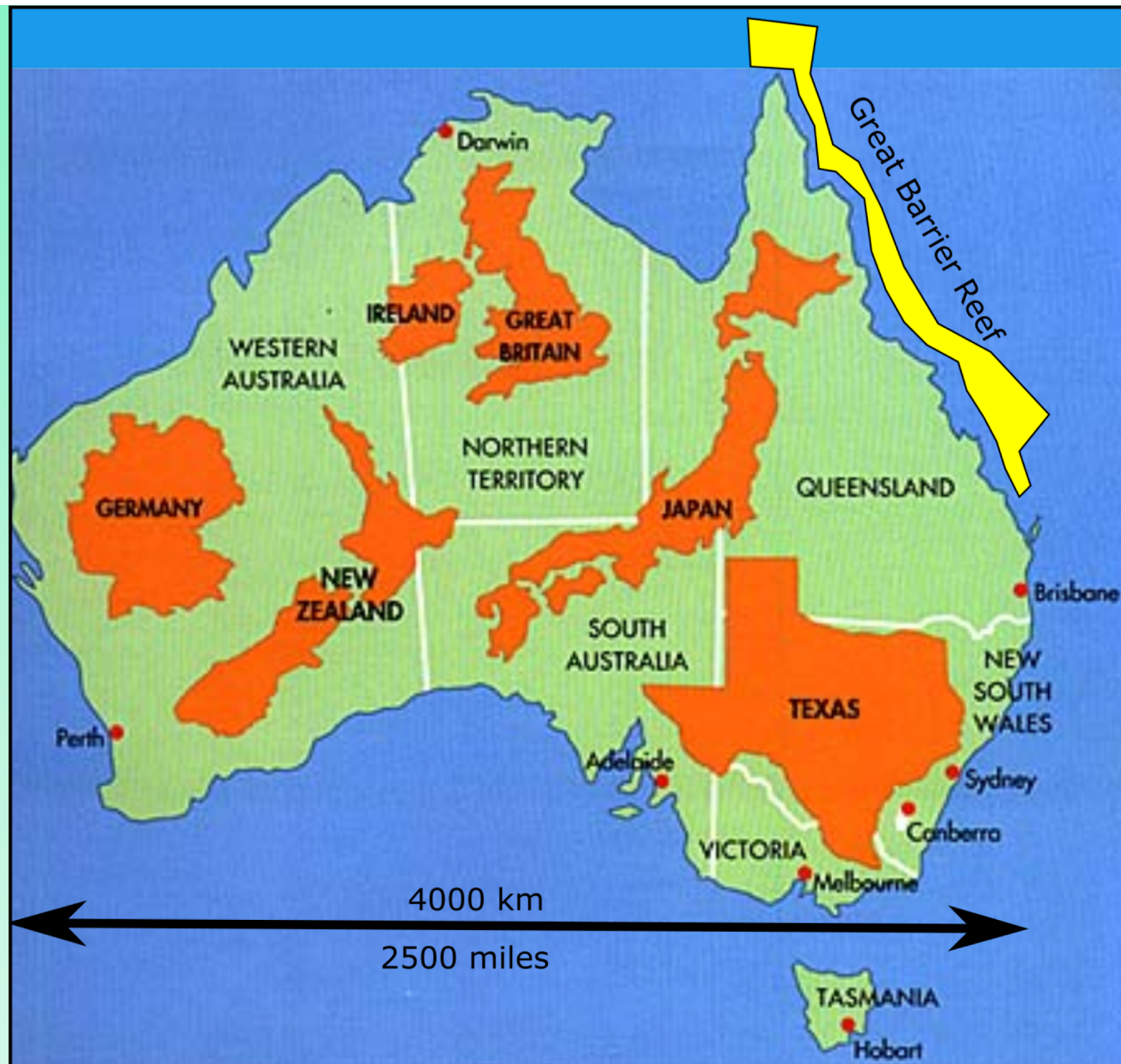


# **Will the Barrier Reef die? About the true condition of the Great Barrier Reef**

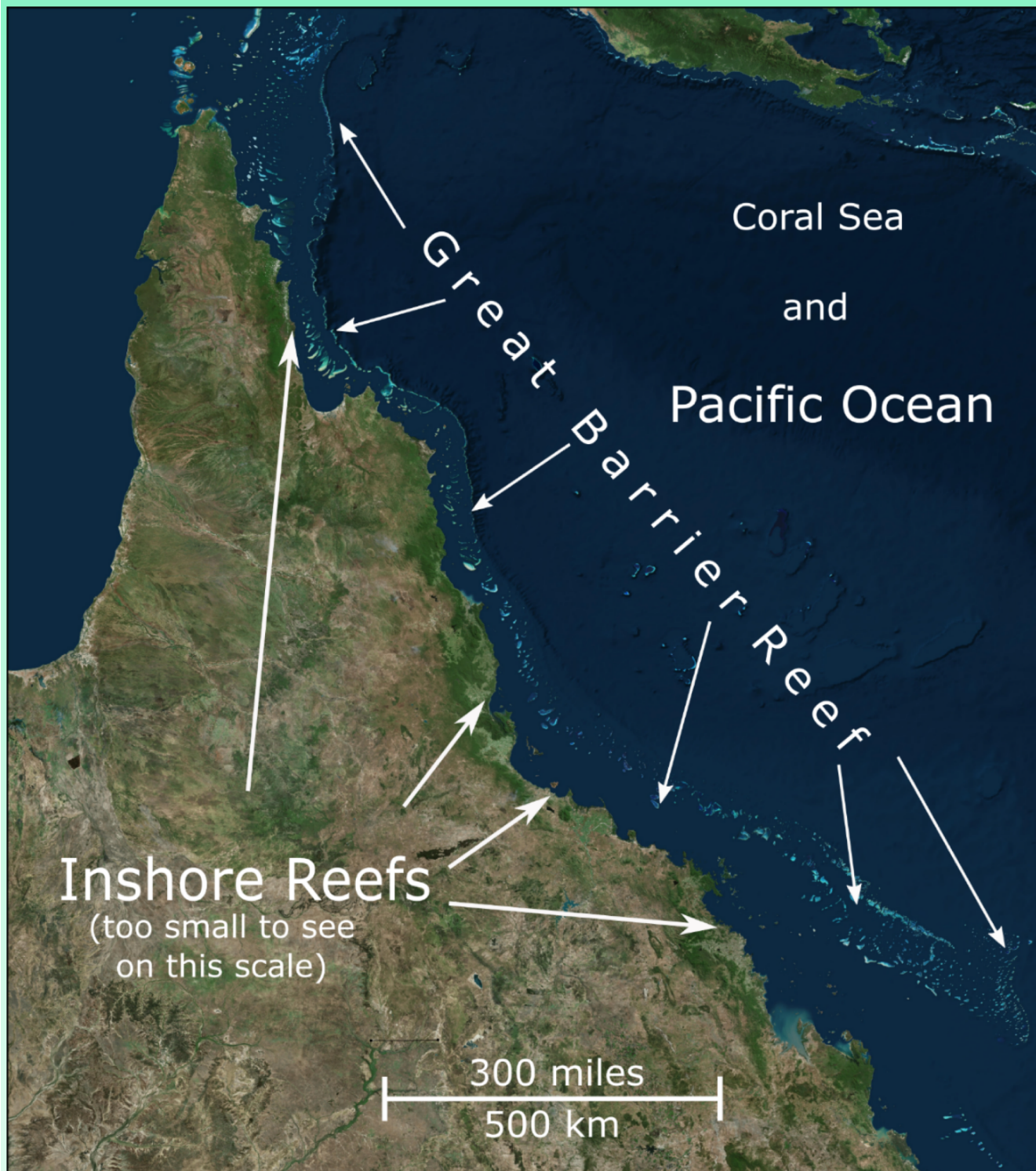
**Peter Ridd  
Institute of Public Affairs**





**How did ‘science’ institutions convince the world the Great Barrier Reef is finished?**





The Reef  
is  
underwater  
and  
hidden.

It is also  
huge

# The New York Times

14/10/20

## *The Great Barrier Reef Has Lost Half Its Corals*

Researchers in Australia blamed climate change for the loss, which they said could diminish critical habitats for fish and other marine life.

# 50% gone



**VIDEO**

GREAT BARRIER REEF

# 2016 sind über 70 Prozent der Korallenbänke verendet

Veröffentlicht am 25.12.2016 | Dauer 1 Min

2016 sind am größten Korallenriff der Welt - dem Great Barrier Reef - über 70 Prozent der Korallenbänke verendet. Das Bremer Leibniz-Zentrum für Marine Tropenökologie arbeitet an einer interessanten Lösung.

# 70% gone



NEWSTICKER

DIE NACHRICHTEN HEUTE: Newsticker, Schlagzeilen und alles, was heute wichtig ist, im Überblick

ZUM NEWSTICKER

WISSENSCHAFT

KORALLEN

# Das Great Barrier Reef stirbt einen bleichen Tod

Veröffentlicht am 20.04.2016

93 Prozent des Great Barrier Reefs vor der Küste Australiens sind von der Korallenbleiche betroffen. Meeresbiologen warnen: Wenn die Wassertemperatur nicht sinkt, ist das Riff nicht zu retten.

dpa/tna

## The Great Barrier Reef dies a pale death

Published on 04/20/2016

Coral bleaching affects 93 percent of the Great Barrier Reef off the coast of Australia. Marine biologists warn: If the water temperature does not drop, the reef cannot be saved.

93%  
Kaput



Daily **Mail**

2/4/2021

## **Is the Great Barrier Reef doomed? Up to 99% of coral is at risk of vanishing by 2025 due to global warming, new report says**

- A new report reveals the Great Barrier Reef is at risk of perishing
- If our planet surpasses 2.7F of warming 70 to 99% of corals will disappear
- However, if Earth increases warming by 3.6F, only one percent will remain
- Researcher say it is 'virtually impossible' to stop the world hitting 2.7F

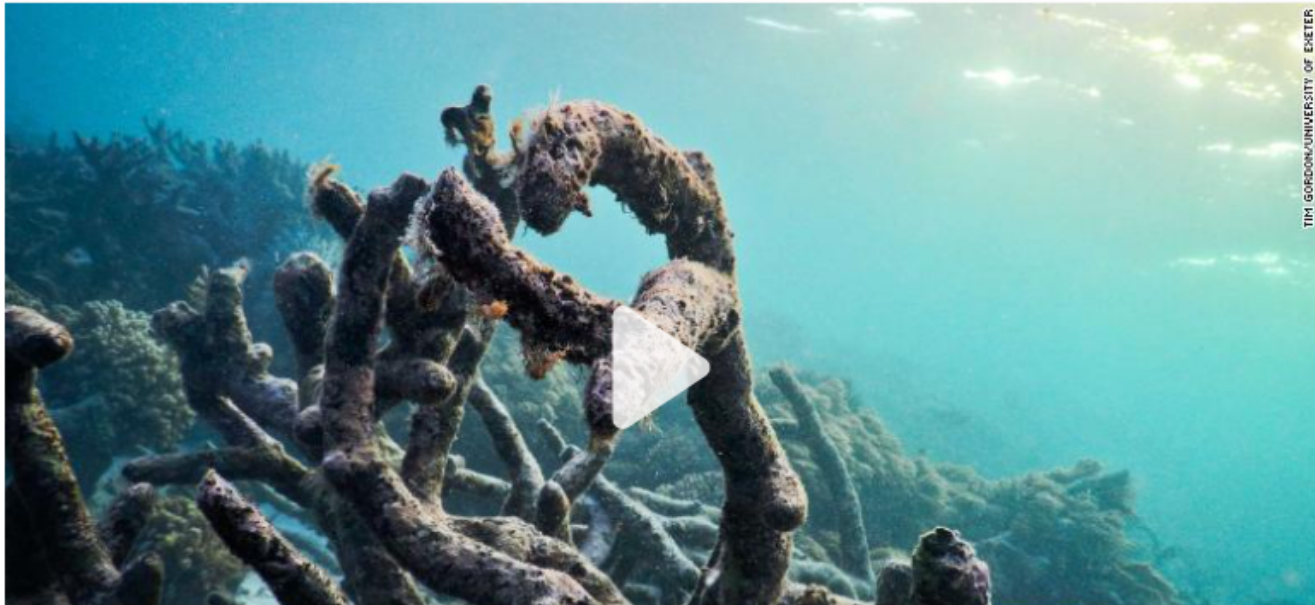
BY STACY LIPERT FOR DAILYMAIL.COM

**99%** by 2025

# Great Barrier Reef suffers third mass bleaching event in five years



By [Helen Regan](#), CNN  
Updated 0704 GMT (1504 HKT) April 7, 2020



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LIFEPROOF

Three unprecedented catastrophic bleaching events in five years



# So how much coral is on the Reef?

## Maybe not too much is left?

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thetimes.co.uk

Great Barrier Reef Foundation  
barrierreef.org

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nationalgeographic.org

Great Barrier Reef has deteriorated to ...  
abcnews.go.com

Coral IVF to restore Australia's Great ...  
weforum.org

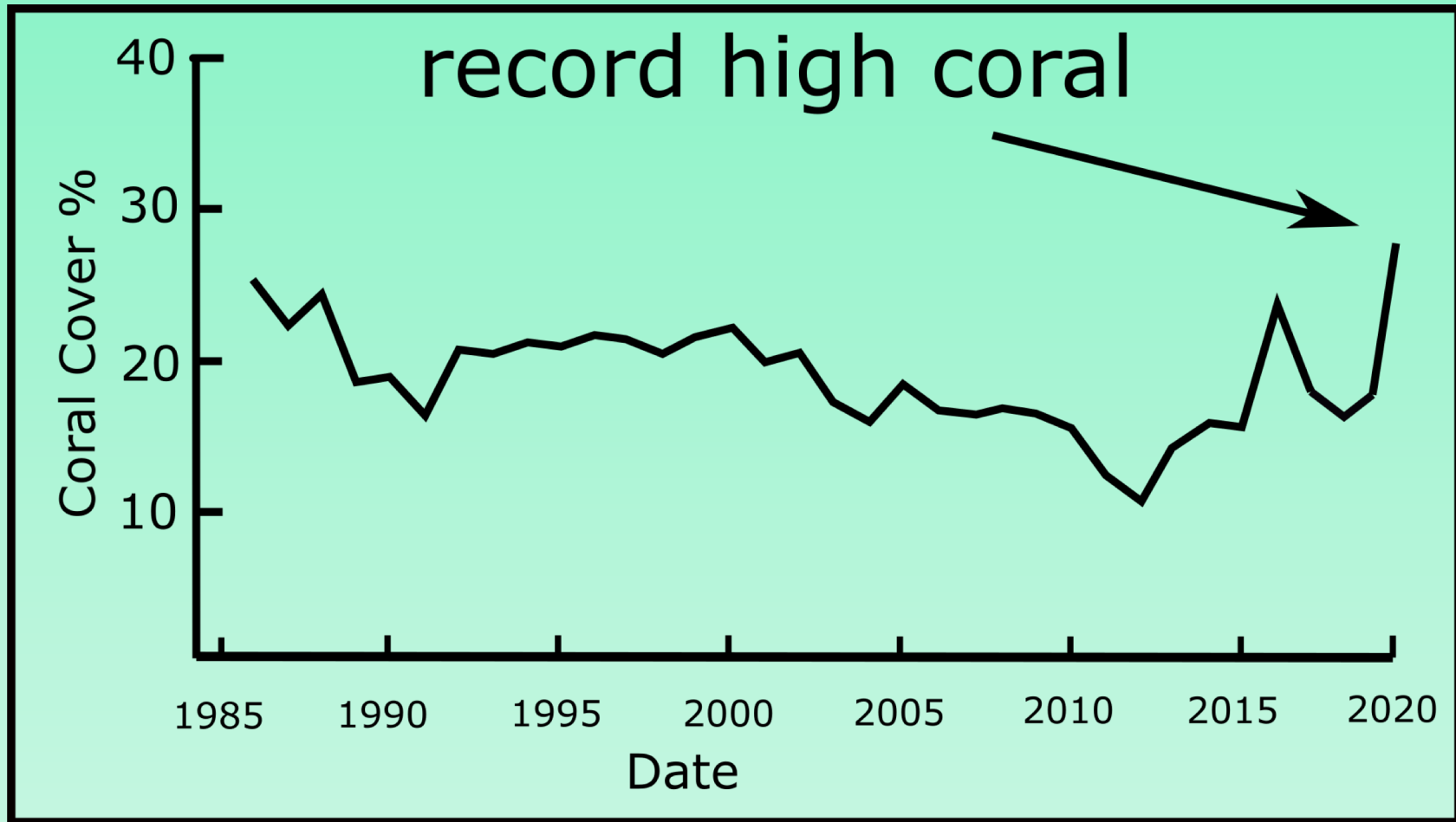
Australia's Great Barrier Reef Escapes ...  
bloomberg.com

Great Barrier Reef ...  
ecowatch.com

The Great Barrier Reef Has Lost Half ...  
globalcitizen.org

THE GREAT BARRIER REEF  
oceansplasticcleanup.com

Will Australia's Great Barrier Reef ...  
dailysabah.com



**That does not look so bad**

Aggregation by PV Ridd. Using AIMS aggregation to 2016 and weighting regions according to number of reefs thereafter.





## Science and media doomsayers ignore good news on reef

PETER RIDD



12:00AM JULY 23, 2021

399 COMMENTS



# Fact Checkers swing into action:



Climate Feedback

Article Reviews

Claim Reviews

Insights

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Despite 2021 being a good year for coral health, coral in the Great Barrier Reef has declined over the past decade and is threatened by climate change, contrary to claims by Peter Ridd

901  
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## CLAIM

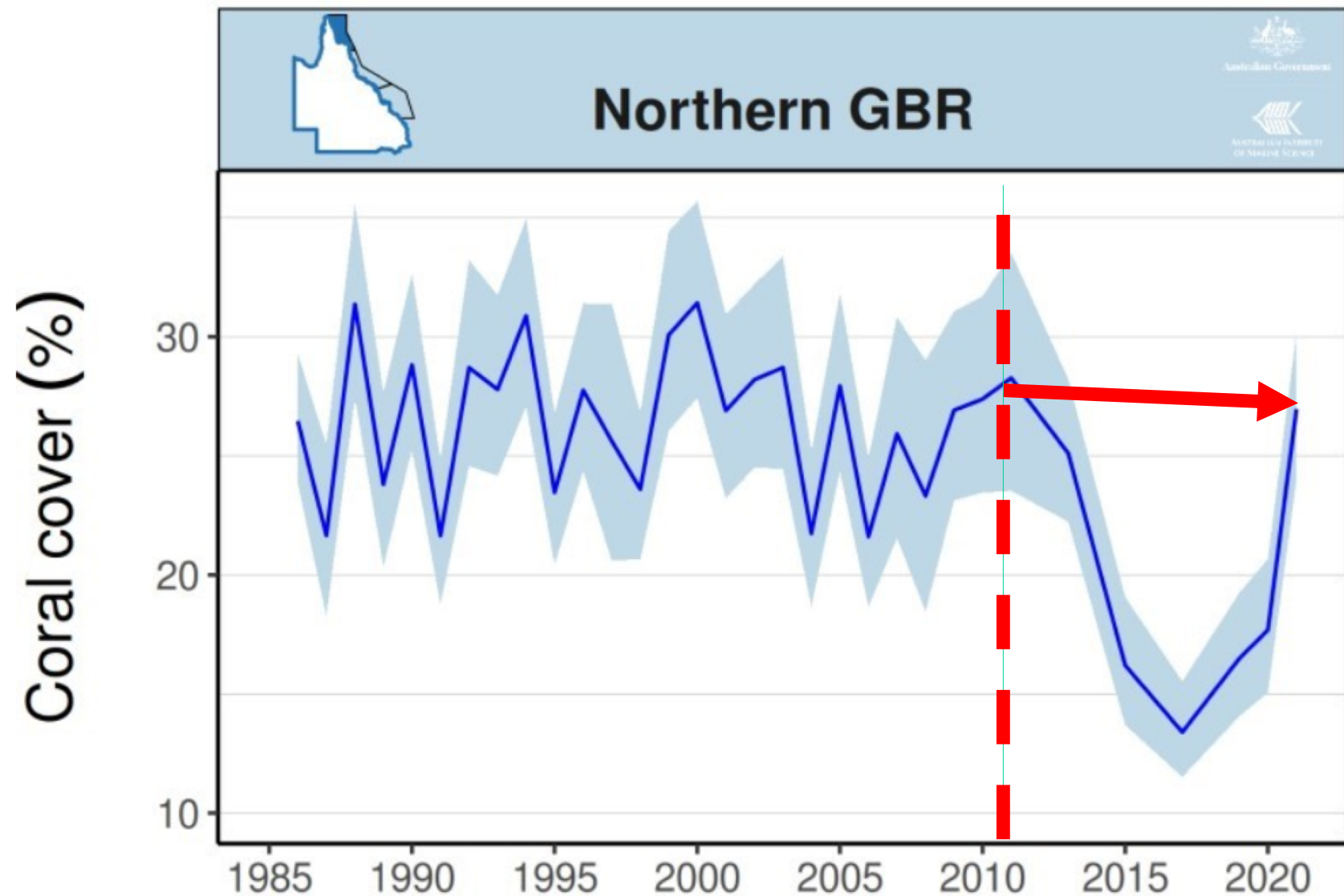
"The amount of coral on the Great Barrier Reef is at record high levels"; those claiming the reef is threatened by climate

## VERDICT <sup>?</sup>

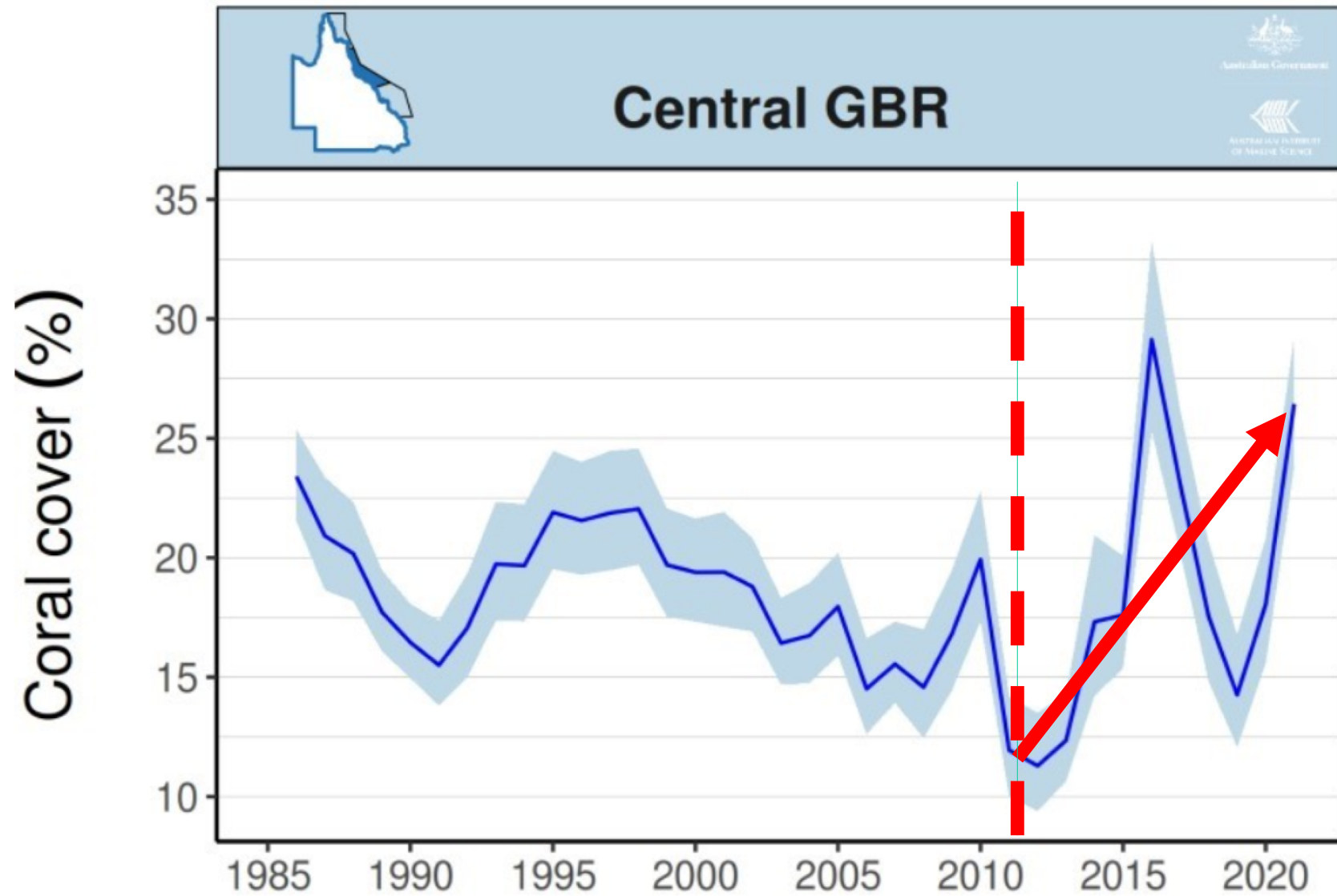
**INACCURATE**



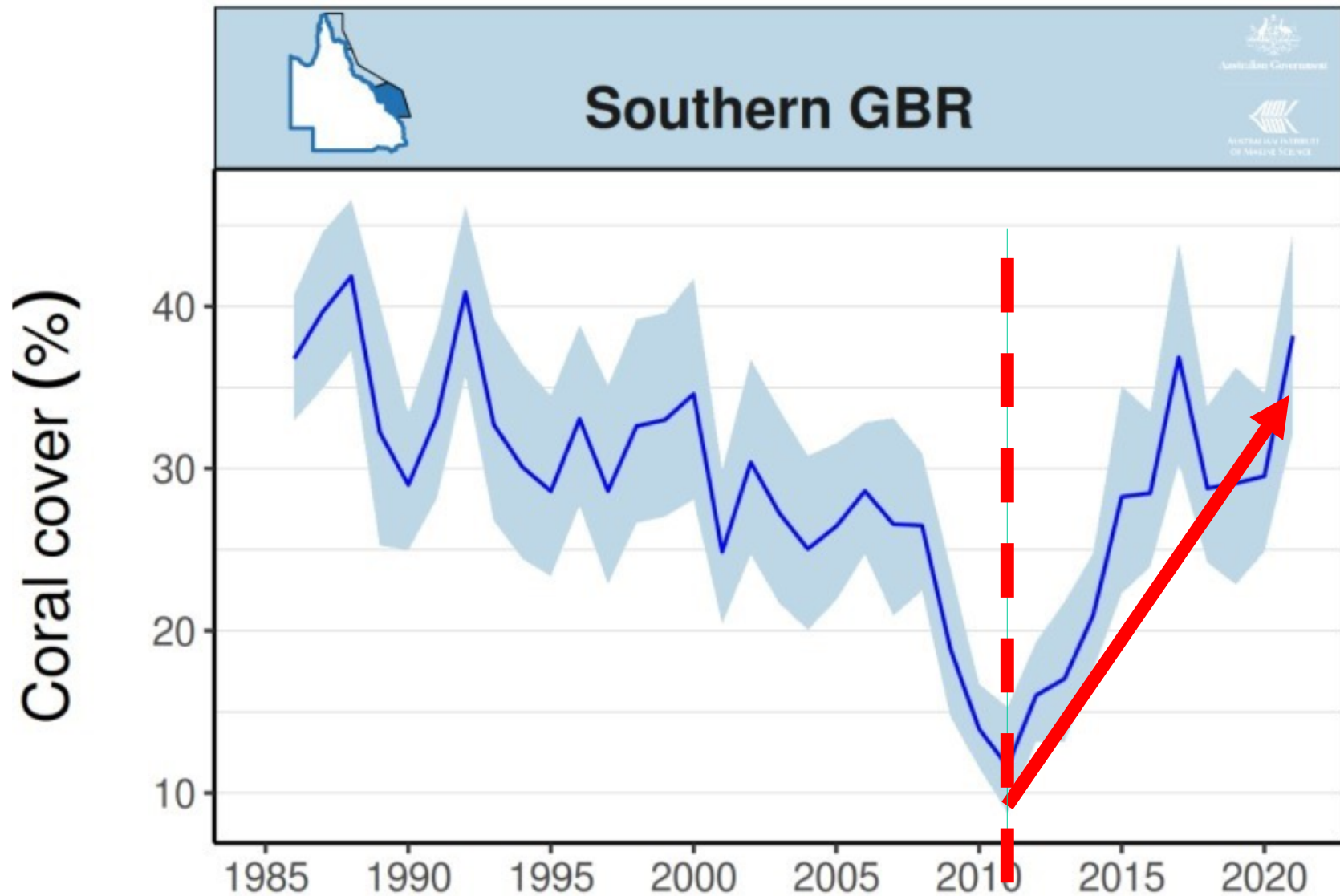
# Coral cover as measured by Australian Institute of Marine Science



**Change over last decade**

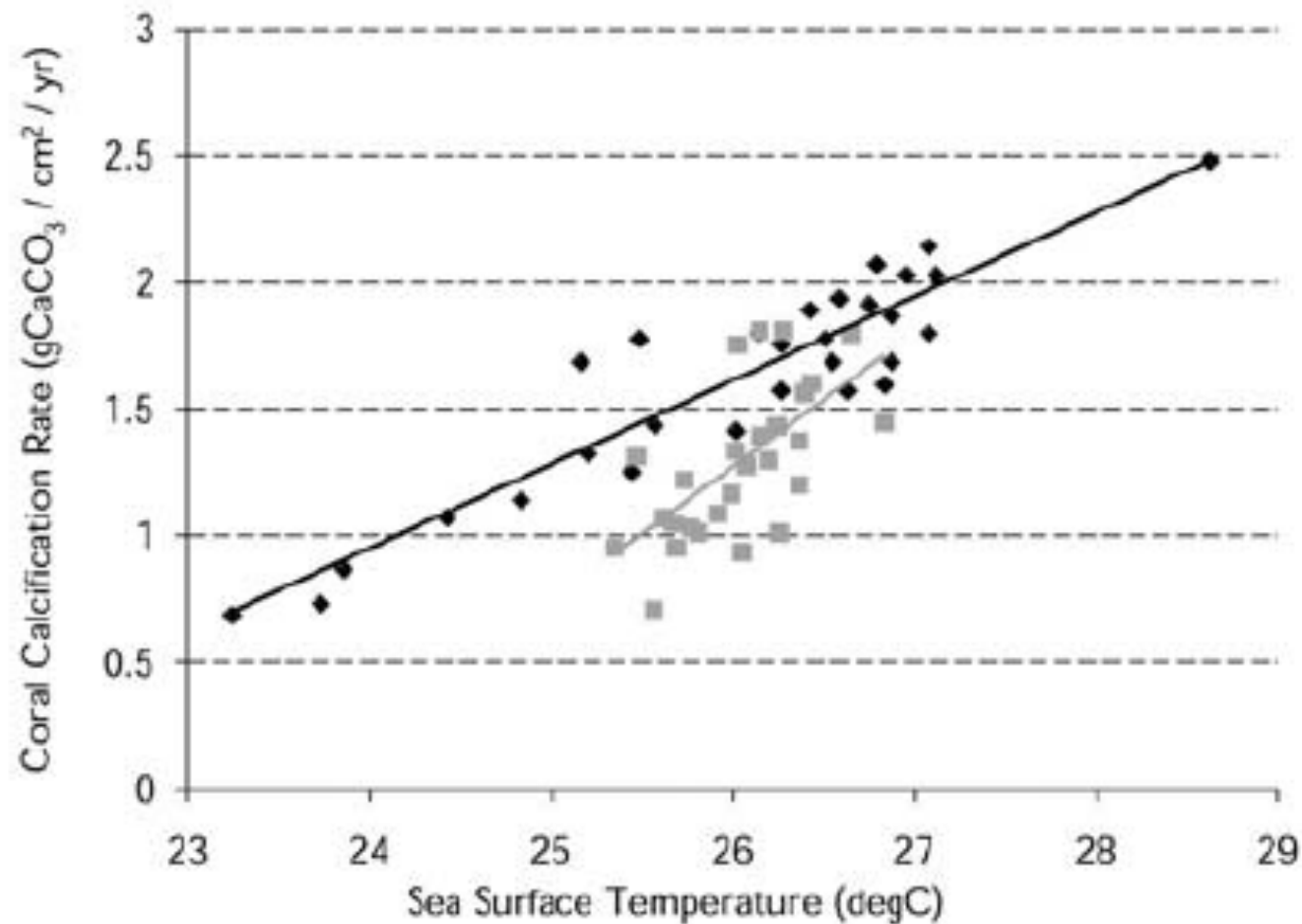


**Change over last decade**



**Change over last decade**





**Figure 1.** Relationship between annual average SST (°C) and coral calcification shown in two separate studies of *Porite* coral colonies where diamonds show the results from *Lough and Barnes* [2000] and squares from *Bessat and Buigues* [2001].

**Coral growth rates increase with temperature to well above the average temperature of the GBR.**

# **Occasionally a large amount of coral dies. Variability gives Doom-Sayers never ending bad news**

- **Huge variability from one year to another**
- **Massive amounts of coral dies periodically**
- **Mostly caused by Hurricanes/cyclones**
- **So there is a never ending stream of bad news**
- **But the coral always regrows.**







**Legend of  
Prometheus.  
Liver eaten  
every day  
and grows  
back each  
night.  
The agony  
never ends**

Salvator Rosa - Galleria  
Corsini, Public Domain,

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greekmythology.com/prom  
etheus-fire-myth/](https://www.greekmyths-greekmythology.com/prometheus-fire-myth/)



## Many other bogus threats to the Great Barrier Reef.

- Sediment from Agriculture
- Nutrients from Agriculture
- Pesticides from Agriculture
- Dredging
- Fishing

There is almost no land derived sediment on the main reef matrix where 99% of the coral lives.  
How can farmers be killing the reef?



Greek reporter



# Why is the water so pure?

**The water that surrounds the Great Barrier Reef is as pure and sparkling blue as the Pacific Ocean that surrounds it. The same amount of ocean water comes into, and out of, the reef waters in 8 hours as come from all the rivers on the Queensland coast in a whole year. The water quality of the reefs is determined by the Pacific Ocean not the rivers and farms.**



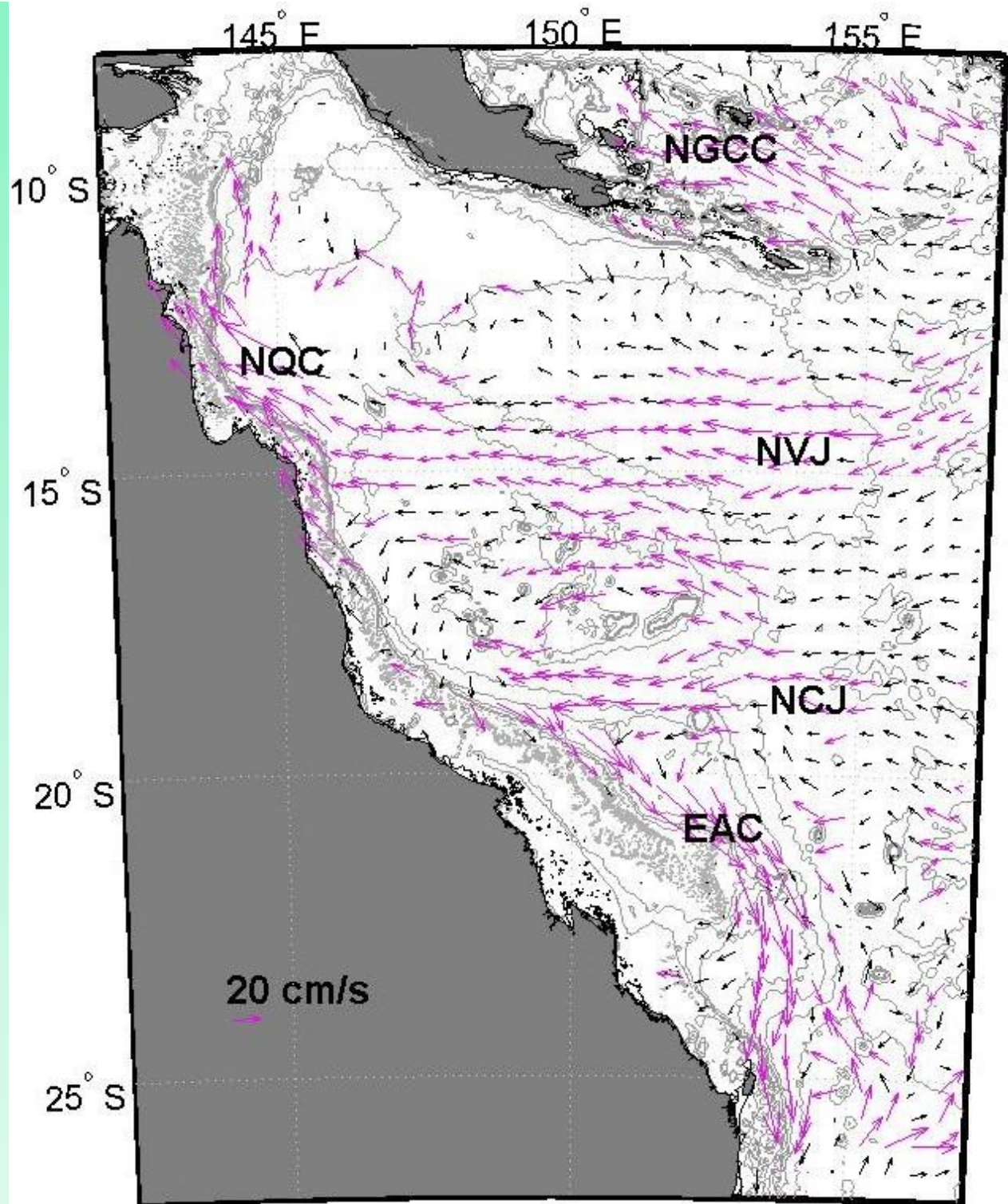
Choukroun et al 2010) Larcombe and Ridd 2018. Picture wikipedia



**The ocean currents dwarf the effect of rivers on the Reef.**

**Totally ignored by science institutions**

(Choukroun et al 2010)



# **Australian Senate Inquiry: Pesticides**

- **Low to negligible risk inshore (1-3% of coral)**
- **Very low to negligible risk for GBR (97% of coral)**
- **Data consistently find concentrations so low, they cannot even be measured.**

**BUT GBR Outlook report by Great Barrier Reef Marine Park Authority says pesticides are a “HIGH RISK”**

**How does low and negligible become High?**

# Coal Dust from Hay Point

- A critical example showing total untrustworthiness off multiple institutions.
- It is a cover up.





# Incredibly influential and totally wrong research: Burns (2014)

- coal dust had reached outer reef 200 km away.
- Quoted to Senate inquiry in 2014 by Prof Hughes to justify calls to stop dredging.
- This would stop the coal industry in Queensland.
- Paper quoted in 2017 Consensus Statement, 2019 Outlook Report, and 2020 UN report on the Reef.

- Dr Simon Apte from CSIRO demonstrated a 1000% to 3000% error.
- Highly doubtful she was even measuring coal
  - Apte showed coal dust was not a problem.

BUT

- Journal would not retract work, and refused to publish Apte's findings.
  - AIMS has done nothing to correct the record
    - GBRMPA has also done nothing.
  - Work continues to be quoted in influential reports.

This case shows there is no commitment to the truth at an institutional level.

# How reliable are our Science Institutions?

- Usually extremely reliable
- Notable exceptions when ideology is involved
  - Can be hard to tell

**Advisors to Government  
or  
Bullies of Government?**



# There are some alarming QA problems in Science in general

- Peer Review has a 50% fault rate
  - Particularly acute in the environmental and social sciences
  - Well known within science community
    - Not well publicised
  - Need to be fixed if used by government

# What are the quality assurance processes in environmental science?

## Peer review:

*“we know that the system of peer review is biased, unjust, unaccountable, incomplete, easily fixed, often insulting, usually ignorant, occasionally foolish, and frequently wrong”* Horton 2000



# Prof John Ioannidis (Stanford Uni.)

Wrote now famous paper “Why most published research findings are false”.

Most downloaded technical paper in PLoS Medicine



85% of science resources are wasted due to false or exaggerated findings in the literature.

Funding bodies don't fund replication even though it is fundamental to scientific process



# And what do companies find when they try to replicate the original results?

“..... a German pharmaceutical giant, reported in *Nature Reviews Drug Discovery* ....that they had successfully reproduced the published results in just a **quarter of 67** seminal studies”

The  
Economist

”Amgen, an American drug company, tried to replicate **53** studies that they considered landmarks in the basic science of cancer ..... they were able to reproduce the original results in just **six**” (The Economist 19/10/2013).

The original work was wrong more than 80% of the time!

So what do we need in the long run?

## Office of Science Review

- **Role: To test, check and replicate policy science. Initial focus on GBR.**
- **Should be run through the Auditor General's office, not the department of science. They understand independence although they have no science experience.**
- **OSR must not be captured by science institutions.**

**Stop group-think**

**Get scientists out of possible bubble**

# How to stop OSR being captured

- Need scientists who have been on the wrong side of the peer/bully-group but were ultimately proven right and rehabilitated.