of marine protected areas in the South China Sea: legal and political perspectives*, University Dalhousie, July 2013.
- 19 This is the first observation station that China has built with an external partner. Three to five other projects are currently underway.
- 20 Sherry P Broder, Jon Van Dyke, 'Regional maritime cooperation in the South China Sea: COBSEA and PEMSEA', in Dr Yann-huei Song, Keyuan Zou (eds), *Major law and policy issues in the South China Sea*, Ashgate, April 2014, Chapter 2.
- 21 Hai Dang Vu, *Towards a network of marine protected areas in the South China Sea*, p. 1.
- 22 Such as an exhibition on biodiversity led around the Natunas and Anambas islands in 2002. Three scientific projects are currently underway.
- 23 Jay Batongbacal 'Environmental Aggression in the South China Sea', Asia Maritime Transparency Initiative, 7 May 2015.
- 24 Discussion with Mark Valencia, 4 November 2014; 'Policy Forum 11–28: Intelligence gathering, the South China Sea and the Law of the Sea', *Policy Forum*, Nautilus Institute, 30 August 2011.
- 25 Bonnie Glaser, 'China's grand strategy in Asia', statement before the US–China Economic and Security Review Commission, Washington DC, 13 March 2014.
- 26 The current Vice Minister for Public Security, Meng Hongwei, was appointed to the posts of Deputy Director of the SOA and Director of the Maritime Police, while the Director of the SOA is the Political Commissar of the Maritime Police.
- 27 Linda Jakobson, *China's unpredictable maritime security actors*, Lowy Institute, December 2014.
- 28 'The effect of a policy is far greater when it is not intentional but when it emerges indirectly from a current process and that it is discreet': François Jullien, *Traité de l'efficacité*, Grasset, Paris, 1996.
- 29 《人民日报》采访肖杰书记：“三沙一号”补给船年底将投入使用 [People's Daily interview with Party Secretary Xiao Jie: Supply ship Sansha No. 1 to enter service by end of year], Sansha City Government website, 11 March 2014, [online](#), cited in Linda Jakobson, *China's unpredictable maritime security actors*, p. 50.
- 30 'China's aircraft carrier returns from South China Sea mission', Voice of America, 1 January 2014, [online](#).

Aconyms and abbreviations

APEC	Asia–Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CNOOC	China National Offshore Oil Corporation
PEMSEA	Partners in Environmental Management of the Seas of East Asia
SOA	State Oceanic Administration (China)
UN	United Nations
UNCLOS	UN Convention on the Law of the Sea

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