

Environmental Change and its impacts on National Security

Changement environnemental et ses impacts sur la sécurité nationale

Cleo Paskal

Associate Fellow, Chatham House, UK

Laureate Trudeau Fellow, Centre d'études et de recherches internationales de l'Université de Montréal
(CÉRIUM)

Centre for National Security Studies, Toronto, 12 February 2018

Geography makes history / La géographie fait l'histoire



Edinburgh Castle, Scotland



Meherangarh Fort, India



Halifax Citadel, Canada

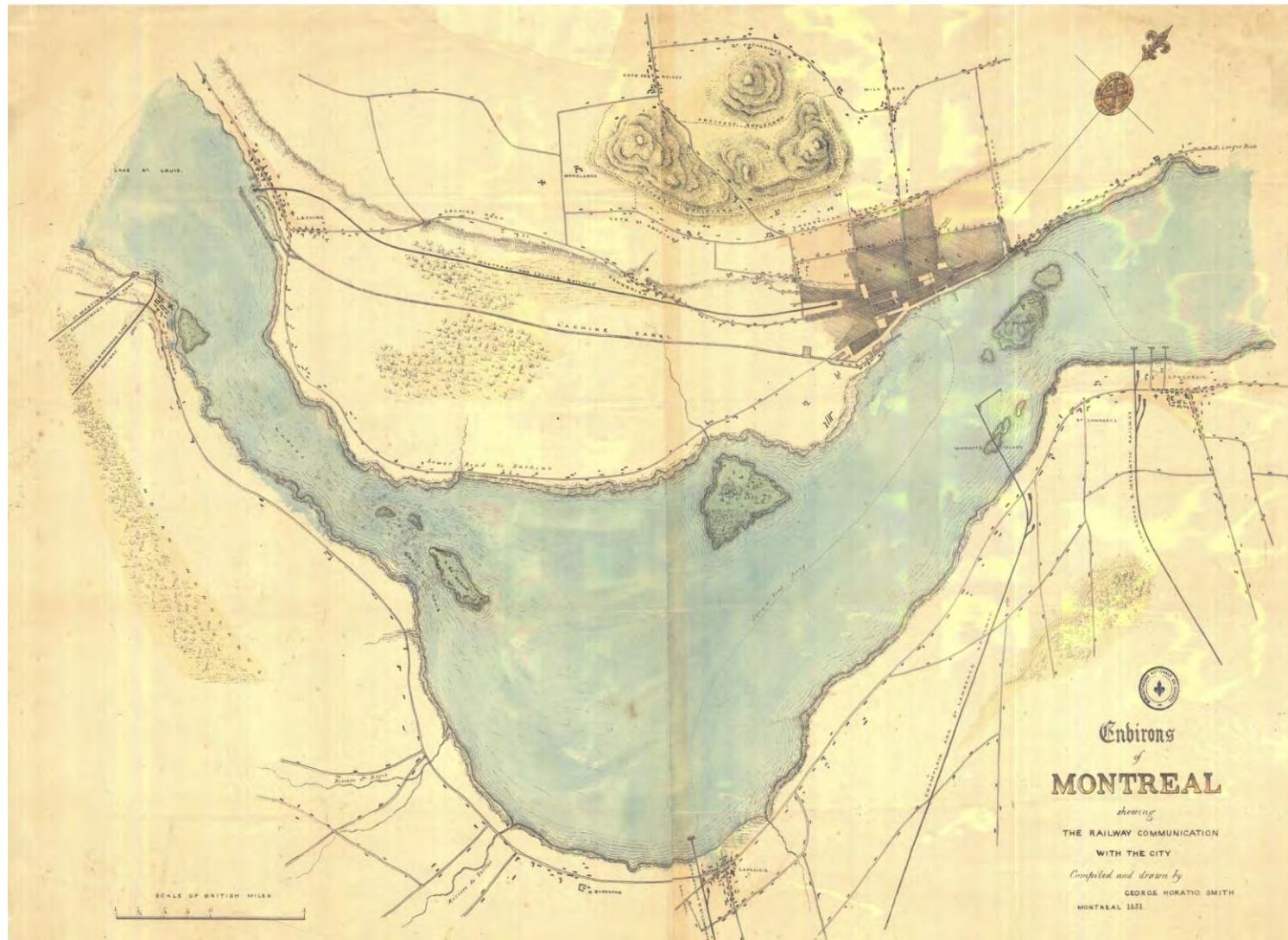


Rakvere Castle, Estonia

River trade / Commerce fluvial



Montréal 1851 (avec/with Fort Sainte-Hélène 1820s)



Montréal 2018



Hong Kong & La Guardia airports/aéroports



Port or airport? Port ou aéroport?



Nepal, 2017



La Guardia, Sandy, 2012



Australia, 2017



Aberdeen, 2015



Acapulco, 2013



Delhi, 2013



Dallas-Fort Worth, 2015



Bangkok, 2011



Queensland, 2012

Rapport du ministère de la Défense sur les risques liés au climat pour l'infrastructure DoD

Department of Defense
Climate-Related Risk to DoD Infrastructure
Initial Vulnerability Assessment Survey
(SLVAS) Report



January 2018

Office of the Under Secretary of Defense
for Acquisition, Technology, and Logistics

As required by Senate Report 114-237, page 11 (TAB C), accompanying S. 2806 of the Military Construction, Veterans Affairs and Related Agencies Appropriations Bill for Fiscal Year 2017.

Map 7 - Sites that Indicated Effects from Multiple Vulnerability Areas (Flooding, Extreme Temperatures, Wind, Drought, Wildfire)



Rapport: La moitié des sites militaires américains sont vulnérables au changement climatique



NEWS THREATS POLITICS BUSINESS TECH IDEAS

Half of the US Military's Sites Are Vulnerable to Climate Change. Now What?



AA FONT SIZE + PRINT

PETTY OFFICER 3RD CLASS CORINNE ZILNICK/U.S.
COAST GUARD



Homestead AFB, 1992

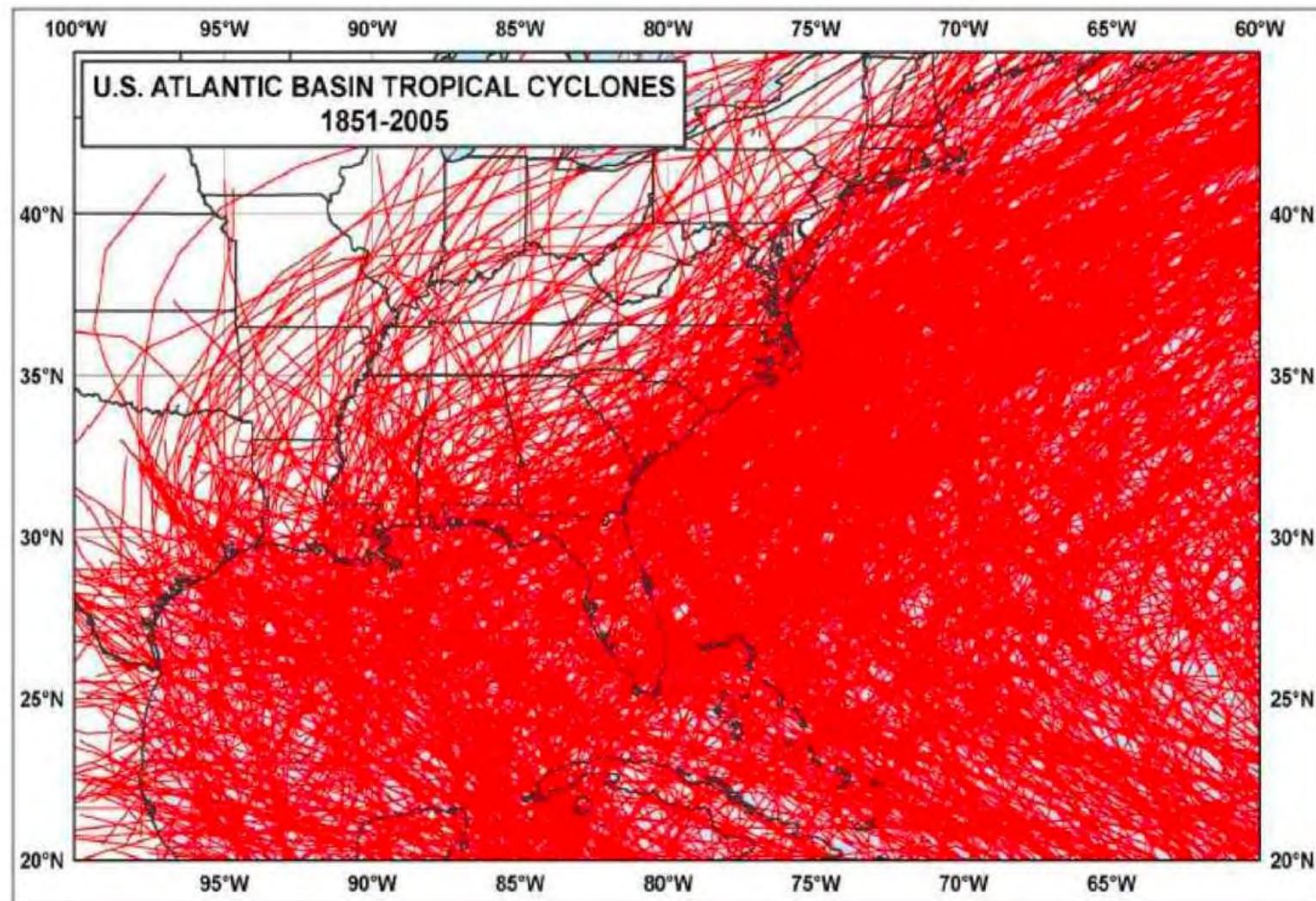


Keesler AFB, 2005



Millington, Tenn, 2010

Chemins des ouragans 1851-2005

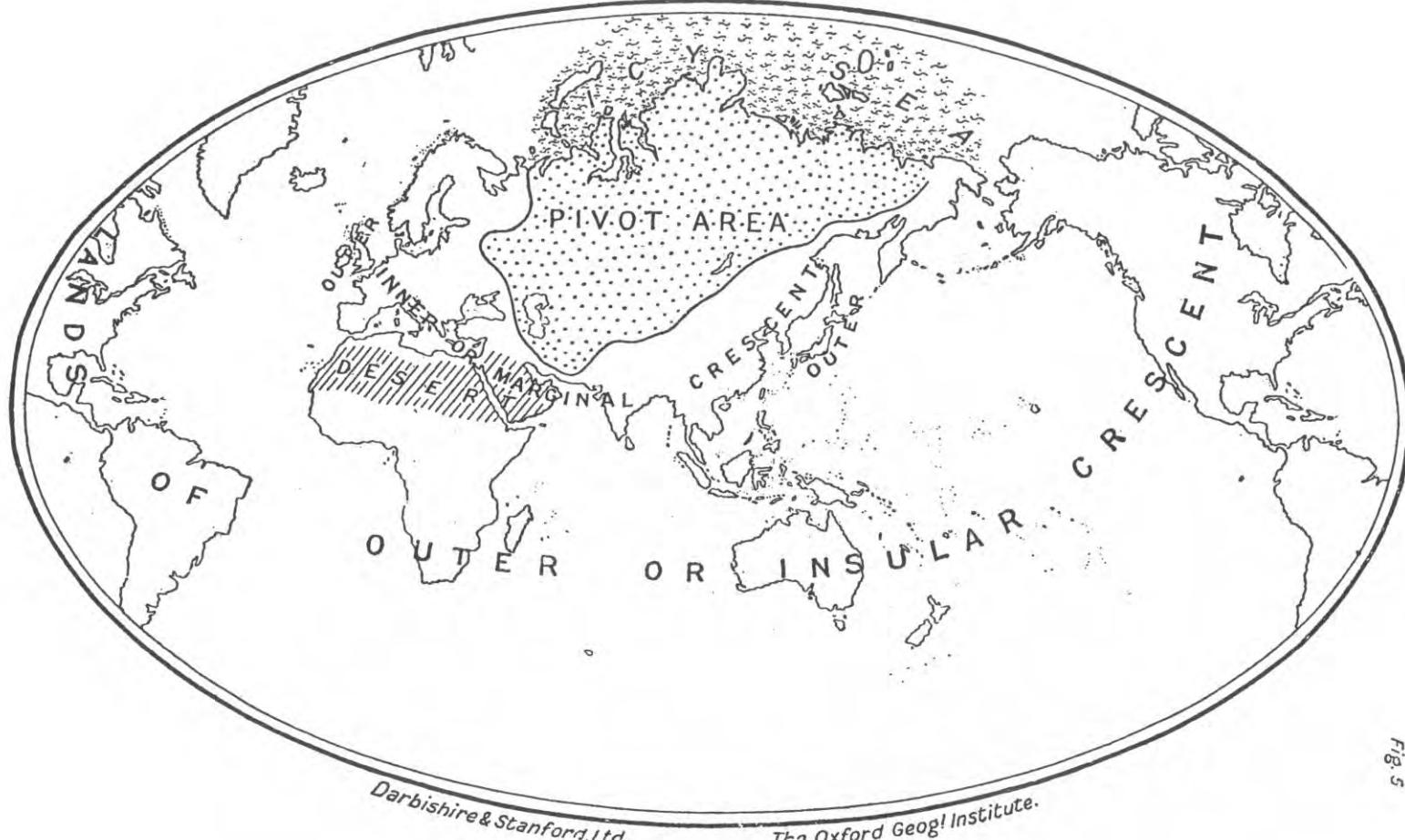


Geostrategic/que = geopolitical/que + geoeconomic/que + geo-physical/que

Geostrategic/que = geopolitical/que + geoeconomic/que + geo-physical/que



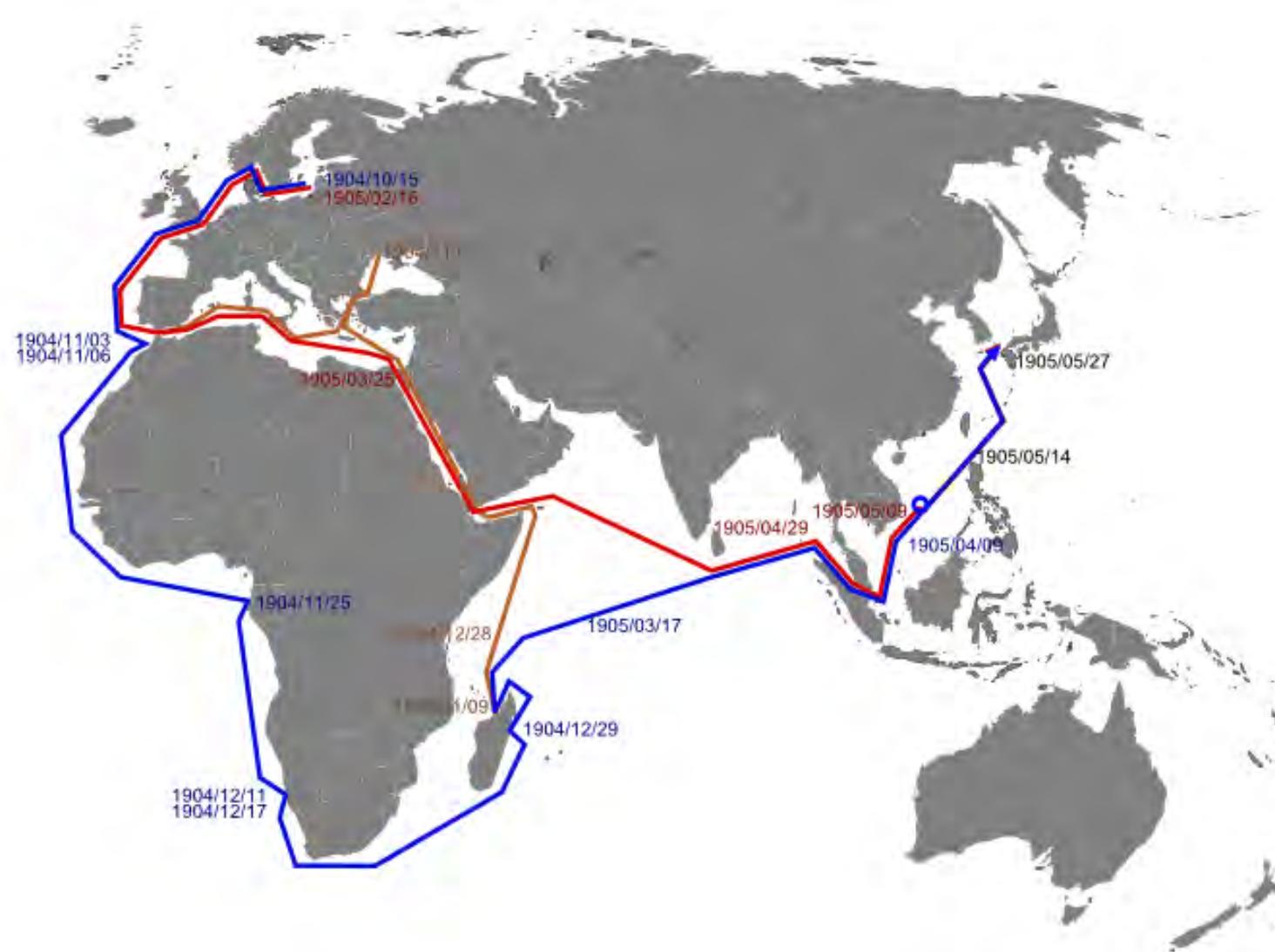
Geostrategic/que = geopolitical/que + geoeconomic/que + geo-physical/que



Pivot area—wholly continental. Outer crescent—wholly oceanic. Inner crescent—partly continental, partly oceanic.

Halford Mackinder, 1904

Battle of Japan/guerre russo-japonaise; Baltic Fleet/Flotte de la Baltique



Geostrategic/que = geopolitical/que + geoeconomic/que + geo-physical/que

NOW READING

HOW CHINA'S POLAR SILK ROAD CAN MAKE CANADA THE NEXT BIG ASIAN POWER



TOPIC ARCTIC

HOW CHINA'S POLAR SILK ROAD CAN MAKE CANADA THE NEXT BIG ASIAN POWER

Ottawa has much to gain by forming closer ties to Beijing as China unveils its first Arctic Policy

BY IRVIN STUDIN

3 FEB 2018

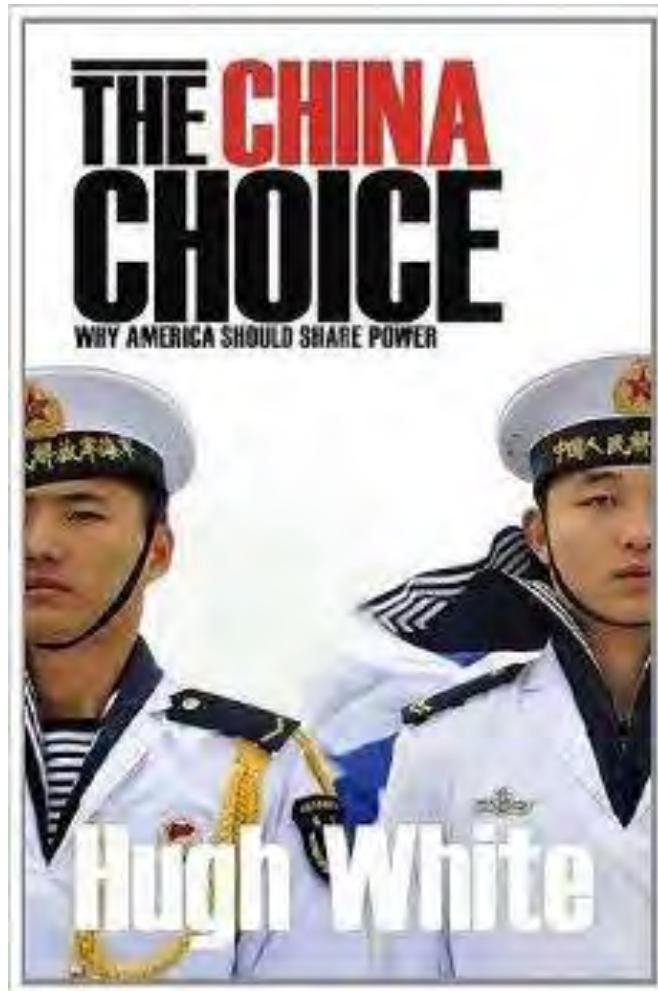
Geopolitical Articles of Faith (GAF) / articles de foi géopolitiques



Geopolitical Articles of Faith (GAF) / articles de foi géopolitiques

D'ici 2022, l'économie chinoise va-t-elle croître/stagner/diminuer?

Will China's economy grow/stagnate/collapse by 2022?



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7.30

PAUL KEATING
FORMER PRIME MINISTER (1991-1996)

0:12 / 7:34

ABC NEWS 7.30

Australia should "cut the tag" with American foreign policy after Trump win says Keating

ABC News (Australia)

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Published on Nov 10, 2016

Former Australian PM Paul Keating (1992-1996)

Nov 17 2015 at 11:10 AM Updated Nov 18 2015 at 8:50 AM



US 'stunned' by Port of Darwin sale to Chinese

3 reasons China will have a soft landing

by [John Kehoe](#) [Laura Tingle](#)

Richard Armitage, a former United States Deputy Secretary of State, said he was "stunned" that [Australia blindsided the US](#) on a decision to allow a Chinese company with alleged links to the People's Liberation Army to lease the Port of Darwin.

"I couldn't believe the Australian defence ministry went along with this," Mr Armitage told *The Australian Financial Review* in an interview.

"And I was further stunned to find out that apparently this did not come up in the A-US talks [Australia-United States Ministerial Consultations]."

Mr Armitage's comments come [amid growing controversy](#) about the \$506 million deal between the Northern Territory Government and the Chinese Company, Landbridge Corporation to lease the Port of Darwin for 99 years. The furore comes ahead of final bids being lodged for the \$9 billion purchase of the NSW electricity grid, which also includes the purchase of sensitive optic fibre cables used by the defence establishment.

« L'Australie lutte contre l'influence politique chinoise »

The Economist

Topics ▾ Print edition More ▾

Meddle kingdom

Australia battles Chinese political influence

It will be an uphill struggle



Claudio Munoz

Print edition | Asia >
Jun 15th 2017 | SYDNEY

Geopolitical Articles of Faith (GAF) / articles de foi géopolitiques

Will the US militarily defend Indo-Pacific allies in a time of crisis?

Est-ce que les États-Unis vont défendre les alliés Indo-Pacifique dans un temps de crise?

Indo-Pacific/que



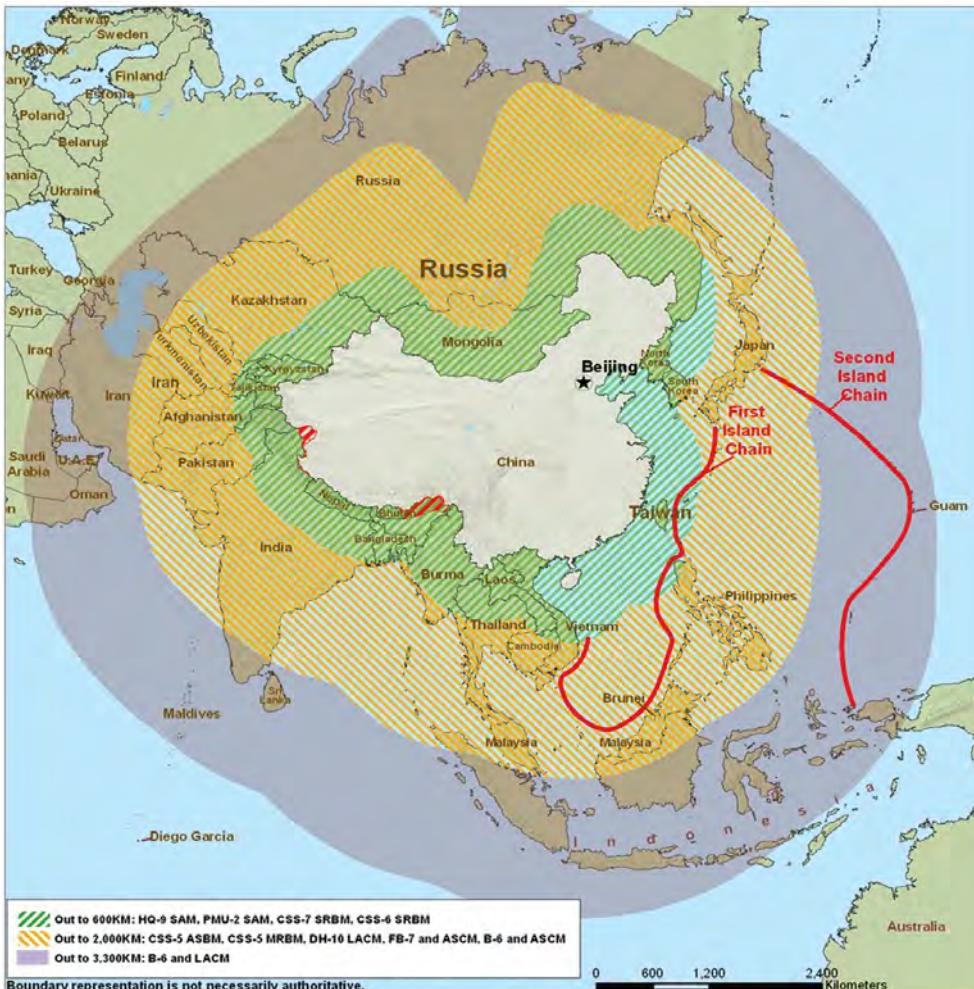


Figure 5. Conventional Anti-Access Capabilities. The PLA's conventional forces are currently capable of striking targets well beyond China's immediate periphery. Not included are ranges for naval surface- and sub-surface-based weapons, whose employment at distances from China would be determined by doctrine and the scenario in which they are employed.

« l'Amérique ne nous protégera pas, prévient Rudd »

The Sydney Morning Herald

National

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MAY 2 2009

America will not protect us, warns Rudd

Jonathan Pearlman Defence Correspondent

THE Rudd Government has acknowledged that the supremacy of the US has begun to fade and Australia is preparing for an uncertain future in which it can no longer rely on the protection of its main ally.

En défense de l'indo-pacifique, nouvelle carte stratégique d'Australie

LOWY INSTITUTE
FOR INTERNATIONAL POLICY

JOURNAL ARTICLES

IN DEFENCE OF THE INDO-PACIFIC: AUSTRALIA'S NEW STRATEGIC MAP

In this article for the Australian Journal of International Affairs, the Lowy Institute's International Security program director Rory Medcalf argues that Indo-Pacific Asia is a suitable regional concept for Australia's strategic needs. Indo-Pacific Asia can best be understood as an expansive definition of a maritime super-region centred on South-East Asia, arising principally from the emergence of China and India as outward-



Rory Medcalf

« Le diamant de sécurité démocratique de l'Asie »



SHINZO ABE

Shinzo Abe is Prime Minister of Japan.

DEC 27, 2012 10

Asia's Democratic Security Diamond

TOKYO – In the summer of 2007, addressing the Central Hall of the Indian Parliament as Japan's prime minister, I spoke of the “Confluence of the Two Seas” – a phrase that I drew from the title of a book written by the Mughal prince Dara Shikoh in 1655 – to the applause and stomping approval of the assembled lawmakers. In the five years since then, I have become even more strongly convinced that what I said was correct.

“In the face of China, India-Japan ties are reinforced”

M Asie-Pacifique

INTERNATIONAL ASIE-PACIFIQUE Afghanistan Australie Azerbaïdjan Bangladesh Bhoutan Birmanie Cambodge Ch

Face à la Chine, l'axe Inde-Japon se renforce

Au-delà de la lutte contre la piraterie, le partenariat Inde-Japon dans les domaines sécuritaires et économiques vise à contrer une Chine perçue comme menaçante. L'exercice naval du 29 janvier en témoigne.

Le Monde.fr | 07.02.2012 à 12h10 |

Par Edouard Ptilimilh

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« L'Inde devient le premier pays à avoir une unité spéciale à l'intérieur du pentagone »

India becomes first country to have its special cell inside the Pentagon

■ BI INDIA BUREAU | 0 | SEP 15, 2015, 04.52 PM



Pentagon, the headquarters of the United States's Department of Defence, has established a special cell to speed up its defence ties with India. The move will speed up the process of co-development and co-production of its hi-tech military equipments.



- ‘Quad’, Raisina Dialogue, Jan. 2018. Admiral Katsutoshi Kawano (Chief of Staff, Joint Staff, Japan; Vice Admiral Tim Barrett, Chief of Navy, Australia; Admiral Sunil Lanba (Chief of Naval Staff, India); Admiral Harris (Commander, US Pacific Command). Dino Patti Djalal, founder of the Foreign Policy Community of Indonesia

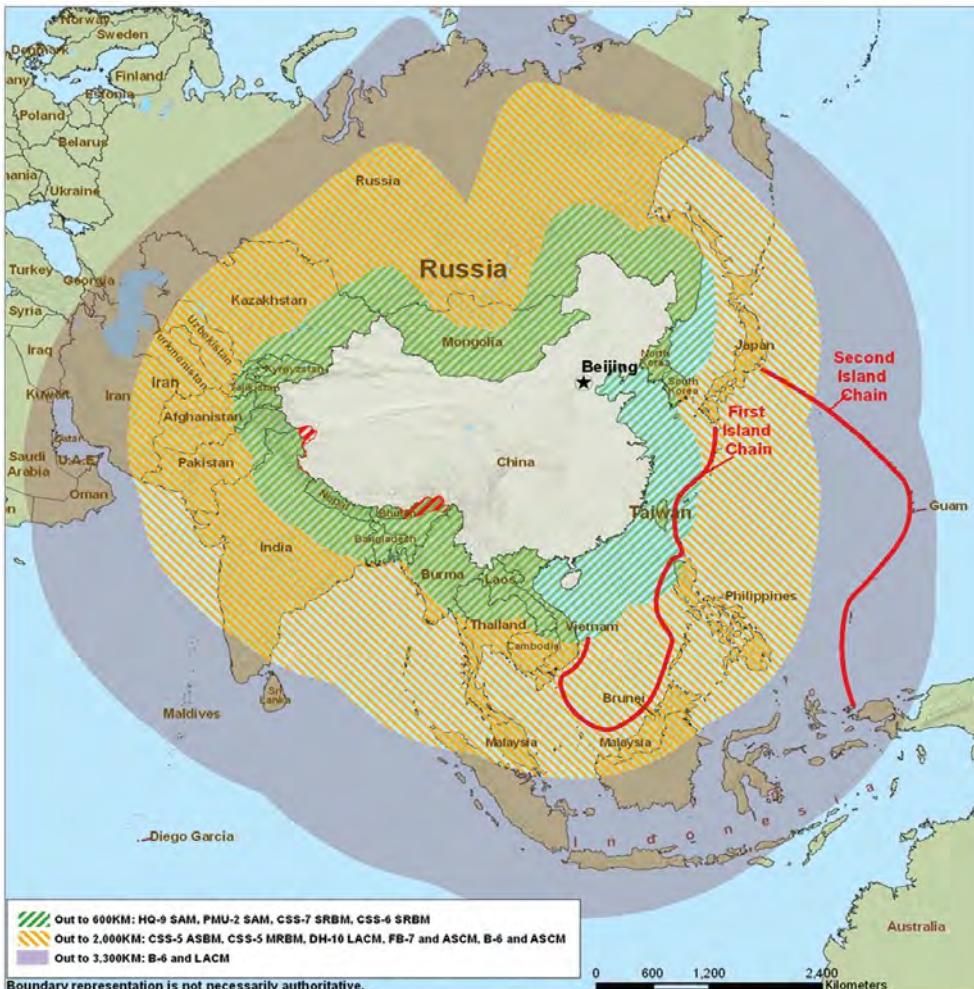
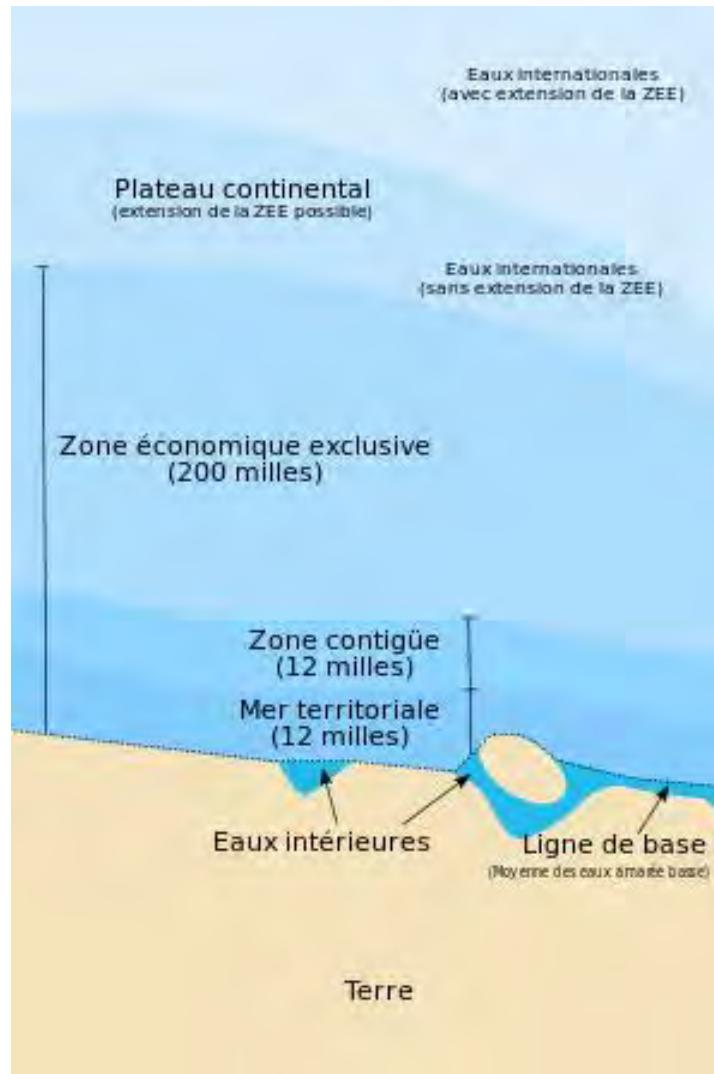


Figure 5. Conventional Anti-Access Capabilities. The PLA's conventional forces are currently capable of striking targets well beyond China's immediate periphery. Not included are ranges for naval surface- and sub-surface-based weapons, whose employment at distances from China would be determined by doctrine and the scenario in which they are employed.

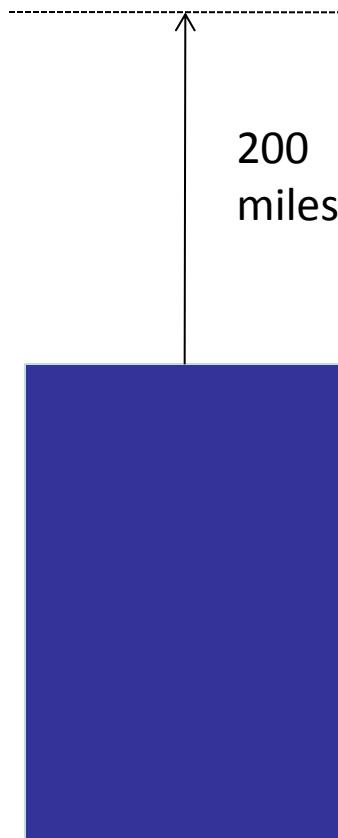
« Concept de défense de chaîne de l'île »



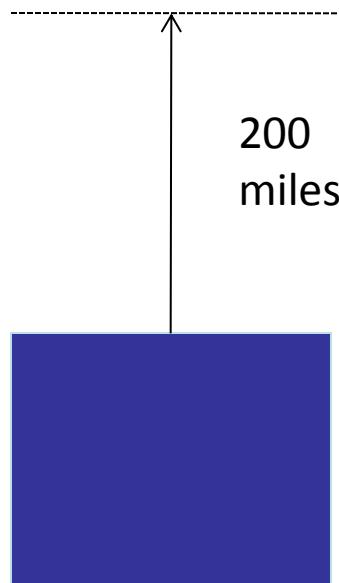
UN Convention on the Law of the Sea (UNCLOS) Convention des Nations Unies sur le droit de la mer



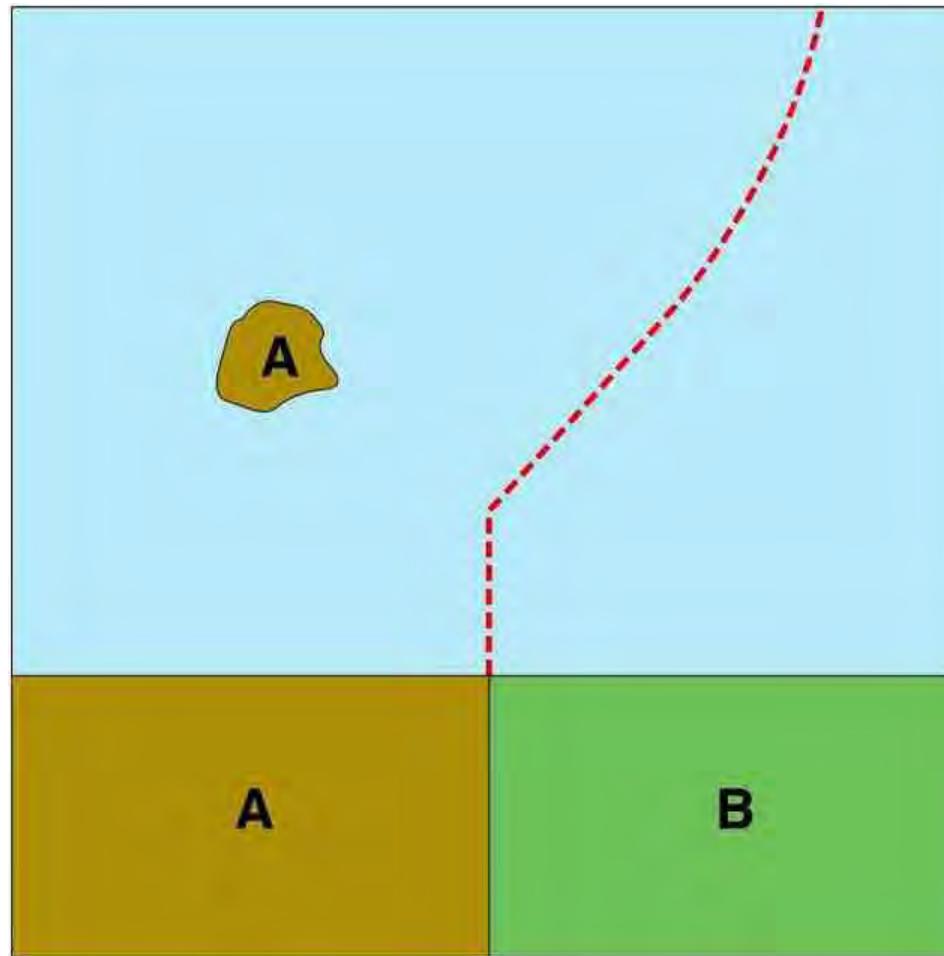
UN Convention on the Law of the Sea (UNCLOS) Convention des Nations Unies sur le droit de la mer



UN Convention on the Law of the Sea (UNCLOS) Convention des Nations Unies sur le droit de la mer



UN Convention on the Law of the Sea (UNCLOS) Convention des Nations Unies sur le droit de la mer







Fiery Cross Reef (Spratley) 08/2014 – 01/2015



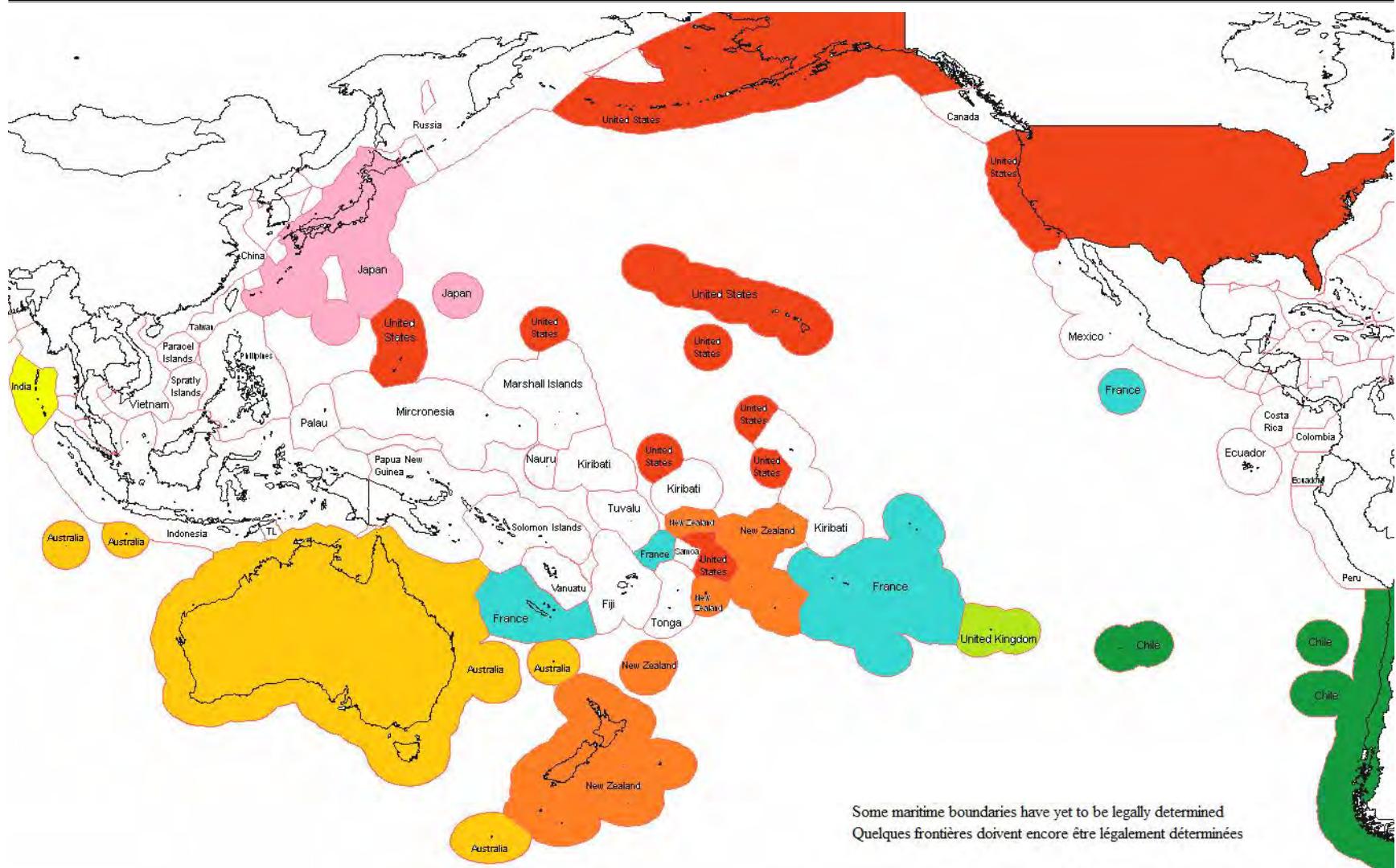
Before and after satellite images taken in August 2014 and January 2015 show the emergence of a large island at Fiery Cross Reef in the South China Sea's Spratly Islands. China is building a number of artificial islands in the hotly disputed body of water.

CNES 2014/Distribution Airbus DS/IHS

‘Third Island Chain’ «troisième chaîne insulaire»







Sous-marins vendus par DCNS à l'Australie : les coulisses d'un contrat « historique »

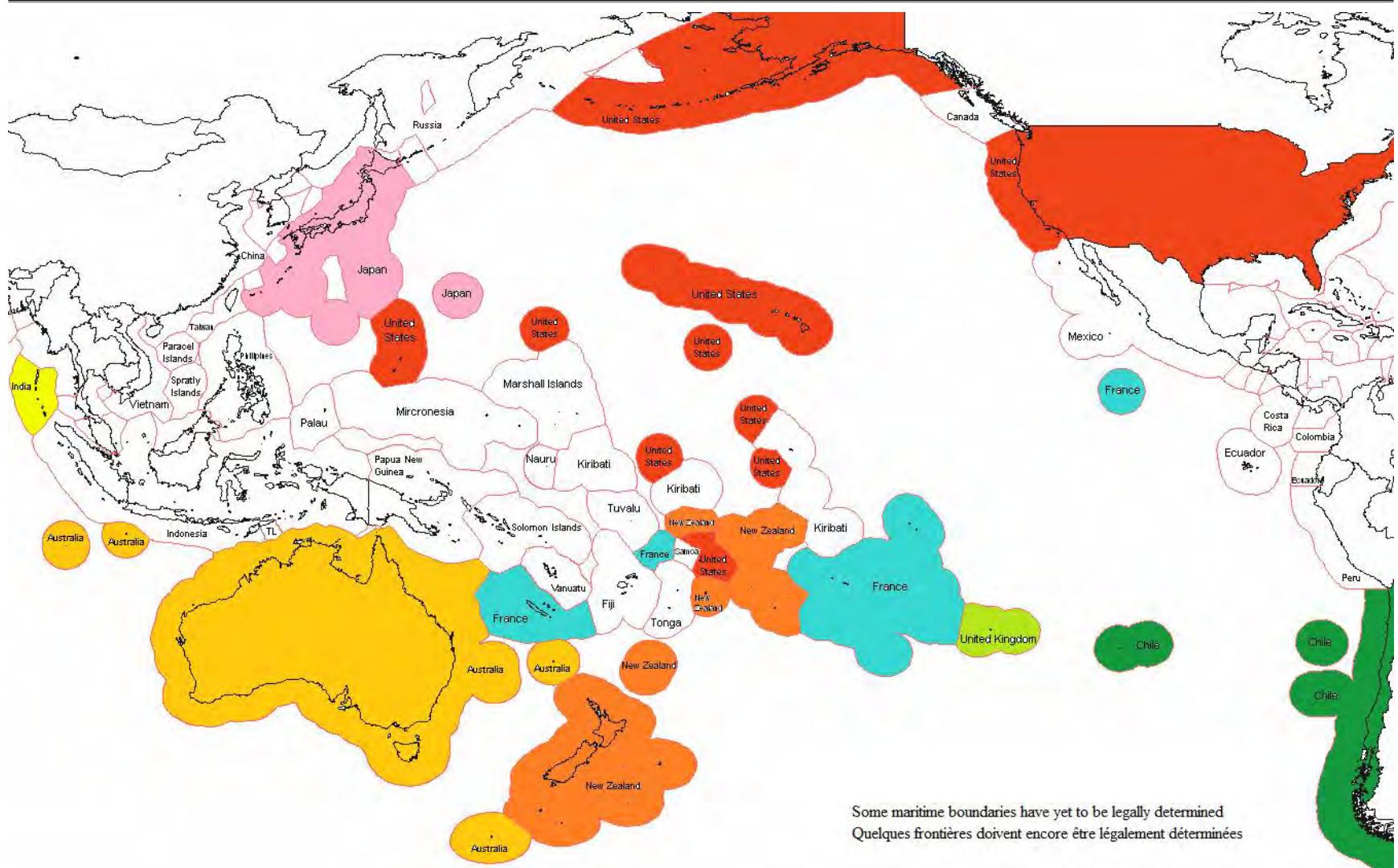
LE MONDE | 26.04.2016 à 04h46 • Mis à jour le 26.04.2016 à 17h45

Par Dominique Gallois et Caroline Taïx (Sydney, correspondance)

AA [f](#) [t](#) [g+](#) [in](#) [p](#)



Les sous-marins australiens Collins seront bientôt remplacés. | CPOIS DAVID CONNOLLY / AFP



« Comment la France a coulé le rêve sous-marin du Japon »

REUTERS

How France sank Japan's \$40 billion Australian submarine dream

POLITICS SPECIAL REPORTS

| Fri Apr 29, 2016 | 10:12am EDT

How France sank Japan's \$40 billion Australian submarine dream



Oceania/Océanie

- 14 Pacific Island Countries / 14 pays du Pacifique
- 10-12 million population / 10-12 millions d'habitants
- 1/6th planet's surface / 1/6ème surface de la planète
- Largely peaceful, relatively educated / Largement paisible, relativement instruit
- Mostly English/French speaking / Surtout anglophone/francophone
- Were solidly 'West' friendly, now looking for friends / Étaient solidement «West» amical, maintenant à la recherche d'amis



NZ 'Britain's eyes and ears in the Pacific'

By Audrey Young

5:15 AM Thursday Mar 30, 2006



0



+1

0



New Zealand will increasingly become the ears and eyes for Britain in the region as Britain's presence wanes and China's increases, respective Prime Ministers Tony Blair and Helen Clark indicated yesterday.

And the communication will be formalised in a new annual security dialogue – at present at senior official level – that the pair signed off on during bilateral talks in Auckland.

The first will be held in London later in the year and involve senior Foreign Affairs officials.

Mr Blair and his wife, Cherie, left for Indonesia last night.

While there was no powhiri on his entry to New Zealand, Mr Blair was given one by school children in Mangere shortly before leaving.

Mr Blair and Helen Clark held a press conference after their talks at which Mr Blair said it was important that Britain had "a friend in this region who can help and advise us on the regional issues that are of immense importance".

Speaking to the Herald last night, Helen Clark would not accept the label of "deputy" in the way that Australia wears it in relation to the United States.

"A friend in the region would be a reasonable description."

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China in Oceania / Chine en Océanie

- Strategic positioning? Brick in Pacific Wall, stepping stone to Indian Ocean/South America. Potential dual/triple use installations? Positionnement stratégique? Brique dans le mur du Pacifique, tremplin vers l'océan Indien / Amérique du Sud. Installations potentielles d'utilisation double / triple?
- Seabed mining, fisheries, satellite launch slots, etc. Exploitation minière des fonds marins, pêche, lancement de satellites, etc.
- Former USPACOM Chief Admiral Samuel Locklear : **"Five trillion dollars of commerce rides on the (Asia Pacific) sea lanes each year, and you people are sitting right in the middle of it."** L'ancien amiral Samuel Locklear de l'USPACOM: "Chaque année, cinq mille milliards de dollars de commerce circulent sur les routes maritimes (Asie-Pacifique), et vous êtes assis au beau milieu de la mer."
- China has people on the ground. Many others rely on Canberra and Wellington for guidance. La Chine a des gens sur le terrain. Beaucoup d'autres comptent sur Canberra et Wellington pour les guider.



« La Chine heureuse d'aider Fidji à établir une nouvelle base navale »

China Happy To Help Fiji Set Up A New Navy Base



The Chinese Ambassador to Fiji, His Excellency Zhang Ping, (LEFT) and Prime Minister Voreqe Bainimarama look through the photographs at the Grand Pacific Hotel yesterday. PHOTO JONA KONATACI.

« Le passé lié à l'espionnage du législateur néo-zélandais suscite des inquiétudes à propos de la Chine »

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The New York Times

A New Zealand Lawmaker's Spy-Linked Past Raises Alarms on China's Reach

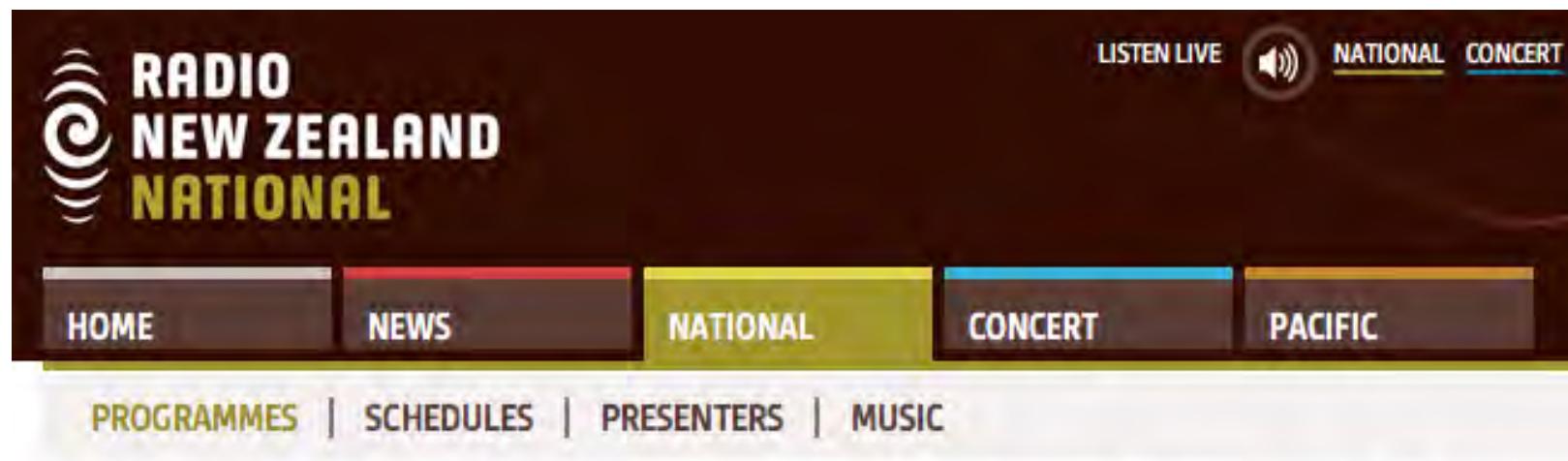
[查看简体中文版](#) | [查看繁體中文版](#)

By CHARLOTTE GRAHAM OCT. 4, 2017



Jian Yang, a New Zealand lawmaker born in China, at a news conference in Auckland, New Zealand, last month. A recent investigation revealed that he had taught spies in China in the 1980s and '90s.

« Les îles Salomon accusent la Nouvelle-Zélande de transmettre des informations d'espionnage à la Chine »



The image shows the header of the Radio New Zealand National website. It features the 'RADIO NEW ZEALAND NATIONAL' logo on the left. On the right, there are buttons for 'LISTEN LIVE' (with a speaker icon), 'NATIONAL' (underlined in yellow), and 'CONCERT'. Below the logo is a navigation bar with five tabs: 'HOME', 'NEWS' (highlighted with a red bar), 'NATIONAL', 'CONCERT', and 'PACIFIC'. Underneath the navigation bar are links for 'PROGRAMMES', 'SCHEDULES', 'PRESENTERS', and 'MUSIC'.

Solomon Islands accuse NZ of passing spy info to China

Updated at 7:25 am on 22 March 2015



Originally aired on Sunday Morning, Sunday 22 March 2015

Former officials in the Solomon Islands' Prime Minister's Office accuse New Zealand of passing on information about the Solomons to China, in the wake of spying revelations.

China in France / La Chine en France



PACIFIC

China talks look at Tahiti as link to South America

6:33 pm on 10 July 2013

A senior advisor of the French Polynesian government says talks have been held with China to explore the viability of using Tahiti as a transit point for air travel to South America.



PACIFIC

Tahiti to ease visa terms for Chinese

1:38 pm on 26 May 2014

The French Polynesian government says visa requirements for Chinese passport holders are about to be lifted for those staying less than 15 days.



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PACIFIC / FRENCH POLYNESIA

Aquaculture project launched in Hao in French Polynesia

1:38 pm on 8 May 2015

Share this

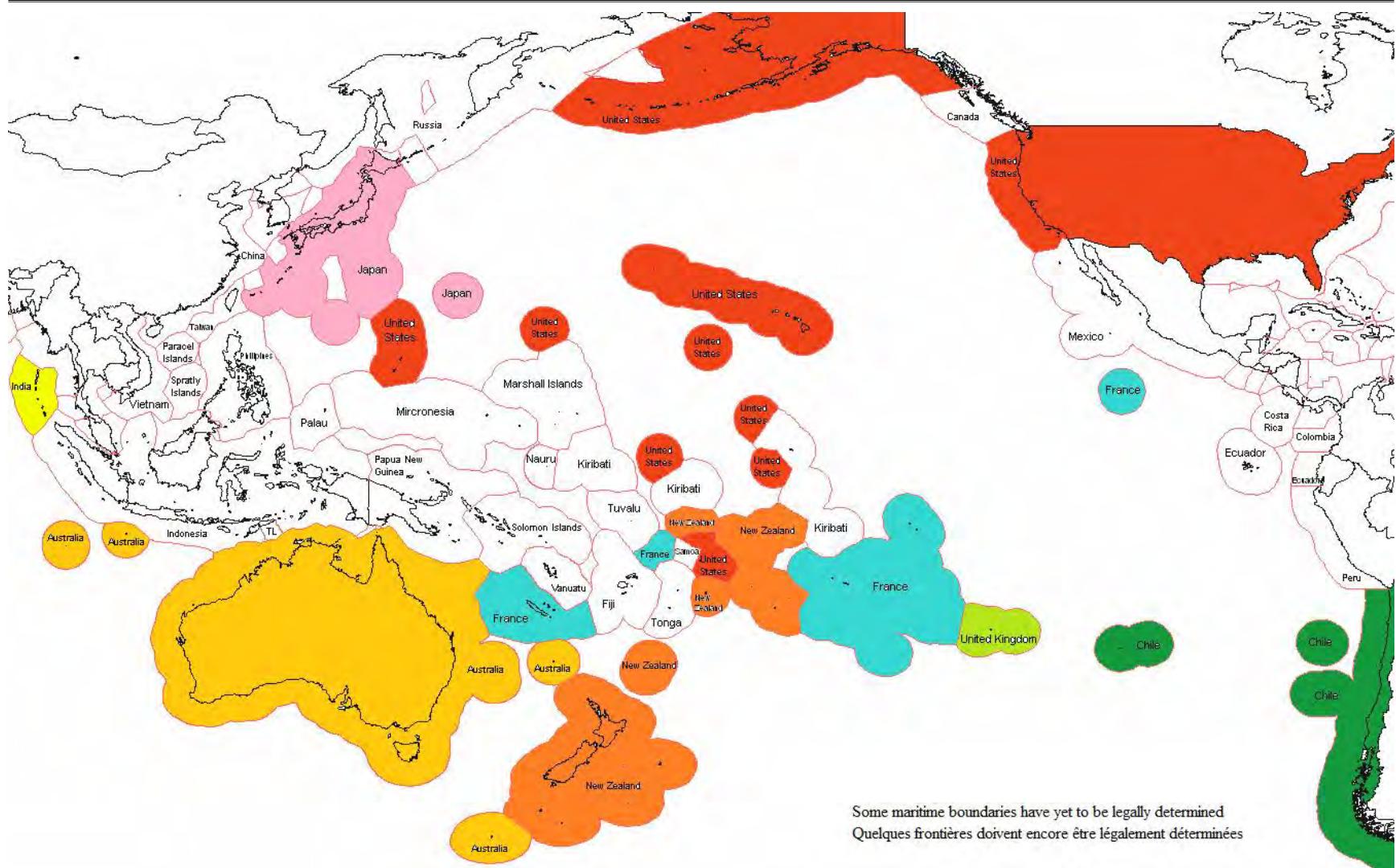
The French Polynesian government and Chinese investors have formally launched a massive aquaculture project on Hao atoll, expected to cost 1.5 billion US dollars.



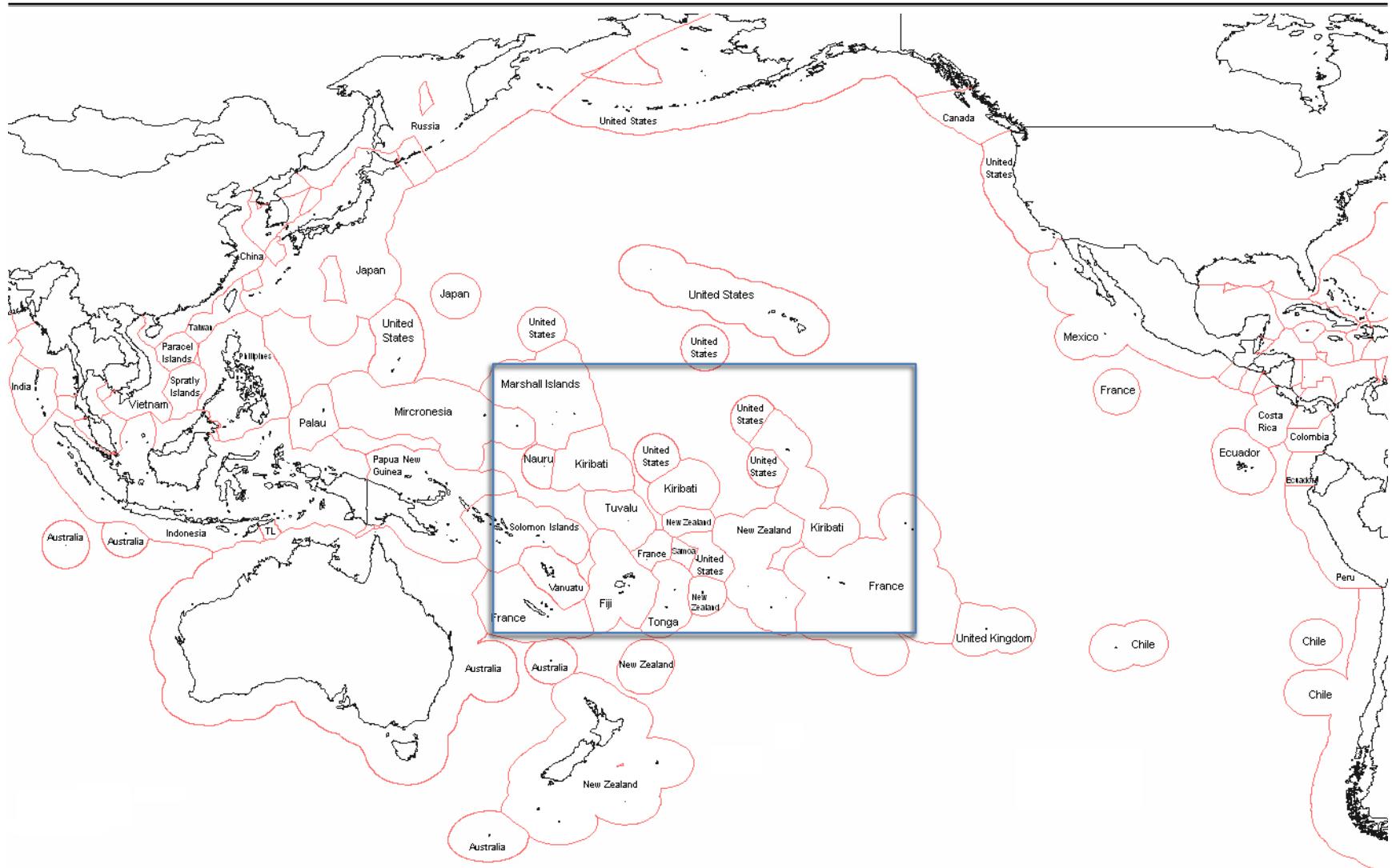
Jiansan Jia, deputy director of the Fisheries and Aquaculture Department at the United Nations, and President of Tahiti Nui Ocean Foods Wann Ohann. Photo: RNZ / AP

At least 3 Yuan Wang class tracking ships visit Tahiti in 5 years / Au moins 3 visites de classe Wang Yuan à Tahiti en 5 ans

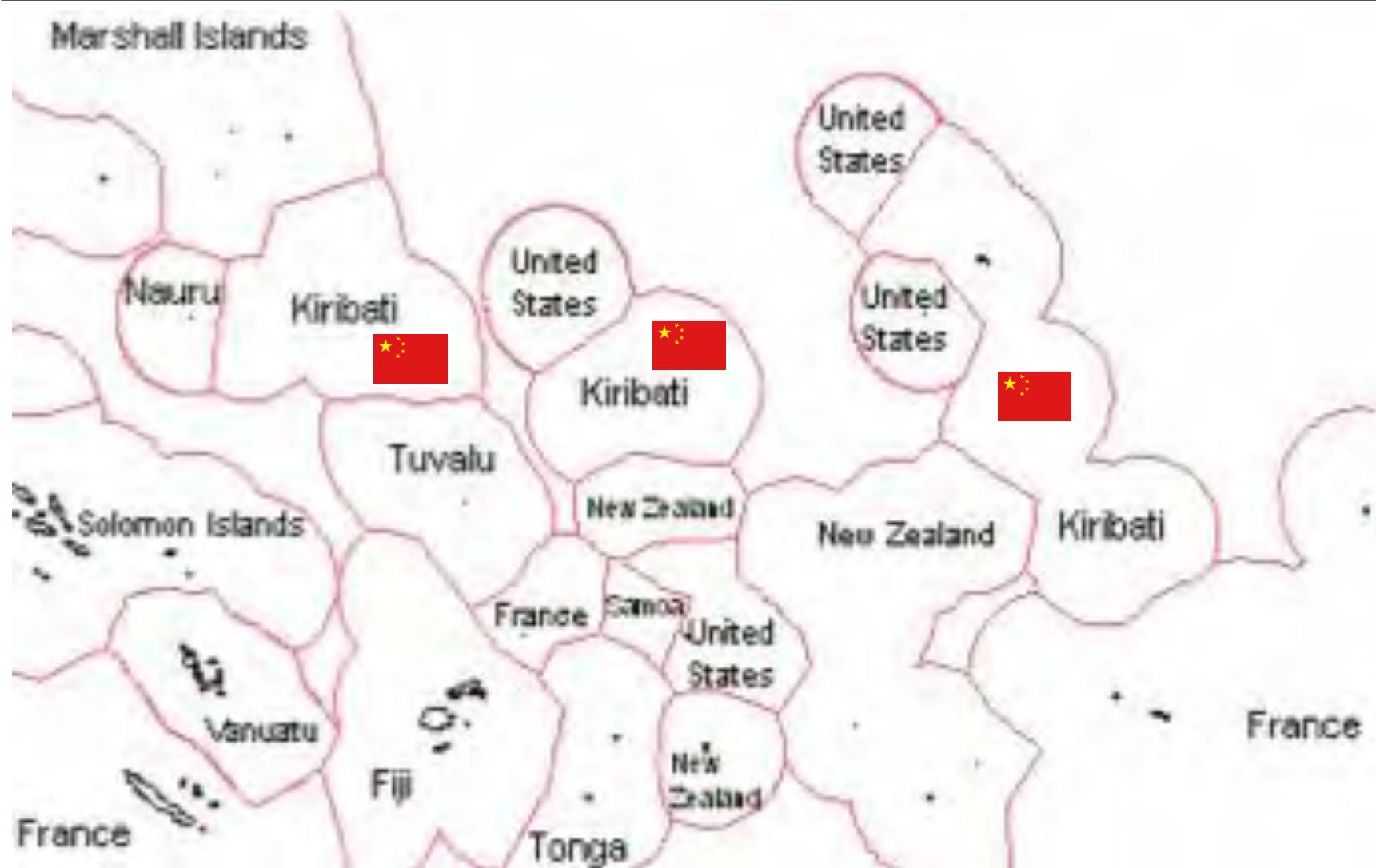




3 geos in action / 3 géos en action



2002: geopolitical/que



China Dismantling Pacific Station In Row Over Taiwan Recognition

Auckland (AFP) Nov 27, 2003

Chinese technicians were dismantling a satellite tracking station in the mid-Pacific nation of Kiribati, state-owned radio reported, after the country opened diplomatic ties with Taiwan.

Radio Kiribati said a Chinese ship had arrived in Tarawa Tuesday and workers were dismantling the satellite station, on the eastern end of the island, which Beijing has maintained since 1997.

Government officials could not be reached for confirmation.

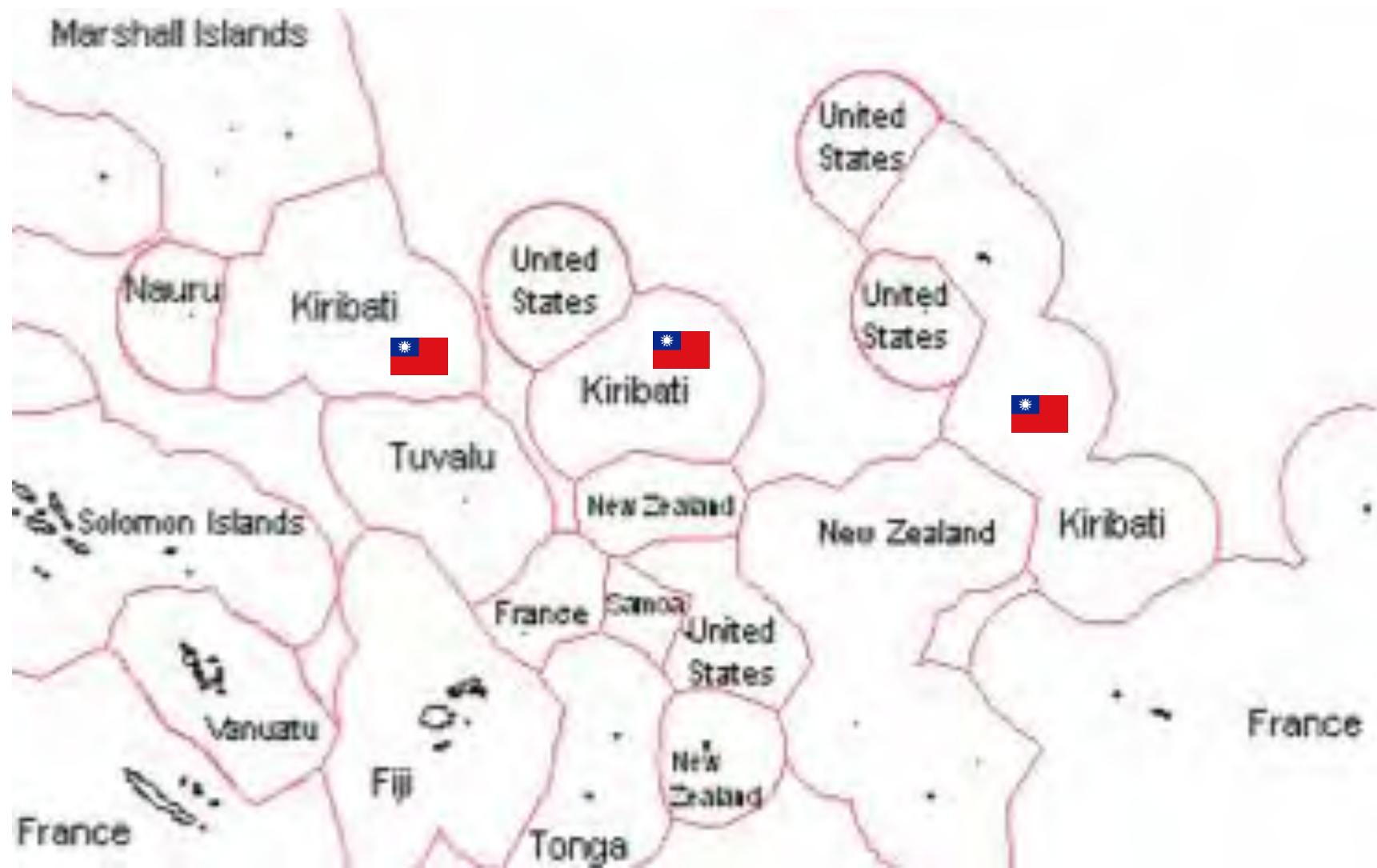
Kiribati President Anote Tong earlier this month announced his country was opening diplomatic ties with Taiwan, sparking protests from China, which regards Taiwan as a renegade province.

China continues to maintain its mission on Tarawa but its ambassador Ma Shuxue told Radio Kiribati that Beijing would suspend relations next week if ties were maintained with Taiwan.



China and Taiwan continue to do battle for recognition among Pacific islands offering money and assistance in return for diplomatic recognition.

2003: geopolitical/que



2018: geopolitical + geoeconomic + geophysical

Les îles Kiribati vont-elles déménager aux Fidji ?

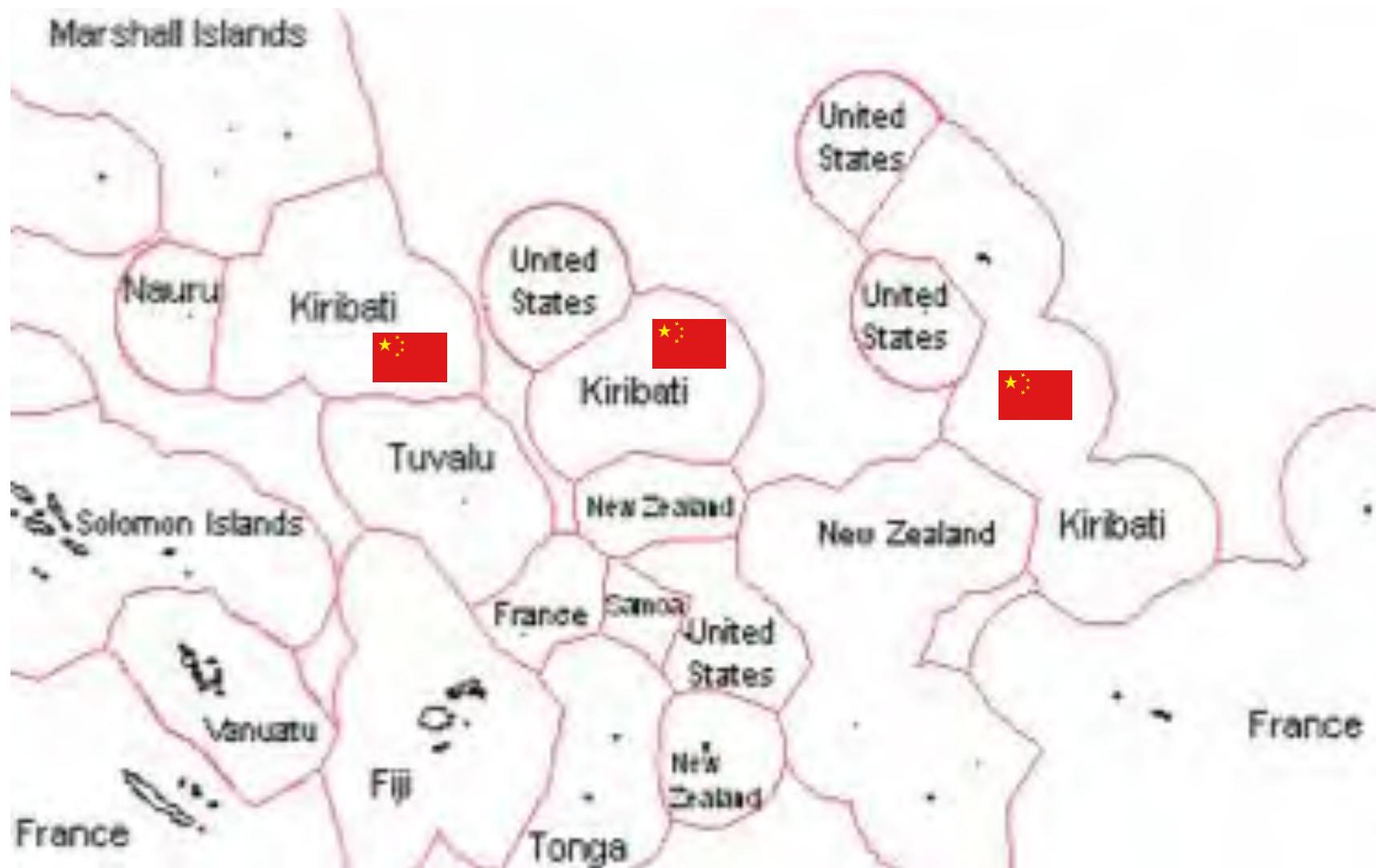
Le président de cet État d'Océanie cherche une terre d'accueil pour ses habitants, menacés par la montée des eaux.

PAR LOUISE CUNEO

Modifié le 09/03/2012 à 10:58 - Publié le 08/03/2012 à 12:44 | Le Point.fr



Future?

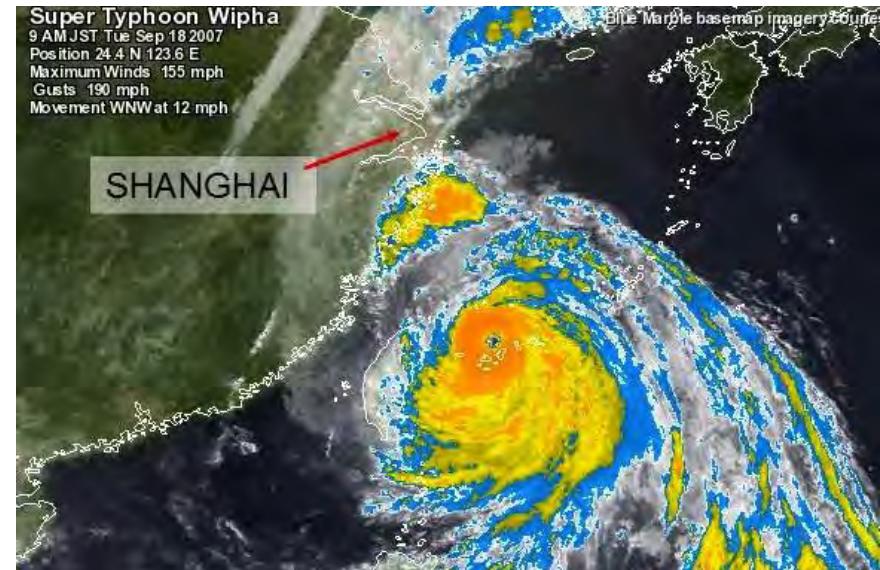


Shanghai



Evacuations From China's South-Eastern Coast / Evacuations de la côte sud-est de la Chine

- 2005 (July), Typhoon Haitang.
 - Around 1,000,000 evacuated.
- 2005 (September), Typhoon Talim.
 - Over 790,000 evacuated from.
- 2006 (May), Typhoon Chanchu.
 - Over 1,000,000 evacuated
- 2006 (July), Typhoon Bilis.
 - Around 320,000 evacuated
- 2007 (September), Typhoon Wipha.
 - Around 2,000,000 evacuated
- 2007 (October), Typhoon Krosa.
 - Over 1,400,000 evacuated
- 2008 (July), Typhoon Fung-Wong.
 - Around 600,000 evacuated
- 2008 (September), Typhoon Sinlaku.
 - Around 460,000 evacuated
- 2009 (August), Typhoon Morakot.
 - Around 1,000,000 evacuated
- 2010, Typhoon Megi.
 - Around 270,000 evacuated from
- 2011 (August), Typhoon Muifa.
 - Around 1.35 million evacuated
 - **Dailan chemical plant toxic waste containment pool breached, leading to demonstrations and political unrest.**
- 2012 (August), Typhoons Saola and Damrey
 - Around 867,000 people evacuated
- 2012 (August), Typhoon Haikui
 - Almost 2 million people evacuated
- 2013 (August), Typhoon Utor
 - Shut down Hong Kong, sunk cargo ship, affected veg prices.
- 2014 (July) **Super Typhoon** Rammasun
 - Over 700,000 evacuated
- 2015 (July), Typhoon Chan-Hom
 - Over a million evacuated



Geography makes history...

But environmental change is
remaking geography

La géographie fait l'histoire ...

Mais le changement
environnemental est en train
de refaire la géographie



Thank you Merci
