

# Maldives to Thailand

Sail meets science  
crossing the Indian Ocean  
on a Swan 61'

# Genesis of the trip

# How Indigo V came to be

- Do you know how much a place costs in Singapore?
- Where can we find a boat big enough to live on?
- How can we make the trip a pioneering, useful and achievable adventure?



# Boat stats and facts

# Indigo V

- 61' Swan
- Built in 1989 ( 1 of 14)
- More wetted surface area than we have floor in our apartment



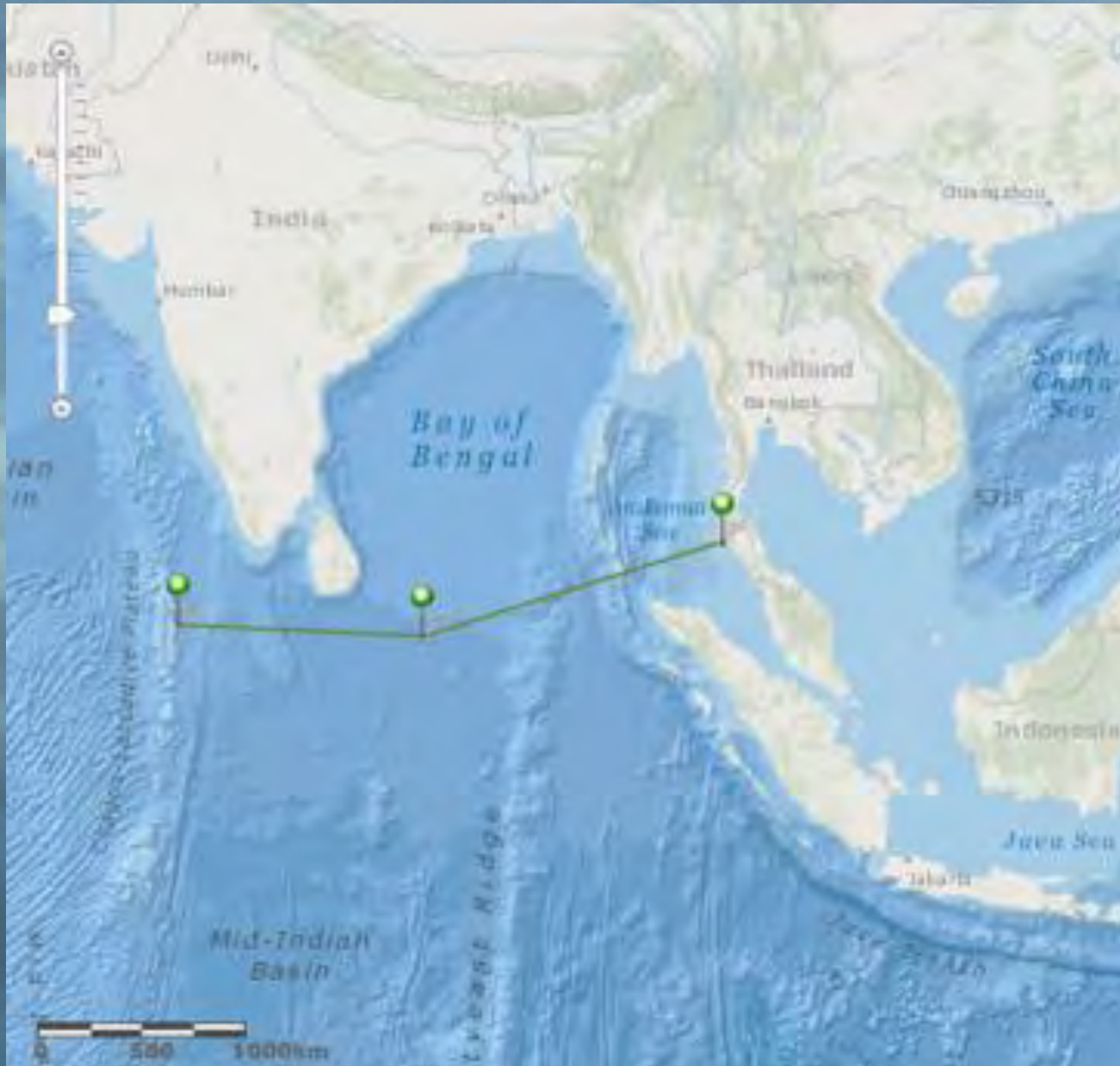
# For those of you who love the stats....

- Boat weight 27,700 kg (61,100 lb)
- Draft 3.1 m (10 ft) Std.
- LOH 18.44 m (60.5 ft)
- LWL 14.68 m (48.2 ft)
- Beam 5.00 m (16.40 ft)
- Engine type Volvo 105hp
- Ballast 9,200 kg (20,300 lb)
- Rig type Masthead
- I (foretriangle height) 24.25 m (79.6 ft)
- J (foretriangle base) 7.06 m (23.2 ft)
- P (mainsail luff) 21.80 m (71.5 ft)
- E (mainsail foot) 6.30 m (20.7 ft)
- Mainsail area 68.7 m<sup>2</sup> (739 sq ft)
- Jib/genoa area 130.7 m<sup>2</sup> (1,407 sq ft)
- Spinnaker area 314 m<sup>2</sup> (3,380 sq ft)

# Indigo V

A beautiful boat  
inside and out...





# Maldives to Thailand

- Male, Capital of Maldives  
4.17524° N, 73.50928° E
- To Ao Chalong, Phuket. 7°  
49.048N, 98° 21.279E
- Over 1500nM
- 12 days at sea



Science!!

# Small scale oceanography





Jay processing and storing samples in the onboard clean room.



Peristaltic  
pumps for  
sampling

# Maldives Cruising

# Maldives facts

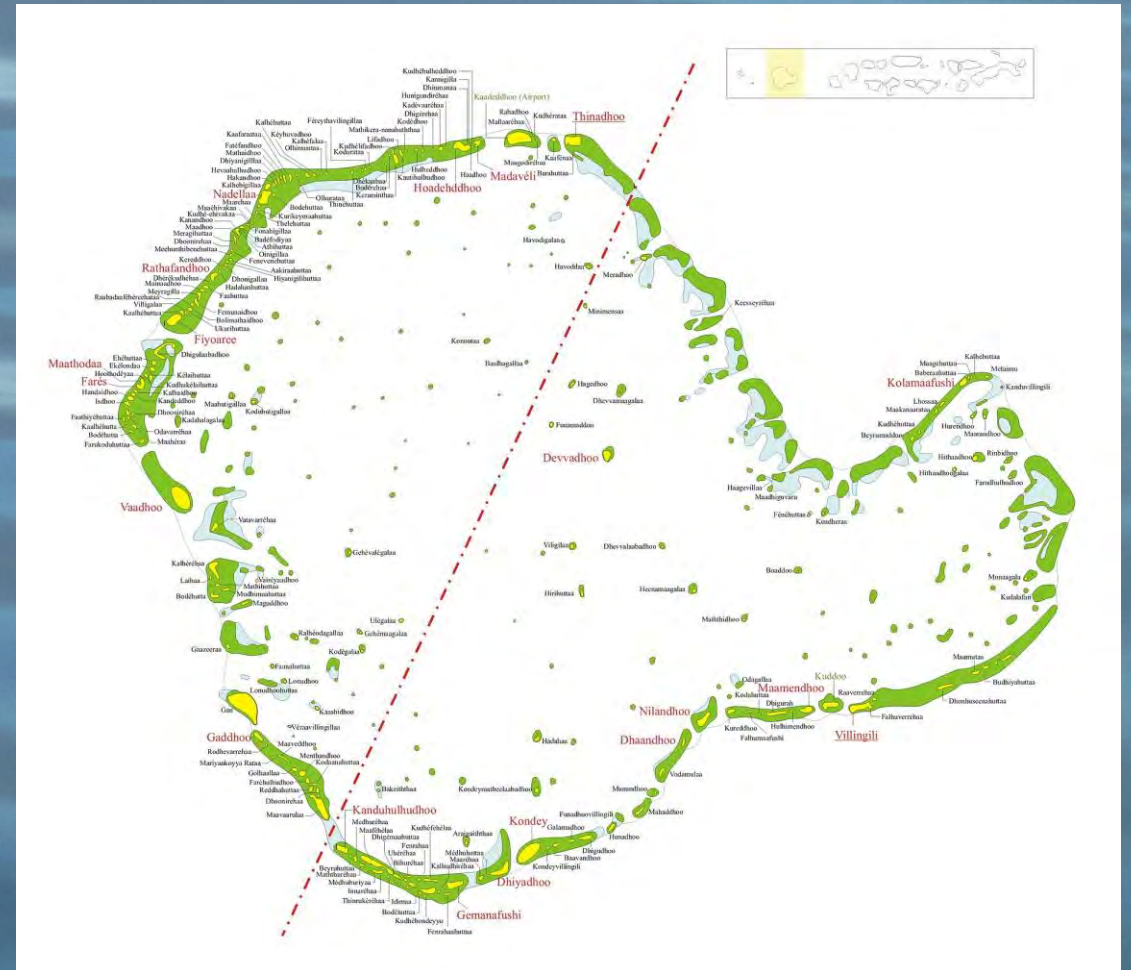
- More than 1190 islands in 26 major atolls across 1000nM
- No part of the Maldives is higher than 2.3m above sea level
- Importing alcohol, pork as well as pork products is illegal.
- Provisions are scarce outside of essentials
- You need an agent to help you navigate the many bureaucratic layers and processes to enter and leave the country also to obtain cruising permits.





# Huvadhu – largest atoll on earth

- 3152 km<sup>2</sup>
- 38.5 km<sup>2</sup> is dry land
- 255 islands





# Huvadhu – largest atoll on earth





# Handy hint – take a tuna cookbook....



- Gut fillet and package your tuna in 38 degree tropical sun
- Count fingers before and after filleting
- Have a BIG freezer
- Maldives fish curry paste is a winner
- Ceviche is good

For our American friends (and for Trent's birthday)



# Sailing in the ITCZ

# Sailing in the ITCZ

- Water at 28 degrees air at 30 degrees – aircon won't work



- Seek shade and cover. Don't get burnt!
- Plan your nutrition for dawn and dusk when you feel like eating
- Staying hydrated takes effort

Enjoy the local delicacies...



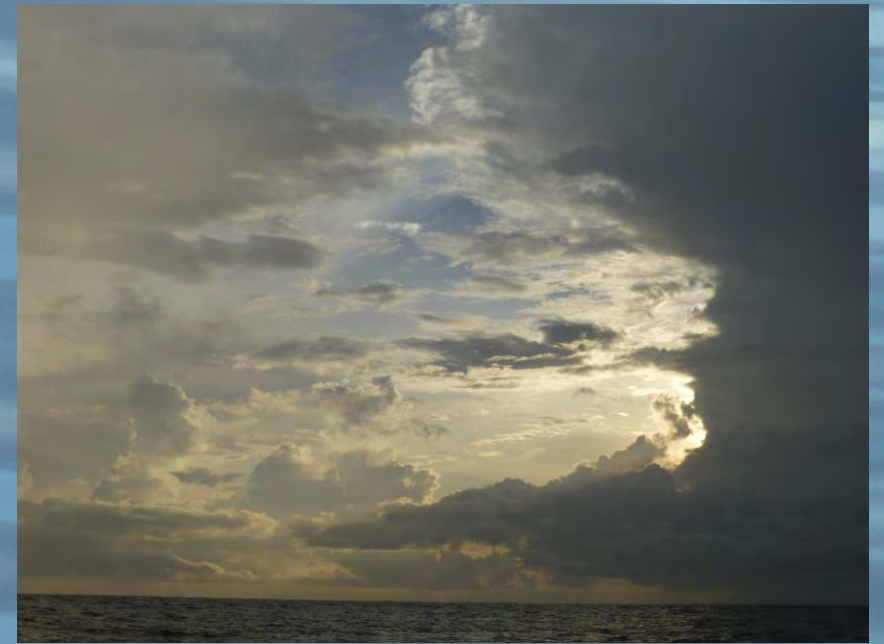
Look carefully at  
the picture.

Can you guess  
what we called  
these?



# Sailing in the ITCZ

- Storms always hit at dusk
- Duration 1 to 3 hours



- Formation ranged from all day to 15 minutes after we last checked.
- No breeze to 60 knots in 10 minutes
- It can get cold: fleece+ storm jacket & still shivering
- Hand steer in moderate breeze when you can as you'll appreciate the practice



# Sailing in the ITCZ



- **Beyond the reach of help with 5000m below you**
- **Good watch system is essential**
- **Visual checks and log**
- **System checks**
- **Ongoing maintenance and spares**
- **Fuel & water management**

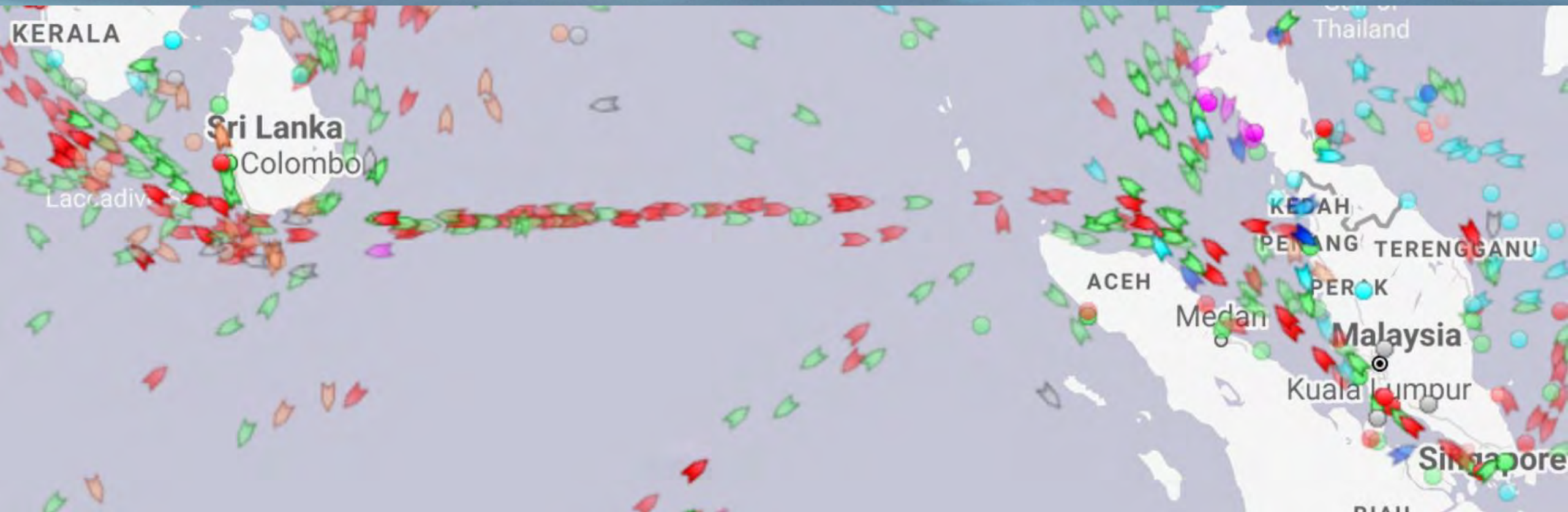
We did get to sail across the equator





Life in the shipping lanes

# How busy is it?



# 20 minutes from horizon to collision



# Why were we there?



- Collecting container ship poo
- Studying the impact of trace metals and the effects of turbulence of propellers



Safety

# Safety

- Safety induction for all crew
- Dedicated roles
- Spreader lights are a Godsend
- Radar & AIS
- AIS on all PFDs
- Sail management – spinnaker sock, sail config, preventer, running backstays.
- Nightly checks and set up.





# Know / Research the Laws

- Generally laws are for commercial mariners
- Have an official looking boat stamp
- Gifts go a long way (T-shirts and sunglasses)



Unexpected visitors

# Unexpected visitors

## Trans-Indian fishing competition results

**Indigo V: 20**

**Scientific All Stars: 1**

(they claim a small shark but there was no photographic proof)



# Unexpected visitors

- Dolphins
- Bioluminescence
- Sri Lankan fishermen or pirates???



In closing

- Adventure begins just a few boat-lengths away from shore
- Citizen science has a real and significant contribution to make to advancing our knowledge of the oceans
- Fede and Rachelle won the Explorers Club Lowell Thomas Award
- Papers published in PLOS Biology and Scientific Reports and more to follow



<http://www.indigovexpeditions.org/>

- Indigo V Expeditions