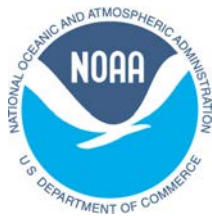


Mapping Ocean Wealth



Dr. Robert Brumbaugh
The Nature Conservancy



The science of ecosystem service modelling and mapping



REVIEW



MODEL



MAP

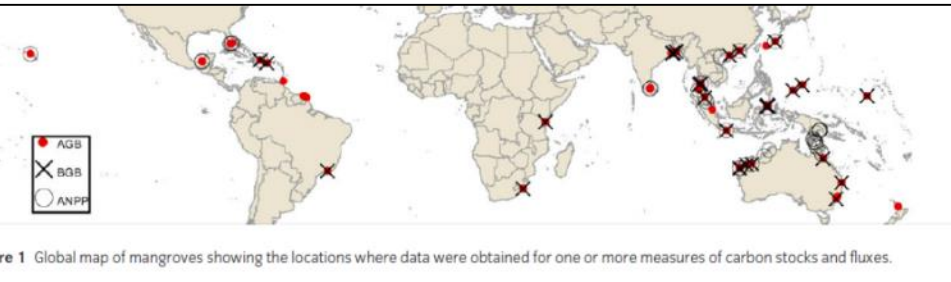
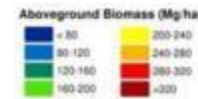
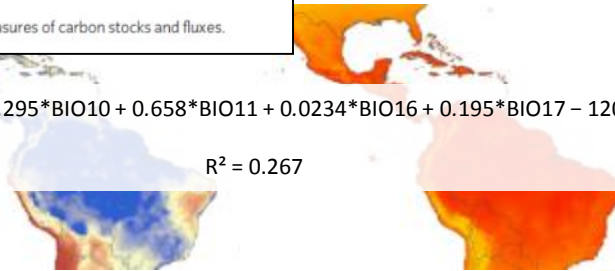


Figure 1 Global map of mangroves showing the locations where data were obtained for one or more measures of carbon stocks and fluxes.



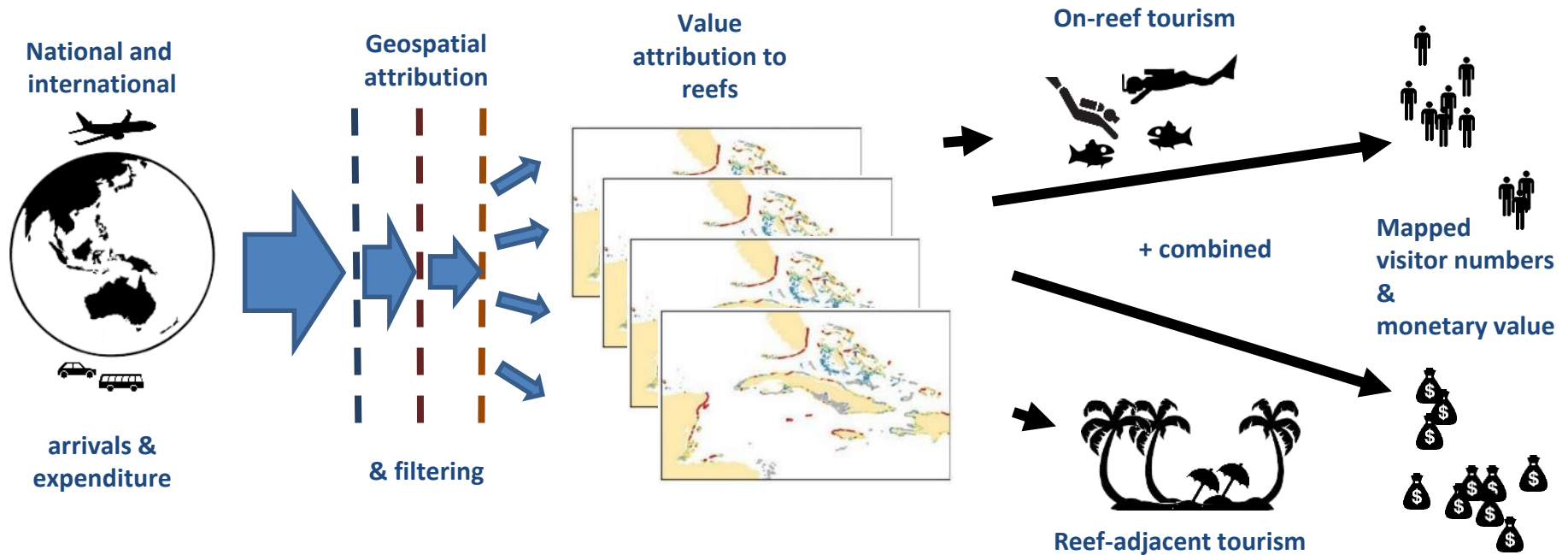
$$AGBt \text{ ha}^{-1} = 0.295 \cdot BIO10 + 0.658 \cdot BIO11 + 0.0234 \cdot BIO16 + 0.195 \cdot BIO17 - 120.3$$

$R^2 = 0.267$

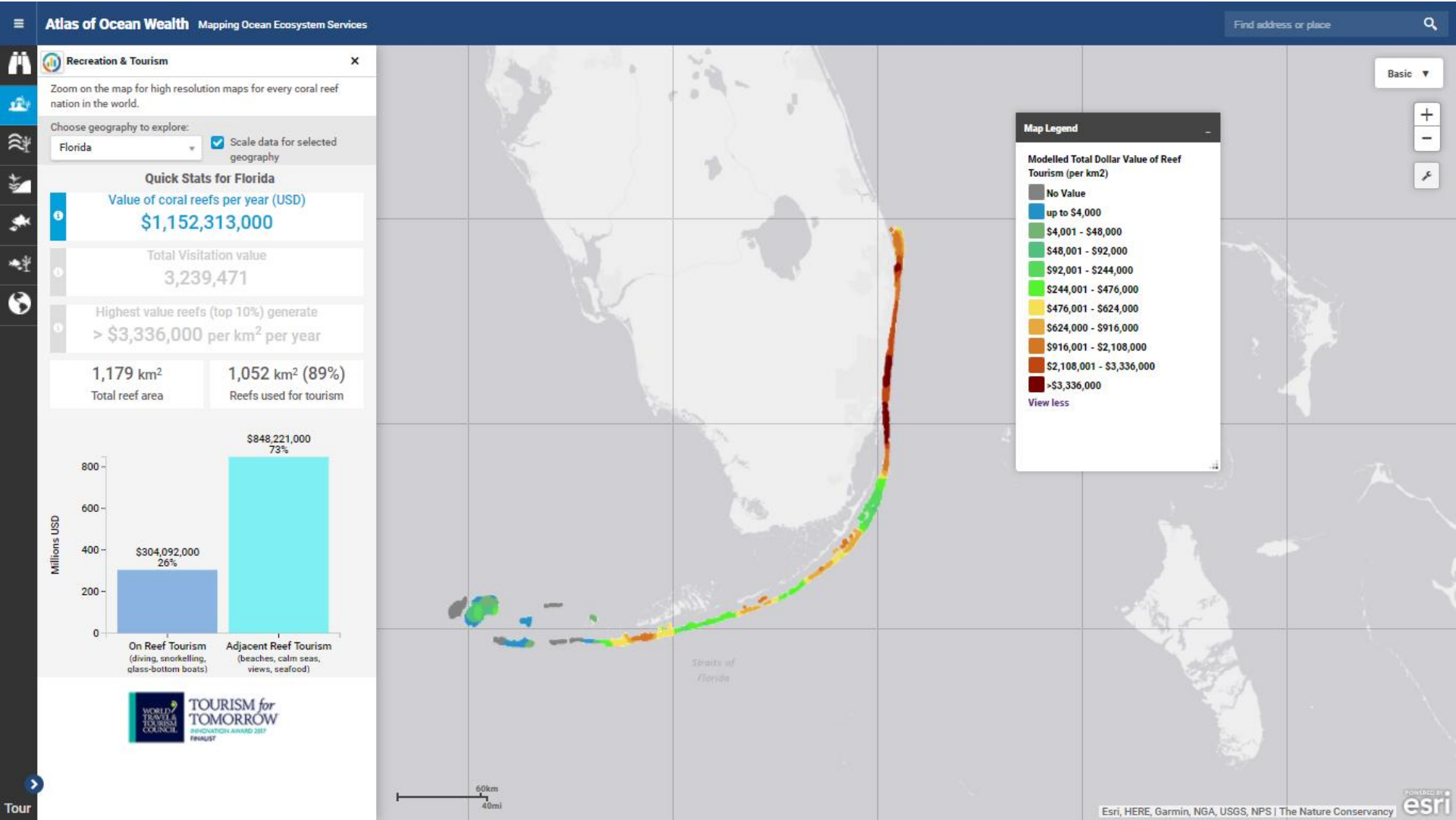


Coral Reef Tourism

How does one arrive at a map of coral reef tourism benefits?
Ask a tourist for directions!



Coral Reef Tourism



maps.oceanwealth.org

Coral Reef Tourism

Atlas of Ocean Wealth Mapping Ocean Ecosystem Services

Recreation & Tourism

Zoom on the map for high resolution maps for every coral reef nation in the world.

Choose geography to explore:
 Florida Scale data for selected geography

Quick Stats for Florida

Value of coral reefs per year (USD)
\$1,152,313,000

Total Visitation value
3,239,471

Highest value reefs (top 10%) generate
> \$3,336,000 per km² per year

1,179 km² Total reef area
1,052 km² (89%) Reefs used for tourism

Millions USD

Category	Value (Millions USD)	Percentage
On Reef Tourism (diving, snorkelling, glass-bottom boats)	\$304,092,000	26%
Adjacent Reef Tourism (beaches, calm seas, views, seafood)	\$848,221,000	73%

Map Legend

On Reef Tourism Value (per km²)

- No Value
- up to \$8,000
- \$8,001 - \$48,000
- \$48,001 - \$92,000
- \$92,001 - \$244,000
- \$244,001 - \$476,000
- \$476,001 - \$624,000
- \$624,000 - \$916,000
- \$916,001 - \$2,108,000
- \$2,108,001 - \$3,336,000
- > \$3,336,000

View less

Esri, HERE, Garmin, NGA, USGS, NPS | The Nature Conservancy

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Coral Reef Tourism

Atlas of Ocean Wealth Mapping Ocean Ecosystem Services

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Map Legend

Reef Adjacent Tourism Value (per km²)

- No Value
- up to \$8,000
- \$8,001 - \$48,000
- \$48,001 - \$92,000
- \$92,001 - \$244,000
- \$244,001 - \$476,000
- \$476,001 - \$624,000
- \$624,000 - \$916,000
- \$916,001 - \$2,108,000
- \$2,108,001 - \$3,336,000
- >\$3,336,000

View less

Straits of Florida

60km / 40mi

Esri, HERE, Garmin, NGA, USGS, NPS | The Nature Conservancy

POWERED BY **esri**

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From Local to Global: Revealing the Big Picture

>3 Million Trips

\$304M

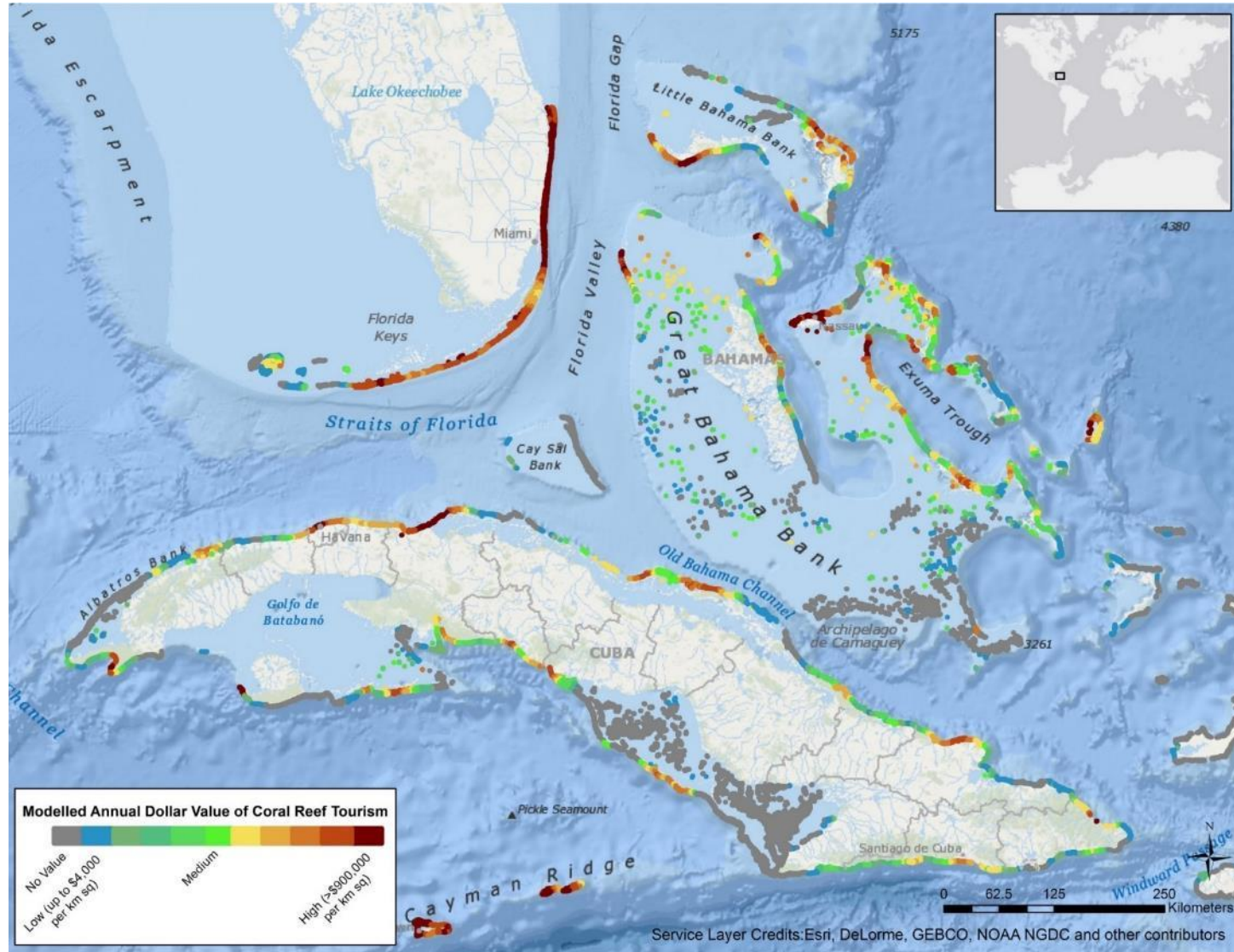
On-reef Tourism

\$848M

Reef-adjacent Tourism

55

Countries with \$3M+ Dollar Reefs



From Local to Global: Revealing the Big Picture

70 Million
Trips

\$19B

On-reef Tourism

\$16B

Reef-adjacent Tourism

71

Countries with
Million Dollar Reefs



Healthy coral reefs are good for tourism – and tourism can be good for reefs



Image: The Nature Conservancy/Ami Vitale

21 Jun 2017

Robert Brumbaugh

Director of Ocean Planning & Protection, The Nature Conservancy



Latest Articles

The geopolitical landscape

Tourism is one of the world's largest industries, contributing trillions of dollars to the global economy and supporting the livelihoods of an estimated one in ten people worldwide.

Much of that tourism depends on the natural world—on beautiful landscapes and seascapes that visitors flock to in search of escape, a second wind, and a direct connection with nature itself.

Coastal and marine tourism represents a significant share of the industry and is an important component of the growing, sustainable Blue Economy, supporting more than 6.5 million jobs—second only to industrial fishing. With anticipated global growth rates of more than 3.5%, coastal and marine tourism is projected to be the largest value-adding segment of the ocean economy by 2030, at 26%.



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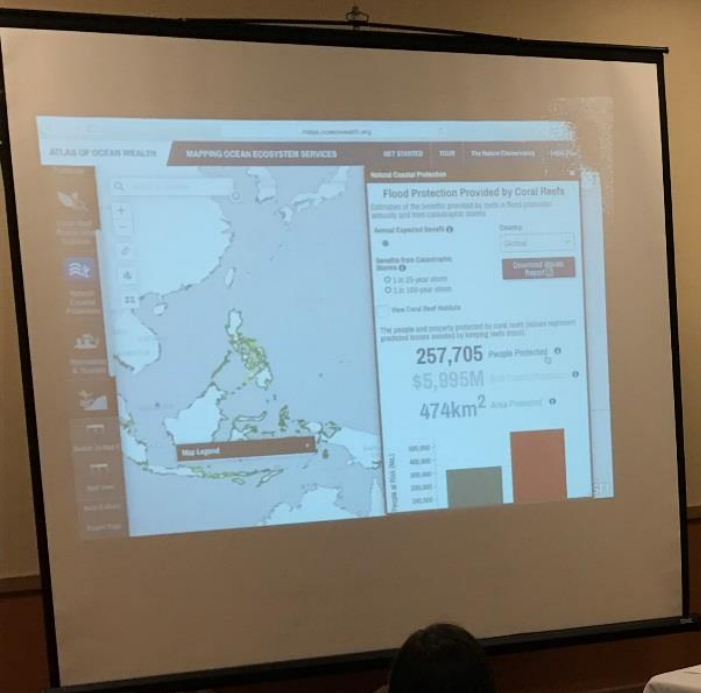
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2,467 Tweets

REEF RESILIENCE NETWORK GLOBAL REACH

COUNTRIES & TERRITORIES WITH INDIVIDUALS TRAINED BY
The Reef Resilience Network





Friday

- 9am - TV & VU
- 9:15am - Mapping from VU
- 10:45am - Break
- 11am - Sustained Small Group
- 12pm - Report Out
- 1pm - Lunch
- 2pm - Deep Dive Feedback
- 4pm - Closing / Summary
- 4:45pm - Dinner (on your own time)



KEY TAKE AWAY MESSAGES

- A range of ecosystem benefits associated with reefs has been mapped through the [Ocean Wealth](#) project
- There is quite a bit of spatial variation in tourism benefits, globally and in Florida
- ‘On-reef’ and ‘reef-adjacent’ tourism benefits are not necessarily attributable to the same reefs
- Globally, just 30% of coral reefs provide tourism value – in Florida, tourism value is provided by 90% of reefs, underscoring Florida’s dependency on reefs for its coastal economy.
- Spatial data on ecosystem benefits are being incorporated into trainings offered through the Reef Resilience Network, and can inform conservation and management investment decisions.

Mapping Ocean Wealth



THANK YOU!

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