

Sick Fish and Swollen Legs



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Introduction

- Swollen legs
- Sick fish
- Dredging
- Great Barrier Reef



Swollen leg from Gladstone

- Jim - 60 year old man from Gladstone
- Sells shark fins to Asia
- Presented in March 2012
- Persistently swollen painful leg Been sick since Dec 2011





Infection risk

- Diseased sharks
Gladstone harbour
- Chops fins off
- Pushes off table
- Juices fall on left leg – No boots - thongs – (Boots smell)





Gladstone Harbour

- October 2010 - LNG projects approved
- December 2010/2011 - Qld Floods
- May 2011 - Dredging starts
- Aug 2011: Sick Barramundi
- Late Aug-Sept 11: >40 Fishermen develop skin lesions

Gladstone Harbour Jan 2004

Gladstone Harbour Jul 2011



< 10 NTU before dredging

After dredging 4-10 times worse

Official view

Port Curtis Jul 2011 – Sep 2011



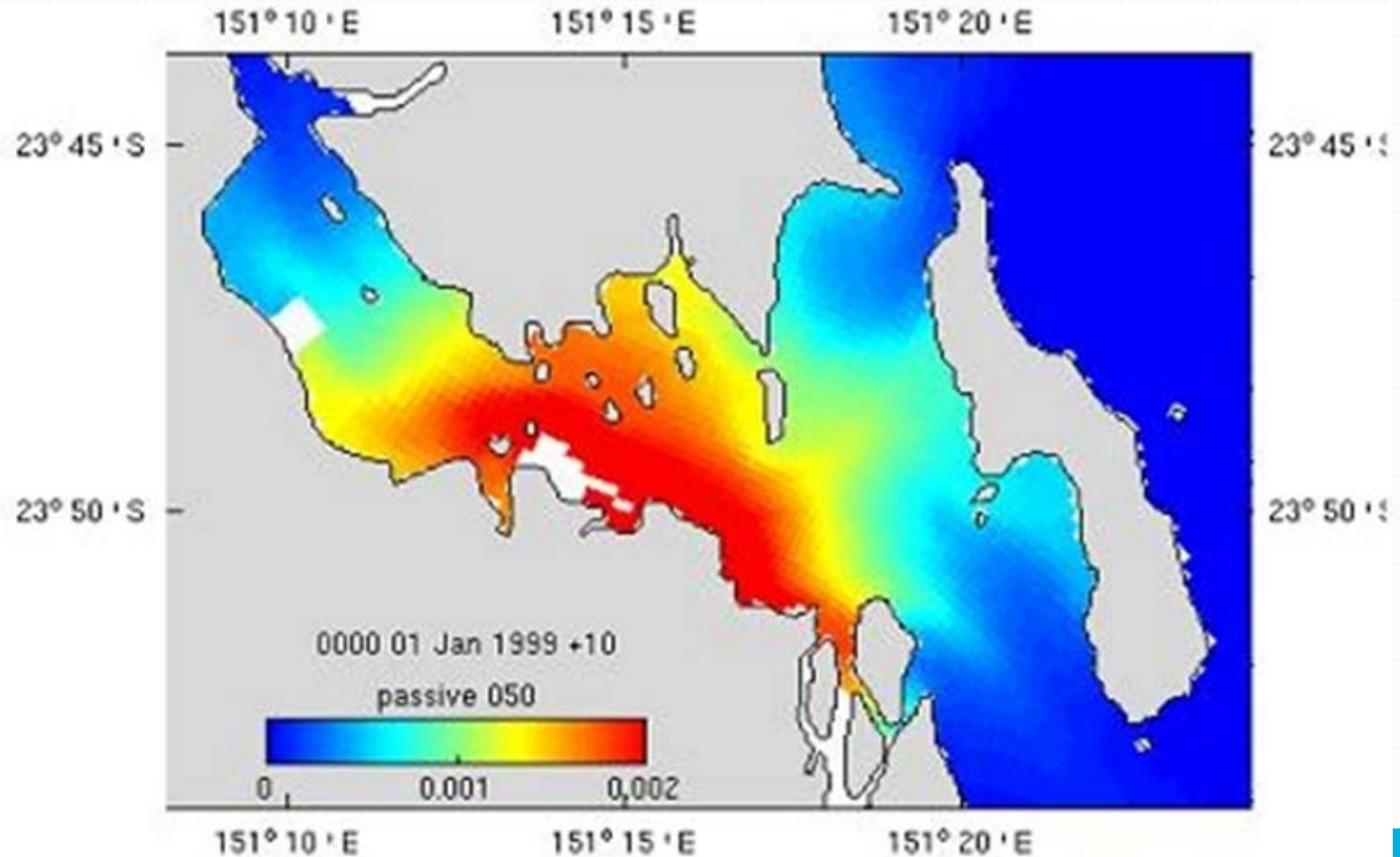
Aluminium dust



Red Wall Dam Shewenella likes Iron (Fe colour - red)



Aluminium sediments in Harbour



Shewenella/ other skin disease



- Fish lesions - shewenella
- Muddy water



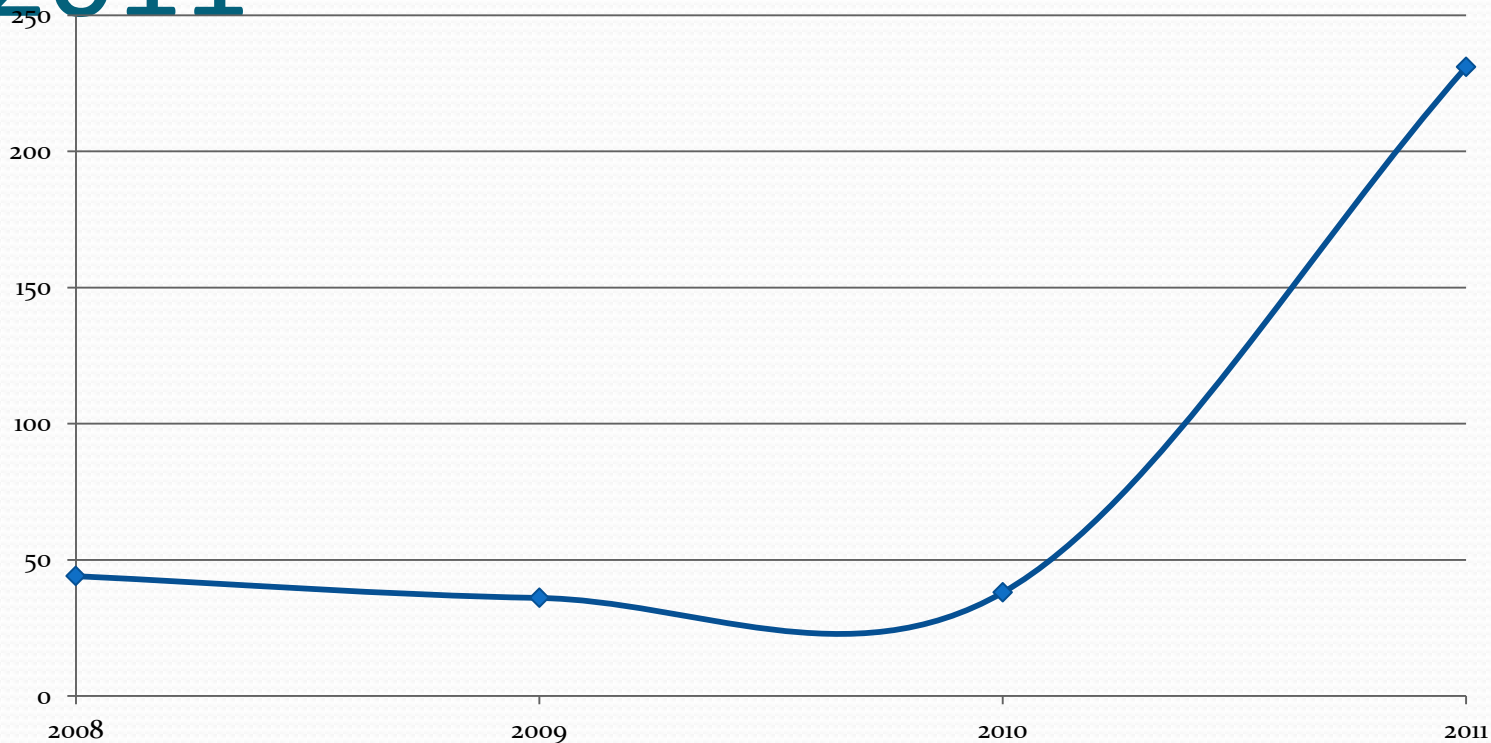
Sick environment

- Barramundi
- Sharks
- Catfish
- Turtle / Dugongs/ Dolphins
- Crabs
- Prawns





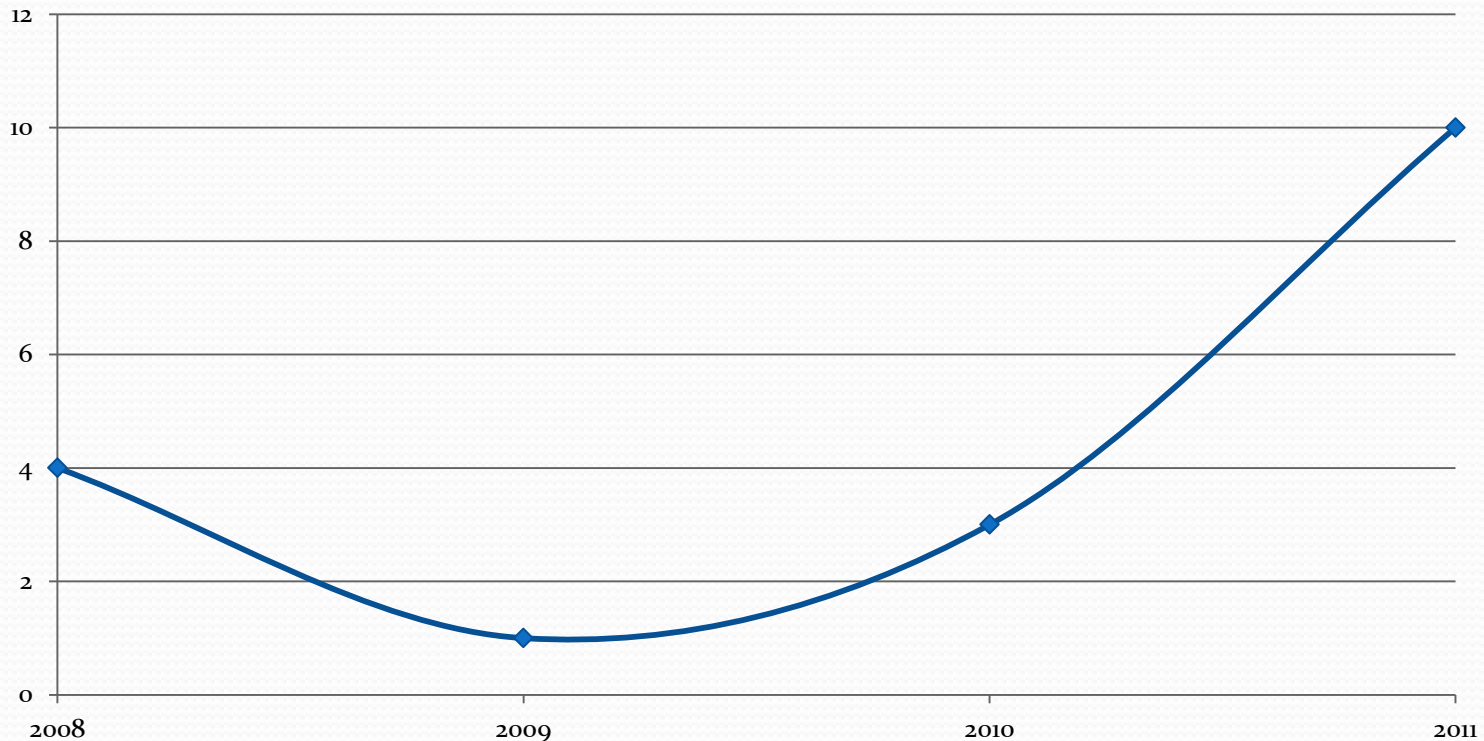
Turtle strandings 2008-Sept 2011



Gladstone Area Only
(40 between April and August 1,
2011)



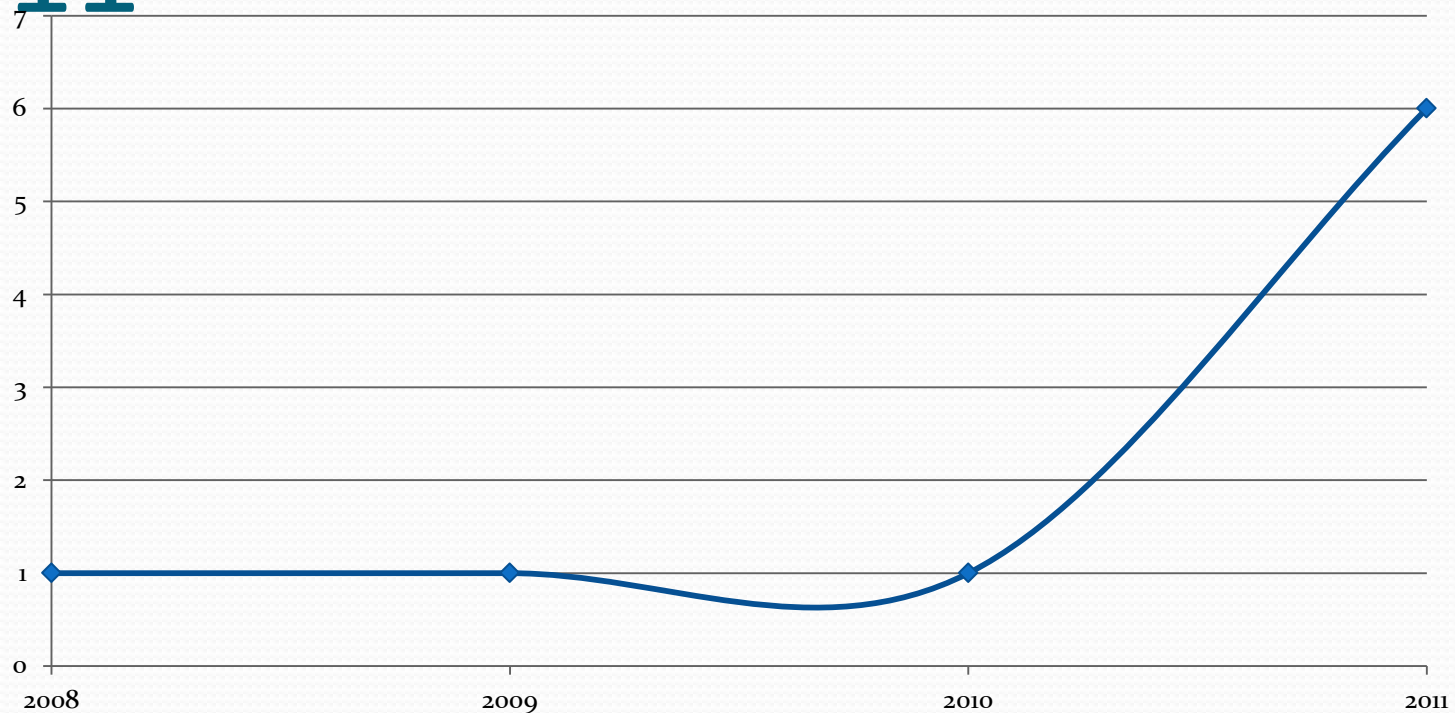
Dugong strandings 2008-Sept 2011



Gladstone Area Only
(4 from May to Aug 1)



Dolphin strandings 2008-Sept 2011



Gladstone Area Only (3 in May)

Human disease - risks

- Dirty Water - Rich in nutrients / metals
- Toxic algal blooms - Cyanobacterium / lyngbya
- Irritation from pollutants – metals.
- Sick fish - bacterial + fungal
- Fisherman skin infections

Govt Health Investigation

- Water Quality normal
- No link to dredging
- No background data
- No outbreak of human disease

? Staph aureus infections ? Temporal association

Poor follow up

Specialists - Gladstone / Brisbane

- Dermatologist - ? cellulitis
- I.D. - ? Lymphatic
- Vascular surgeon – Doppler OK
- Knee Surgeon - OA knee - TKR
(Won't operate due to leg swelling)



Biological – Marine Infections

Bacteria

Aeromonas hydrophila

Edwardsiella tarda

Erysipelothrix rhusiopathiae

Streptococcus iniae

Vibrio spp.

Mycobacterium marinum

Clinical Effects

Serious infection uncommon

Soft tissue infections; arthritis;
septicaemia; gastroenteritis

Skin infection (on hands), septicaemia;
Suppurating ulcers; cellulitis;

Lymphadenitis; septicaemia;
Endocarditis and arthritis

Lesions; gastroenteritis; septicaemia

Skin lesions (usually hands); ulceration
and inflammation of joints

Treatment

- Biopsy - no growth
- Swab biopsy site later
Pseudomonas
- Oral antibiotics
 - Ciprofloxacin 500 mg bd
 - Flagyl 400 mg tds
 - Zithromax 500mg od
- Mild improvement
- Repeated oral Abs later



My friend had Shewenella

- October 2012
- ? Shewenella
- Multi- resistant
- Sensitive to Gentamicin
- Daily IV shots of Gentamicin
- Not admitted – no time



Patera foot - Shewenella

- Common in African boat people
- Malnourished
- Hot water, rotting fish, barefoot
- Amputation



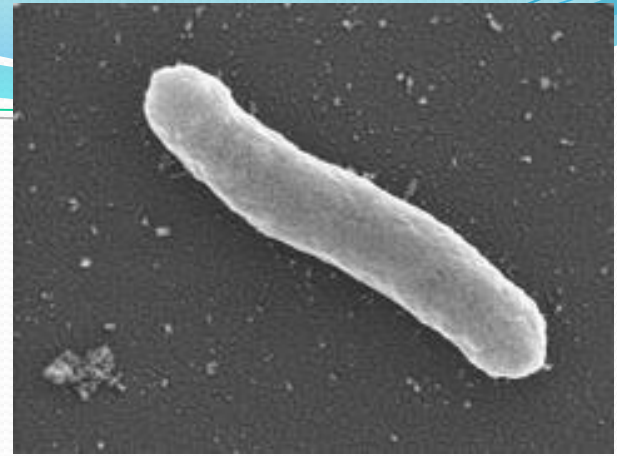
Leg Worsened

Transferred Mater Dec 12
Grew *Shewanella*-IV abs
4 weeks in hospital



Shewanella

- Marine infection (salt water)
- Tropical / warm water - Townsville to Coffs
- December to March
- 30 cases a year
- 70% wounds , 20% ear swabs
- Likes metals (bioremediation)

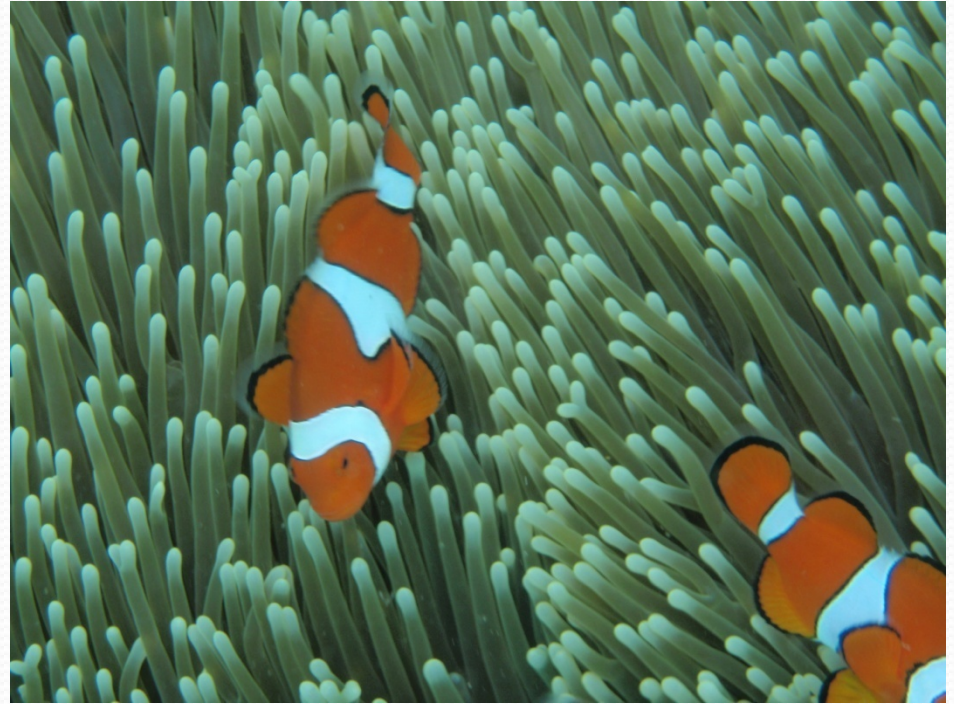


Bioremediation



UNESCO Mission

- Great Barrier Reef -
- Tourism Icon
- World Wonder
- Part of our National Identity
- ? World Heritage in Danger List - June 1st



Gladstone Situation

UNESCO mission – “Government statements may be untrue”

\$ 20 million compensation claim

Ports requested delisting

Water – muddy / metals

100,000 petition stop dredging

Fish unsafe to eat



State Response

- Change Coastal Development laws
- Economic development bill - mine waste water
- Nature Conservation Act (Feb 7)
- 10 year Port strategy, including Abbott,
- Approve dredging duplicate channel

Federal Response

- Sea Dumping Act
- Pilots not enforced in Torres Strait
- Approved Abbott Point
- ? Approval for 13 more dredging projects
- Charge to dump spoil in the Marine Park

Scientific publication

- Great Barrier Reef has lost 50% of coral (1985 – 2012)
- Will lose another 50% in 10 years
- Article yesterday by 2040 - Ocean acidification will kill coral
- The REEF is DIEING

Dumping Dredge spoils \$5-15 m³

- Toxic dredge spoils not tested
- High metals / Acid sulphate soils
- Contributed to Fish kills
- GBR cheapest dump site in Qld
- Industry want to dump for free
- Different rules Industry vs Public

Challenges

Economic development
vs
Environmental protection

Fishing industry

Tourism industry
(Infections in kids and
tourists could hurt it)

“ Fair go ”





Questions

