



# Twilight Panel:

## Grounding of the Solomon Trader (or) *Canary Dies in Bauxite Mine*

Chair

Prof Jennifer Corrin, UQ Solomon Islands Partnership

Panel

Assoc Prof Ian Tibbetts School of Biological Sciences, UQ

Mr Stefan Armbruster, SBS News and Current Affairs

Prof Craig Forrest, TC Bierne School of Law, UQ



# Approach

Ian – Geography, geology and demography

Stefan – The incident

Craig – The legal position

Ian – Causes and effects

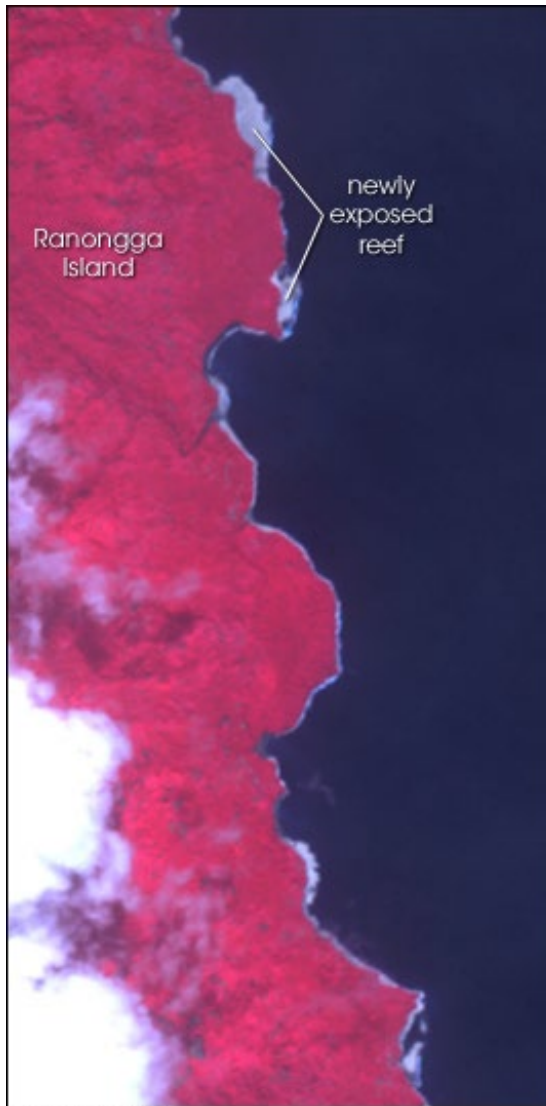
# Penrhyn Atoll – Cook Islands



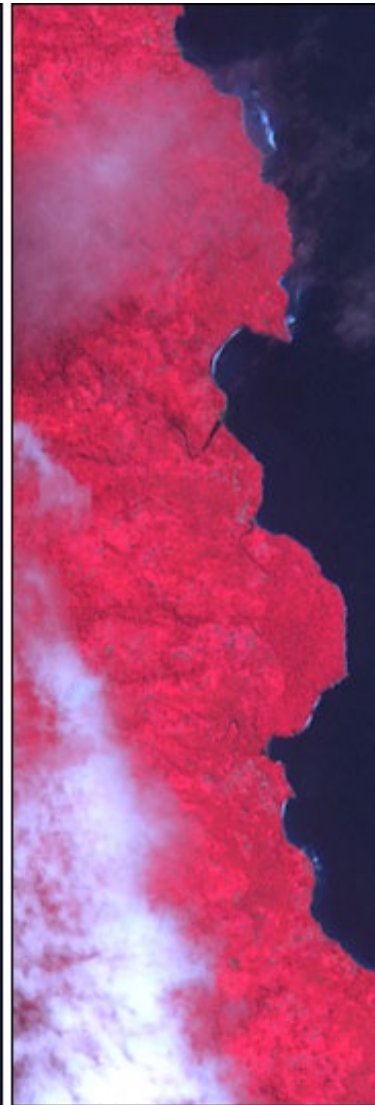
By EwanSmith - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=6387424>



# Ranongga Island after an 8.1 earthquake



April 12, 2007

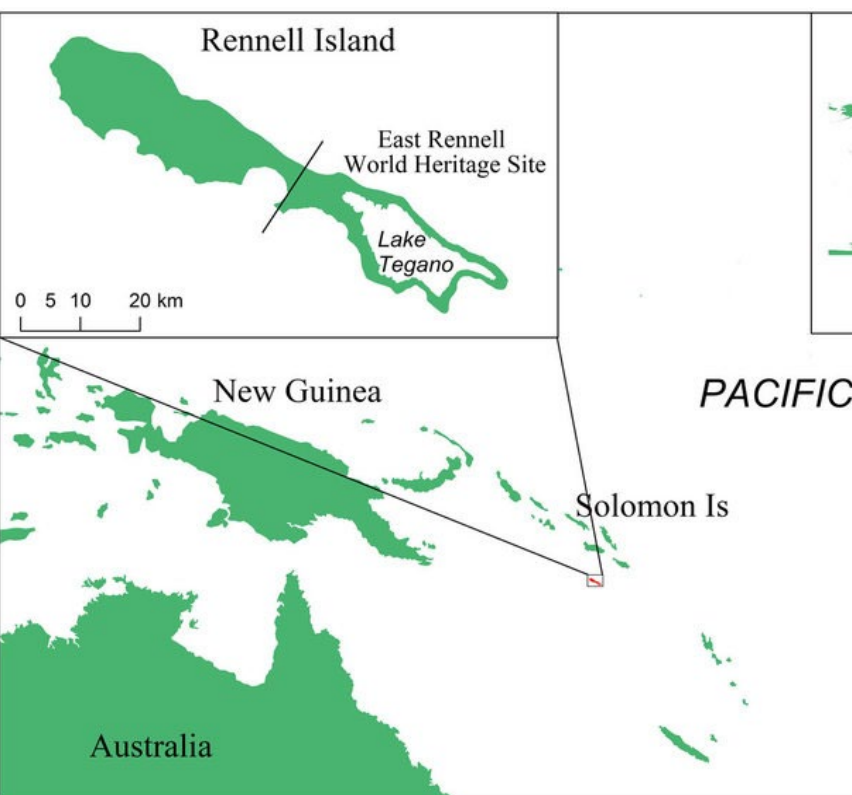


March 31, 2006



Image credits - Simon Albert

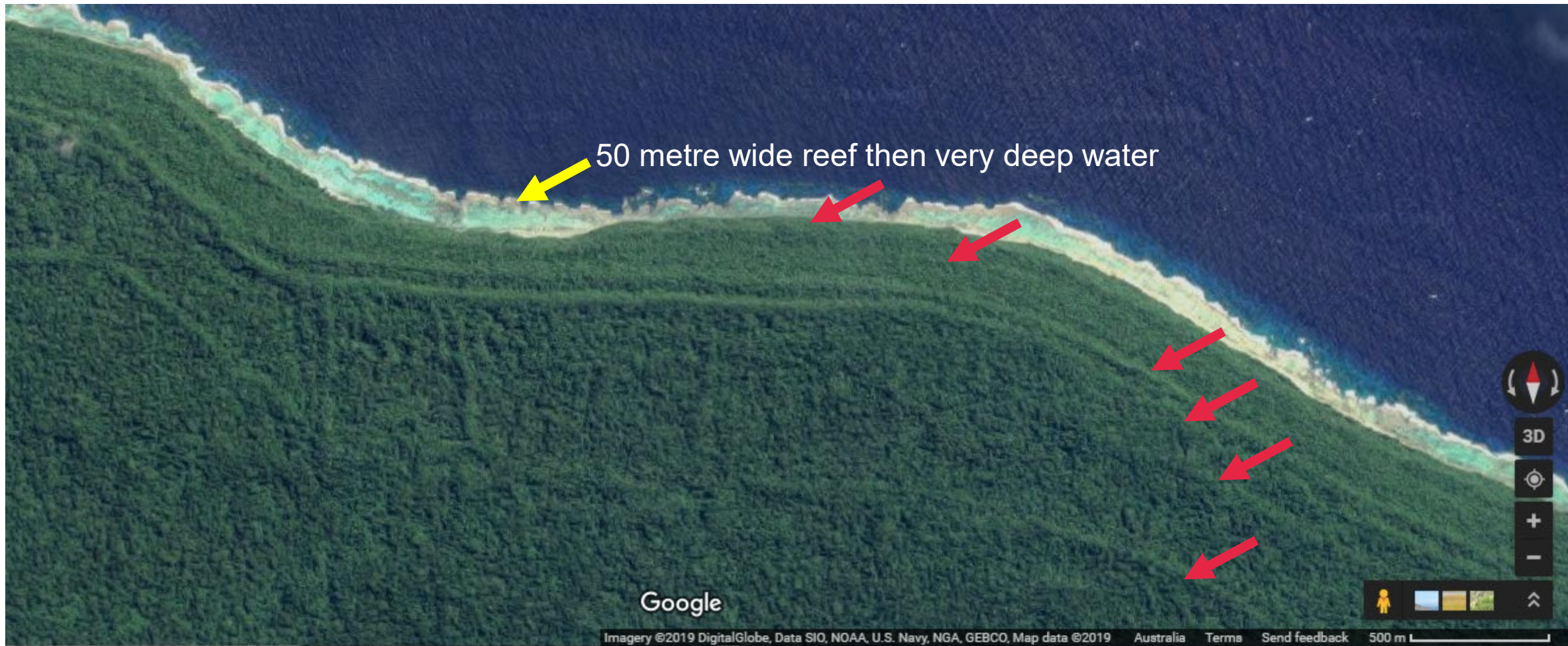
# Rennell Island



from Wang M et al (2018). Monitoring vegetation dynamics in East Rennell Island World Heritage Site using multi-sensor and multi-temporal remote sensing data. International Journal of Digital Earth. 1-17. 10.1080/17538947.2018.1523955.



# An uplifted atoll



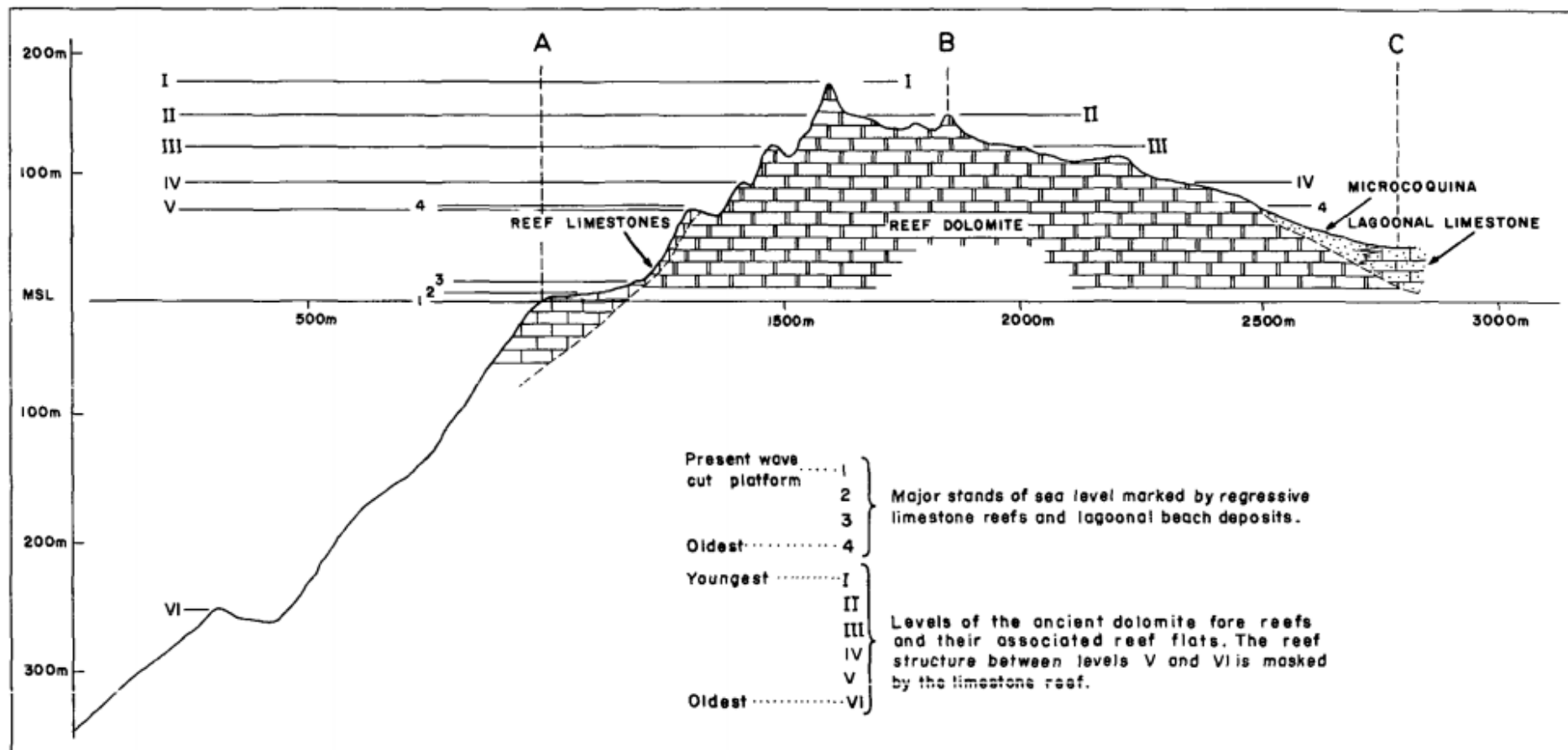
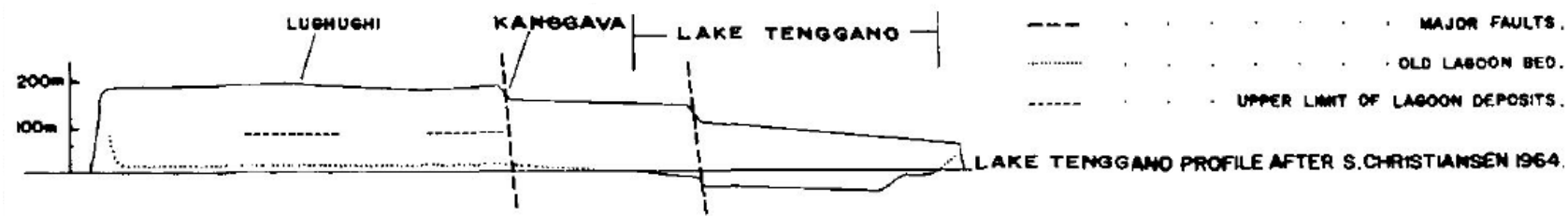
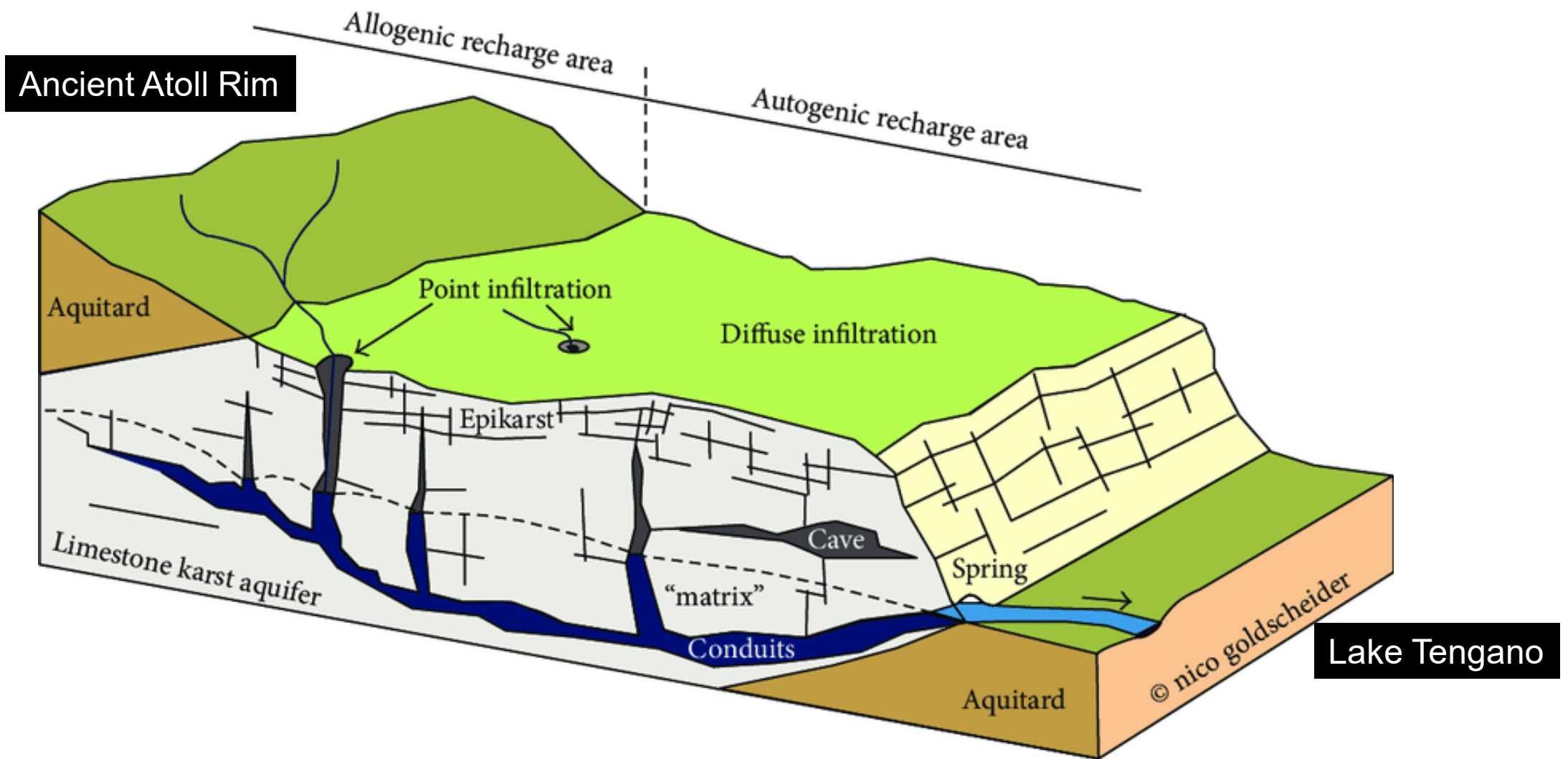


Figure 6. Lughughi Bay—Geological profile (vertical exaggeration  $\times 2\frac{1}{2}$ ).



Taylor GR (1973) GSA Bulletin 84: 2795-2806



Atangana, A (2014). A modified groundwater flow model using the space time Riemann-Liouville Fractional Derivatives Approximation. *Abstract and Applied Analysis*. 2014. 8. 10.1155/2014/498381.



## Steep drop offs surround 95% of Rennell



© Kristyna Zvaritch

# Island and People of Rennell

86km long and 15km wide

250km south of Honiara

Rennell is the largest raised atoll in the world

Lake Tengano at 15,000ha is the largest lake in the insular Pacific

Polynesian outlier populated from New Caledonia region

Population ca 2000

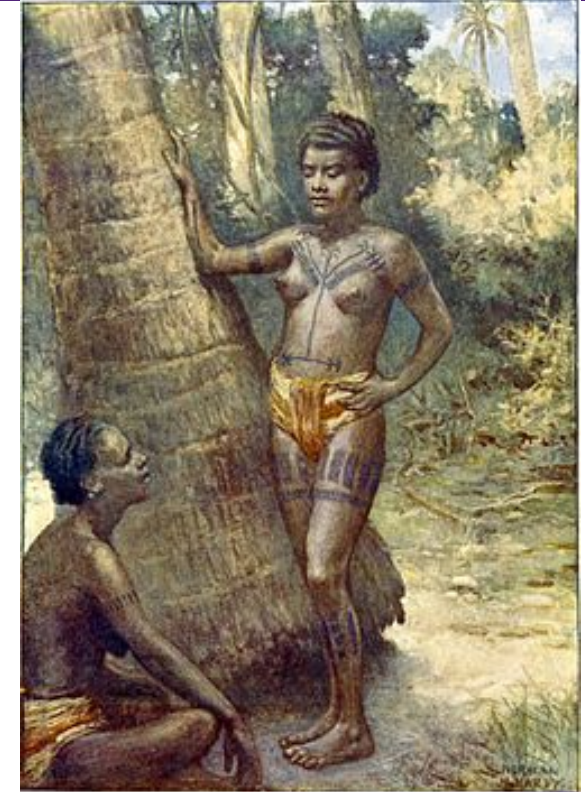
Provincial capital: Tigoa (popn 170)

Religion: SSEC in the east and SDA in the west

Medical: 2 basic clinics

Industry: logging and mining (bauxite)

Subsistence: gardens, Lake Tengano fish (tilapia and eels), marine fish and shellfish



Norman H Hardy's Tattooed women of Rennell Island, 1911.



Munch-Petersen N.F. (2011) *An Island Saved in Island Futures*. Global Environmental Studies.

Food from gardens and fishing, supplemented by hunting and collecting.

Yams, taro, tannia and sweet potatoes and coconut important for nutrients and raw material.

Women cook and garden, fishing inshore (on the narrow reef), plaiting, making nets, and caring for young children.

Men do the heavy gardening, catch coconut crabs, fish, make cordage, and are responsible for canoe making and house building.







© Simon Albert

## Kagava Bay

- White beaches
- Shallow fringing reef
- Great snorkelling

## Lake Tengano

- Brackish
- Fish rich
- Vulnerable



Tengano Lake - © R. Bourdeix, 2018

# Stefan (The Event)











<https://www.sbs.com.au/news/ship-owner-sorry-for-solomons-oil-spill-amid-liability-concerns>

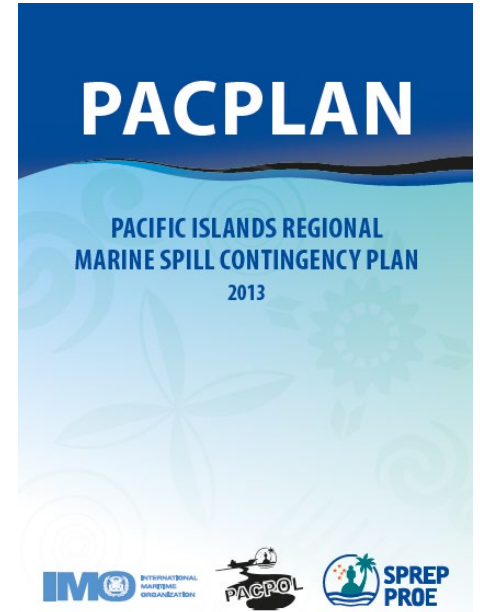
<https://www.newshub.co.nz/home/world/2019/03/exclusive-solomon-islanders-feel-forgotten-after-devastating-oil-spill.html>



# Craig (The Legal Position)

# Pacific Pollution Plan (PACPLAN)

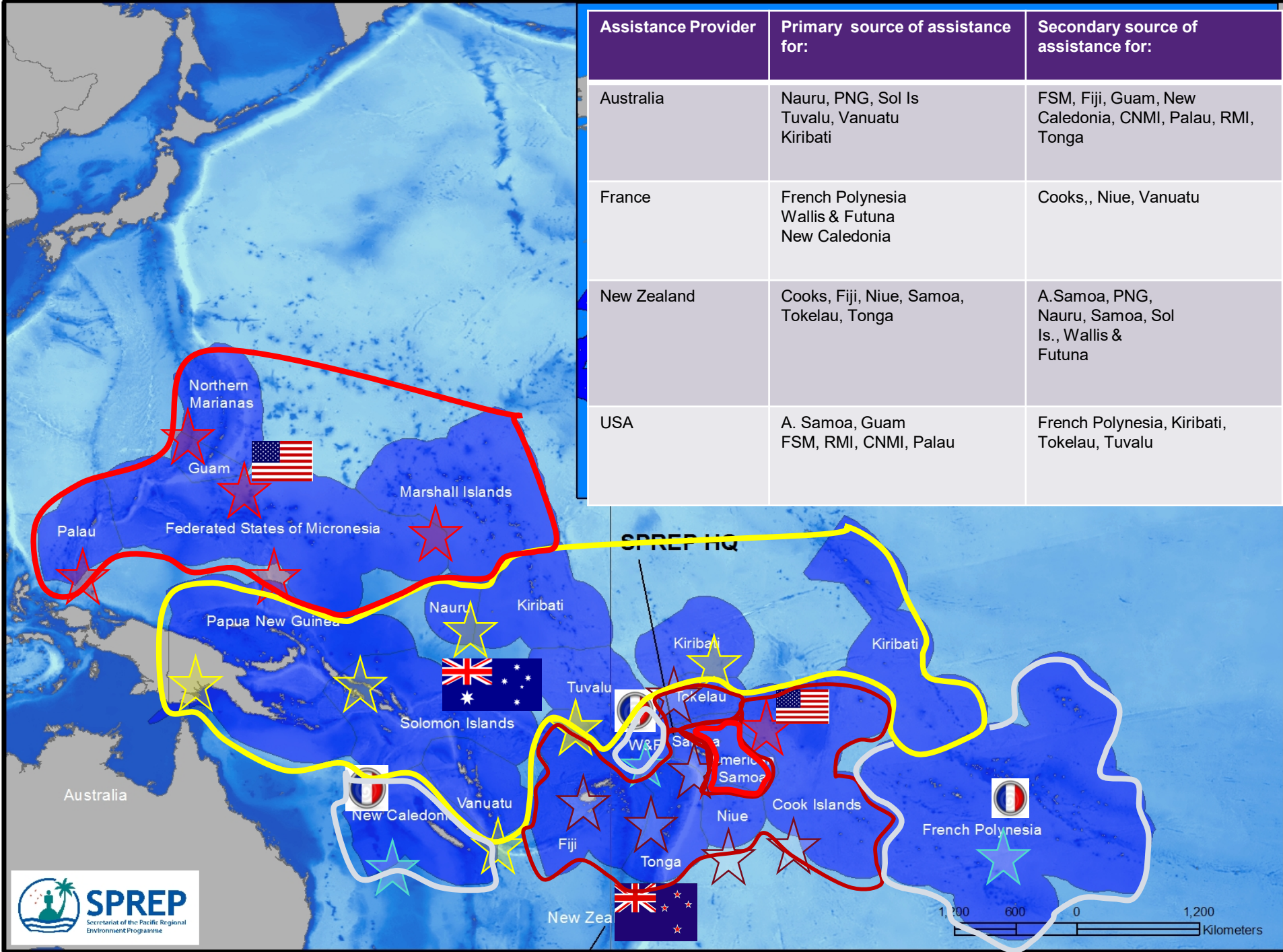
A SPREP (South Pacific Regional Environment Plan) with the AIM to prevent/minimise damage to marine and coastal environments and resources from marine spills, and to provide systems, frameworks and guidelines to assist with response and recovery of the environment and resources damaged by marine spills in the Pacific islands region.



# Pacific Pollution Plan (PACPLAN)

- Plan to foster cooperation, training, detection and reporting of oil spills
- Outlines the mechanism and procedures by which SPREP island members (Solomon Islands) may request assistance from each other, from SPREP metropolitan members (Australia) or from industry (**assistance from Australia**)
- Facilitate actions and cooperation consistent with the Noumea Pollution Protocol 1986, the OPRC Convention and the OPRC-HNS Protocol at the operational level by all SPREP members (**in context of existing international law**)
- Provides guidance for the recovery of costs of responding to marine spills (**with provisions for cost recovery by those providing assistance**)





# International Pollution Laws

- 1969 Intervention on the High seas (1973 Protocol)
- 1973/1978 MARPOL Convention
- 1990 Oil Pollution Preparedness, Response and Co-operation
- 1969/1992 CLC Convention (Civil Liability for Oil Pollution)
- 1971/1992 Fund Convention for Oil Pollution
- 1996/2010 Hazardous and Noxious Substances Convention
- **2001 Bunker Convention**
- 2007 Wreck Removal Convention

# International Conventions

| As at May 2018   | INTERVENTION Convention 69 | INTERVENTION Protocol 73 | CLC Convention 69 | CLC Protocol 76 | CLC Protocol 92 | FUND Protocol 76 | FUND Protocol 92 | FUND Protocol 2003 | LLMC Convention 76 | LLMC Protocol 96 | OPRC Convention 90 | Salvage Convention 1989 | HNS Convention 96 | HNS PROT 2010 | OPRC/HNS 2000 | BUNKERS CONVENTION 01 | NAIROBI WRC 2007 | NOUMEA Protocol |
|------------------|----------------------------|--------------------------|-------------------|-----------------|-----------------|------------------|------------------|--------------------|--------------------|------------------|--------------------|-------------------------|-------------------|---------------|---------------|-----------------------|------------------|-----------------|
| Australia        | Y                          | Y                        | d                 | Y               | Y               | Y                | Y                | Y                  | d                  | Y                | Y                  | Y                       |                   |               | Y             | Y                     |                  |                 |
| Kiribati         |                            |                          |                   |                 | Y               |                  | Y                |                    | Y                  |                  |                    | Y                       |                   |               |               | Y                     |                  |                 |
| Nauru            |                            |                          |                   |                 |                 |                  |                  |                    |                    |                  |                    |                         |                   |               |               |                       |                  | Y               |
| Papua New Guinea | Y                          |                          | d                 |                 | Y               |                  | Y                |                    |                    |                  |                    |                         |                   |               |               |                       |                  | Y               |
| Solomon Islands  |                            |                          |                   |                 | Y               |                  |                  |                    |                    |                  |                    |                         |                   |               |               | X                     |                  | Y               |
| Tuvalu           |                            |                          | d                 | Y               | Y               |                  | Y                |                    | Y                  | Y                |                    |                         |                   |               |               | Y                     | Y                |                 |
| Vanuatu          | Y                          | Y                        | d                 | Y               | Y               | Y                | Y                |                    | Y                  |                  | Y                  | Y                       |                   |               | Y             | Y                     |                  |                 |



# Bunker Convention 2001

Three core principles

1. Strict (but limited) liability of ship-owner
2. Compulsory insurance
3. Direct action against insurer

# Bunker Convention 2001

What could have been application to *MV Solomon Trader*

1. No need to prove negligence or some other basis for liability
2. Compulsory insurance (exists in form of P&I club Korea P and I club)
3. Direct action against insurer (action taken directly against P&I club (Korea P and I) rather than shipowner (South Express/King Trader))



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# Causes and Effects (Ian)

# Bauxite and Rennell

Asia Pacific Investment Development (APID) a logging company

Bintan Mining (Indonesia) operates the bauxite (karst bauxite) mine for APID

Solomon Trader was picking up a load of bauxite when it grounded

Chief Joshua Na'siu is the chief of Aba'tai (Abatai) village: "...allowed the company to dig up his gardens to mine for bauxite" (Radio New Zealand, 13 May, 2019)



# Causes and effects

## Causes

- Corrupt progression from logging to mining
- Poor infrastructure
- About 300 tonnes bunker oil, diesel, spread some 600 kilometres away
- Bauxite was dumped from 2 barges into the bay to protect them from the cyclone

## Effects

- Bauxite has contributed to the odious smell, killing fish and marine life
- Loss of gardens
- Loss of forest
- Loss of graves and cultural icons
- Contamination of the aquifer
- Damage to corals, fish and invertebrates

# Bauxite mining



*[Photo: David Maurice Smith for The New York Times]*



*[Photo: Jonathan Danitofea]*

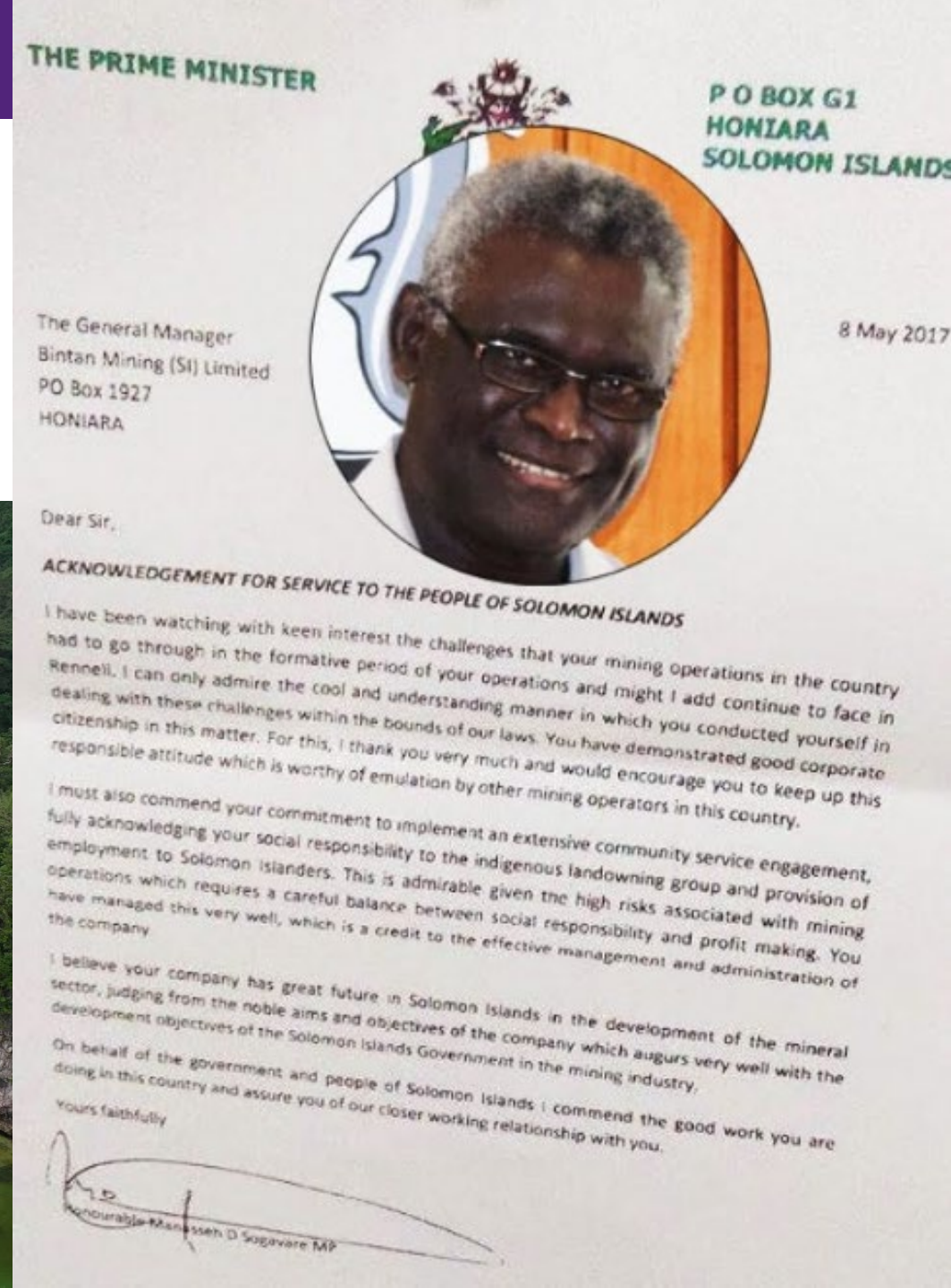


*[Source: Island Sun]*



“Observations from last couple of weeks indicate the reefs are in much worse condition (likely more bauxite-related than oil).

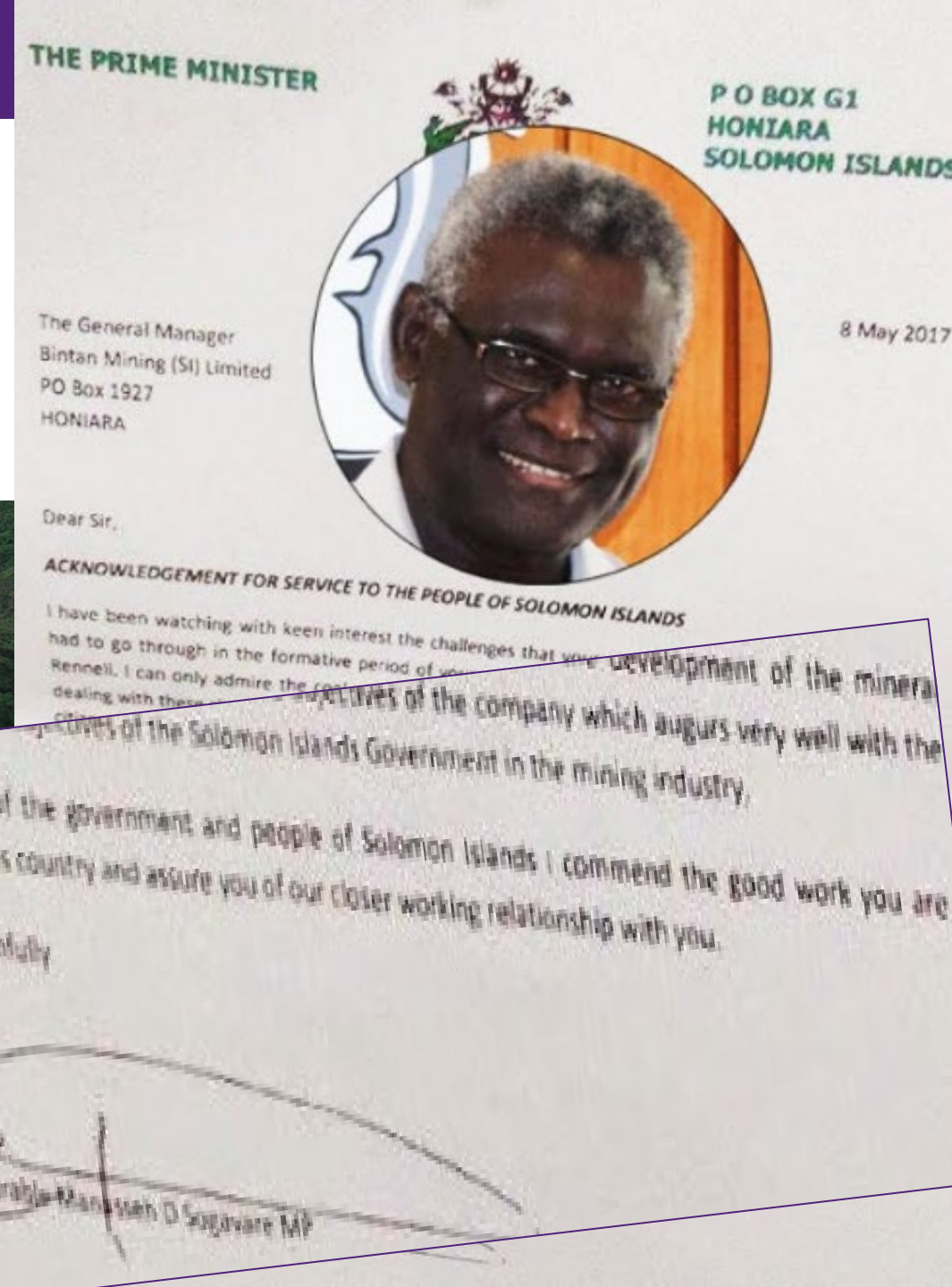
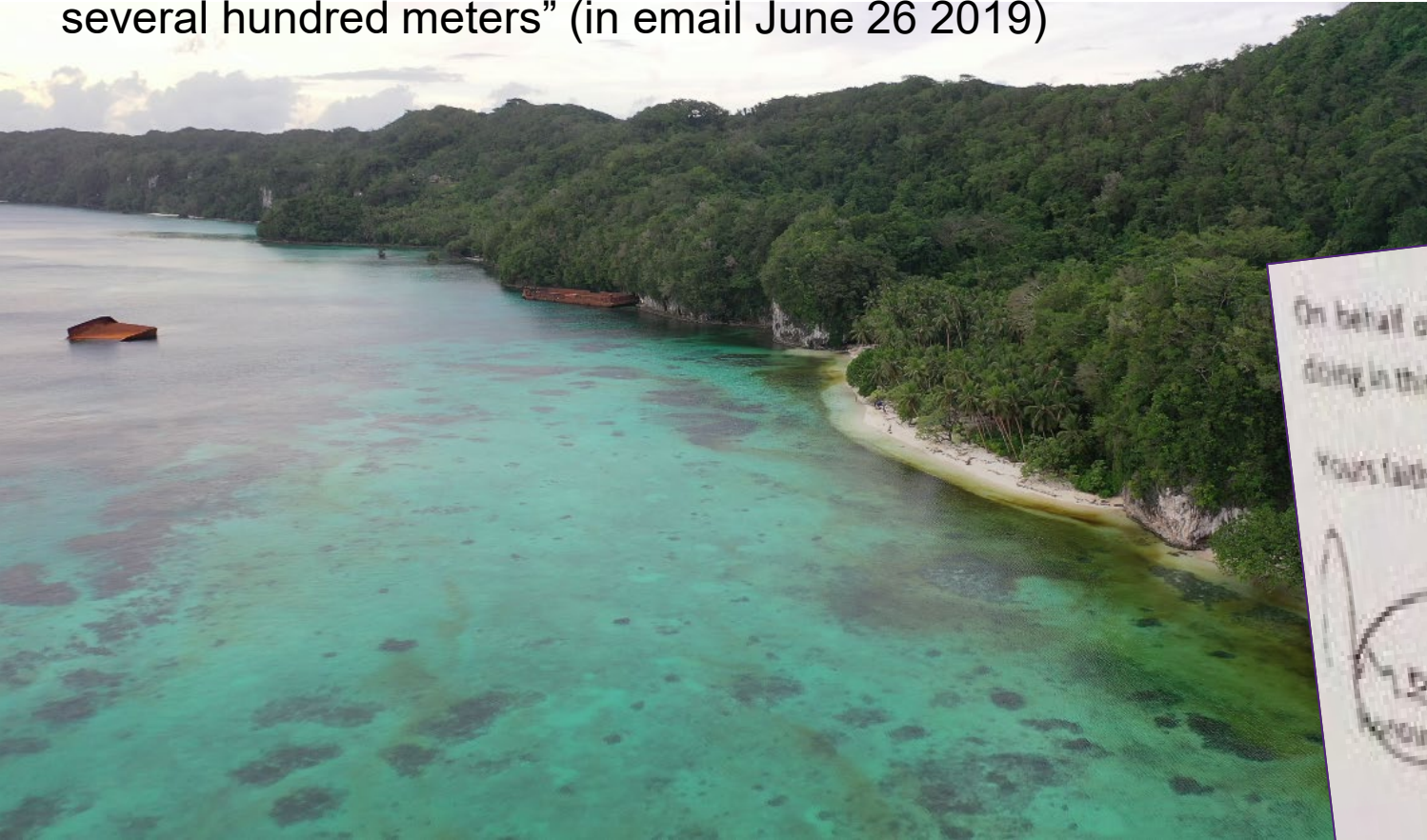
Seems the area has always had a high disturbance regime (cyclones/bleaching?/disease?) but its capacity to bounce back now that algal turf cover substrate etc is diminished. We also found bauxite covering the bay (Kagava) down to several hundred meters” (in email June 26 2019)





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# Are we going to need another canary?

*“Bintan Mining Solomon Islands Limited, the Indonesian company that chartered the vessel, continues to load bauxite with other bulk carriers” (The Guardian, 1 March 2019)*



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- <https://whc.unesco.org/uploads/nominations/854.pdf> (UNESCO WHA East Rennell Nomination 1998)
- [https://reliefweb.int/sites/reliefweb.int/files/resources/RenBel\\_150k\\_topo.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/RenBel_150k_topo.pdf)



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# Thank you

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The End

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