

Money Grows on Trees

And Wealth Swims in the Seas

Pavan Sukhdev

McCluskey Fellow, 2011, Yale University

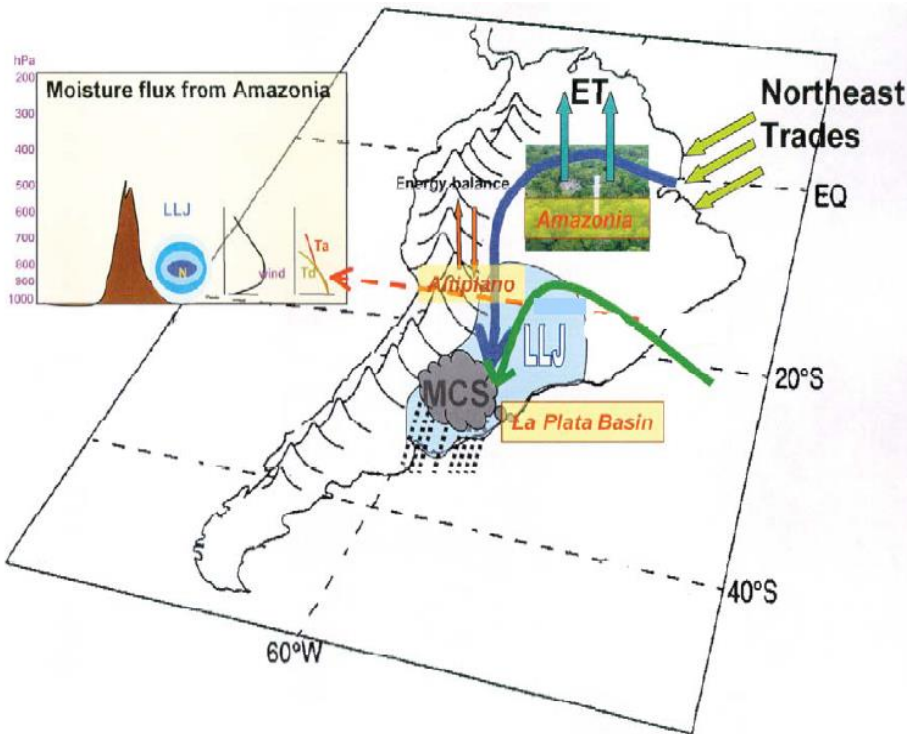
Founder-CEO, GIST Advisory



The Economics of Ecosystems and Biodiversity

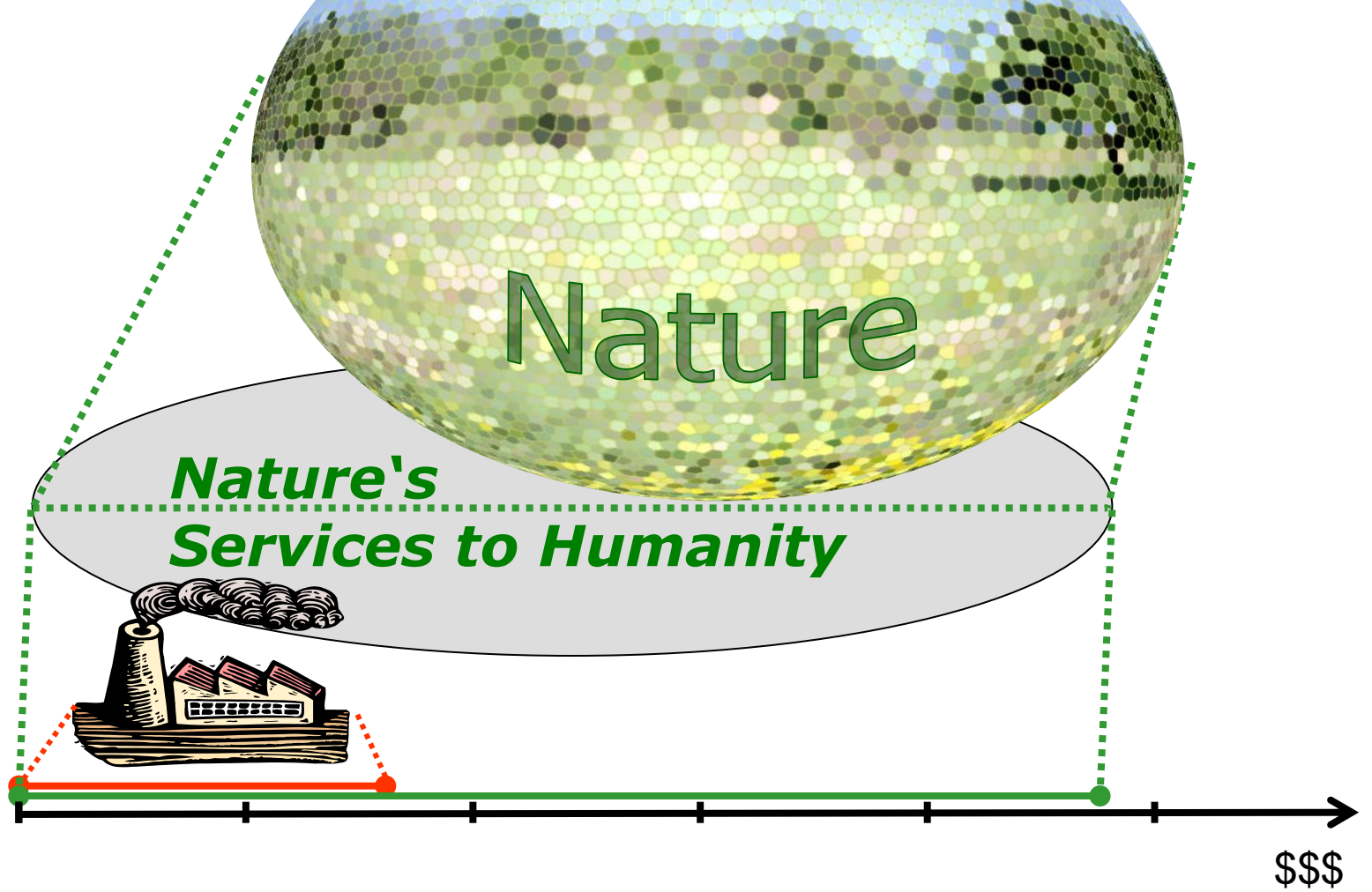


The Economic Invisibility of Nature



What does the Granary of Latin America pay for its freshwater?

Marengo et al. (2004), Journal of Climate



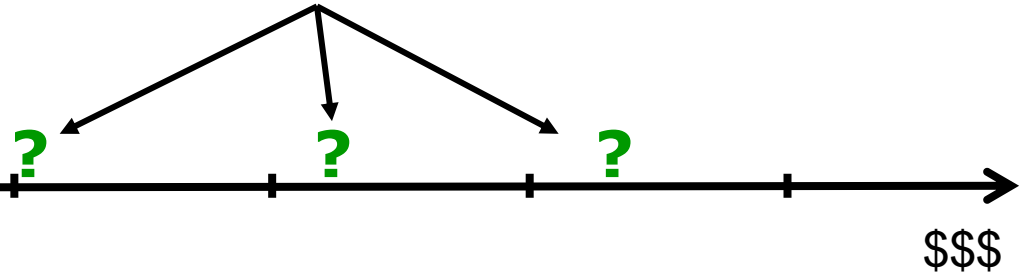
1/19/2016

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Photo: C.Neßhöver, UFZ



**No Value =
No Counterweight !**



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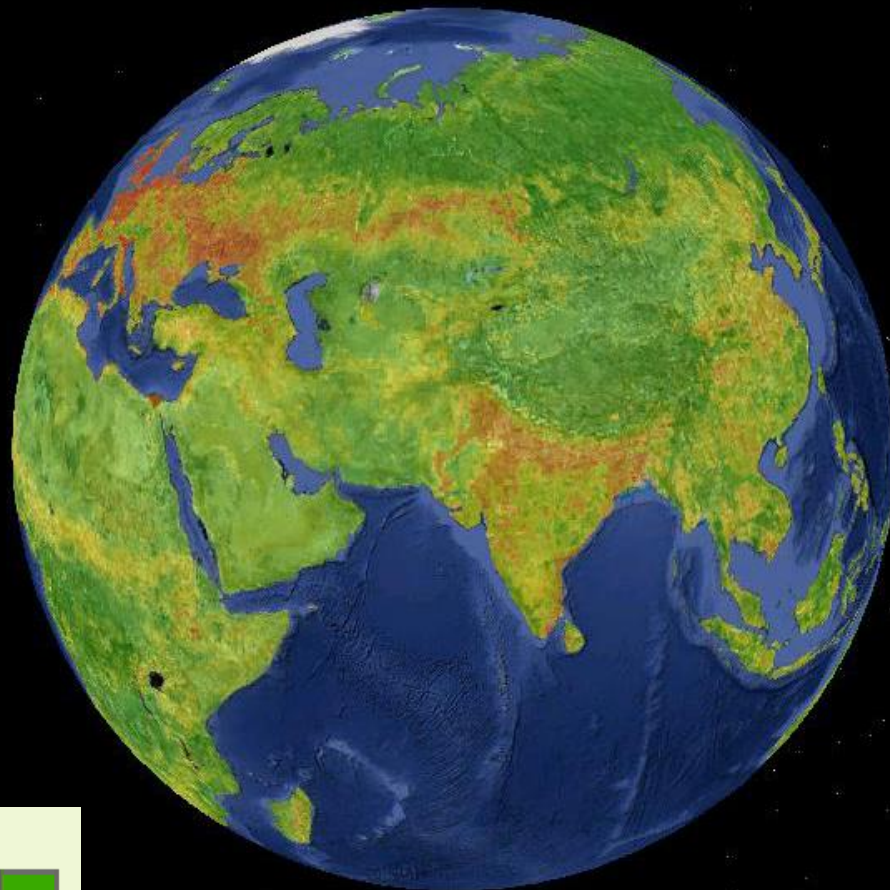
Photo: C.Neßhöver, UFZ

**How bad will
things get?**

1970



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Mean Species Abundance (%)



0 20 40 60 80 100

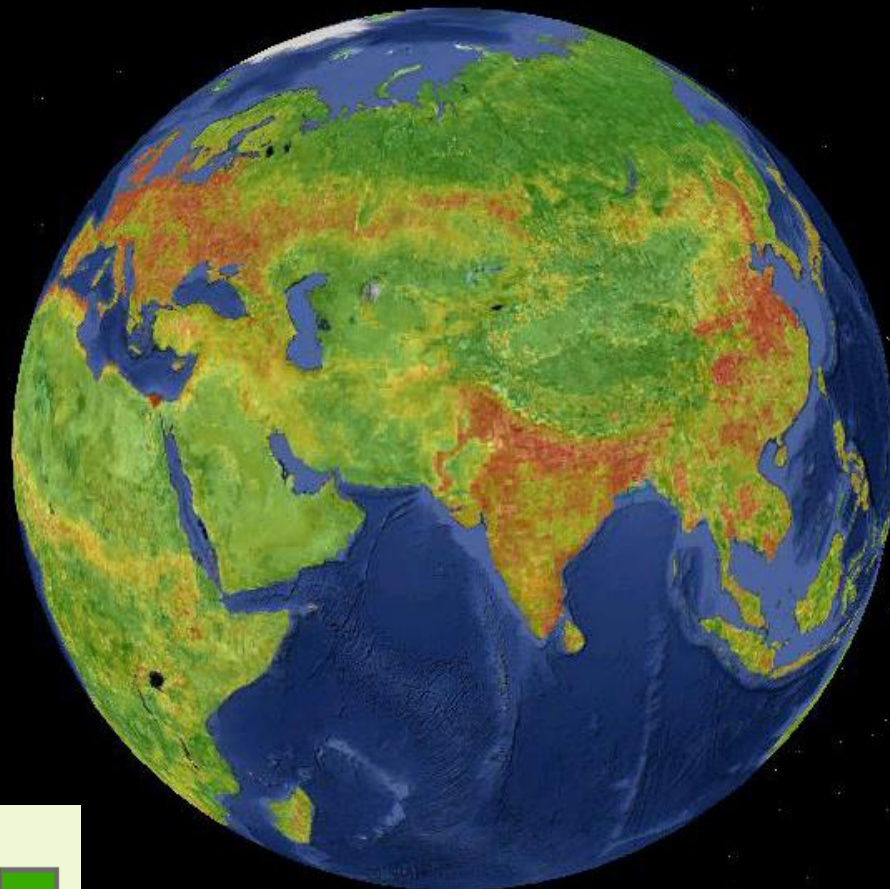
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
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2000



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Mean Species Abundance (%)



0 20 40 60 80 100

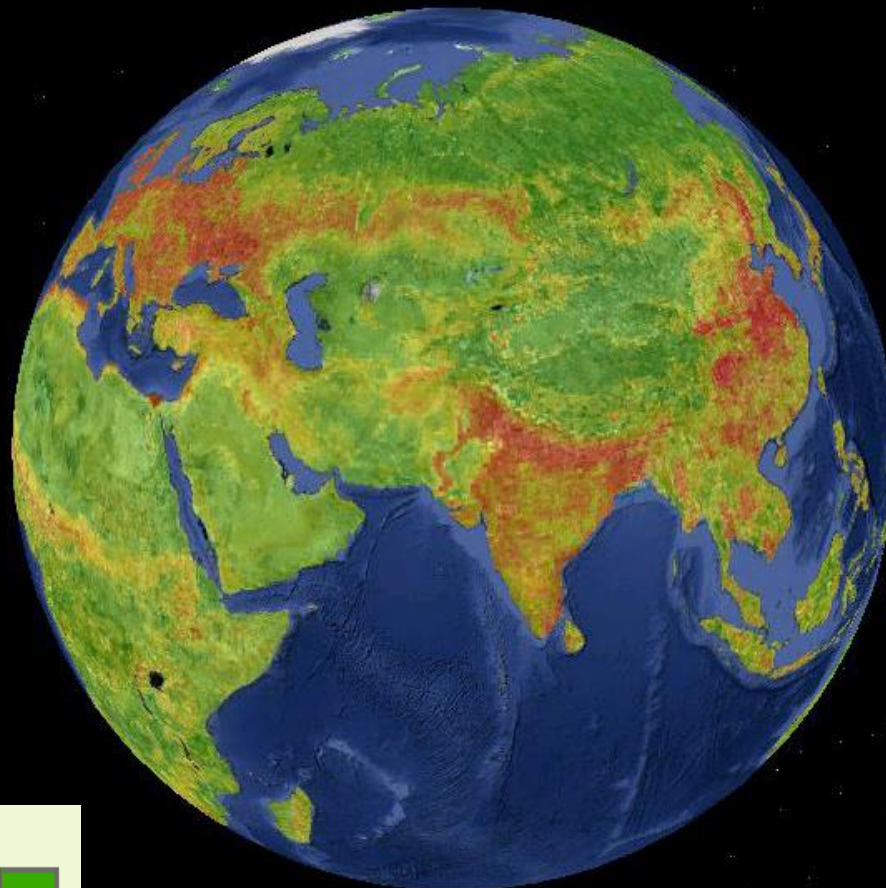
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Mean Species Abundance (%)



0 20 40 60 80 100

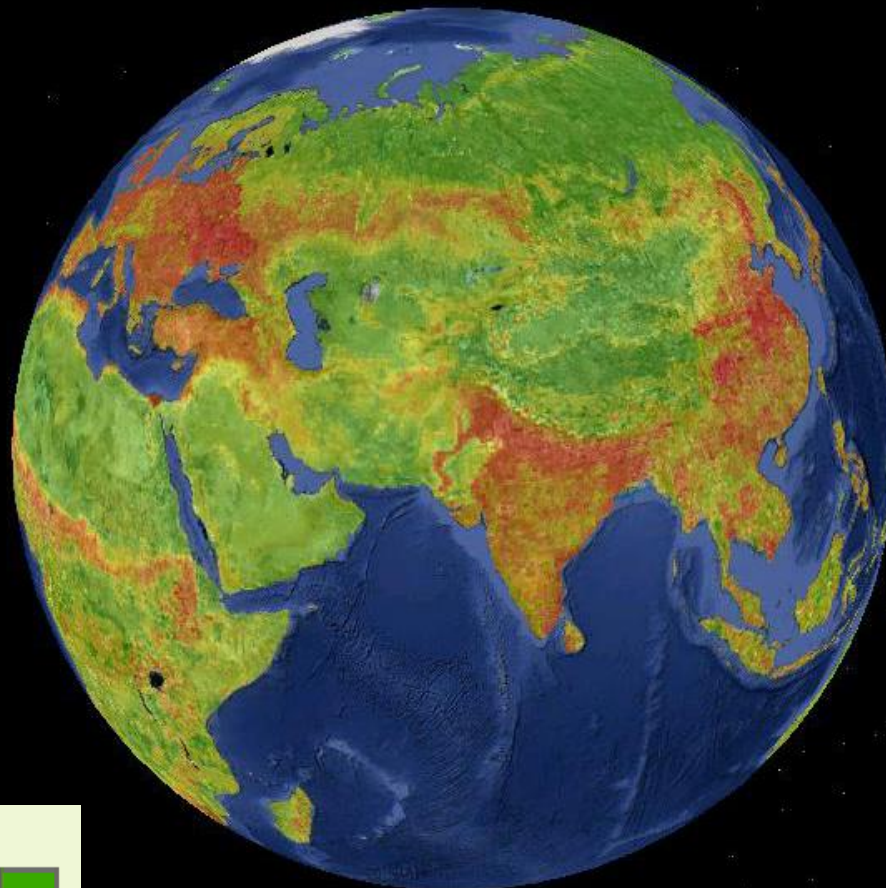
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2030



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Mean Species Abundance (%)



0 20 40 60 80 100

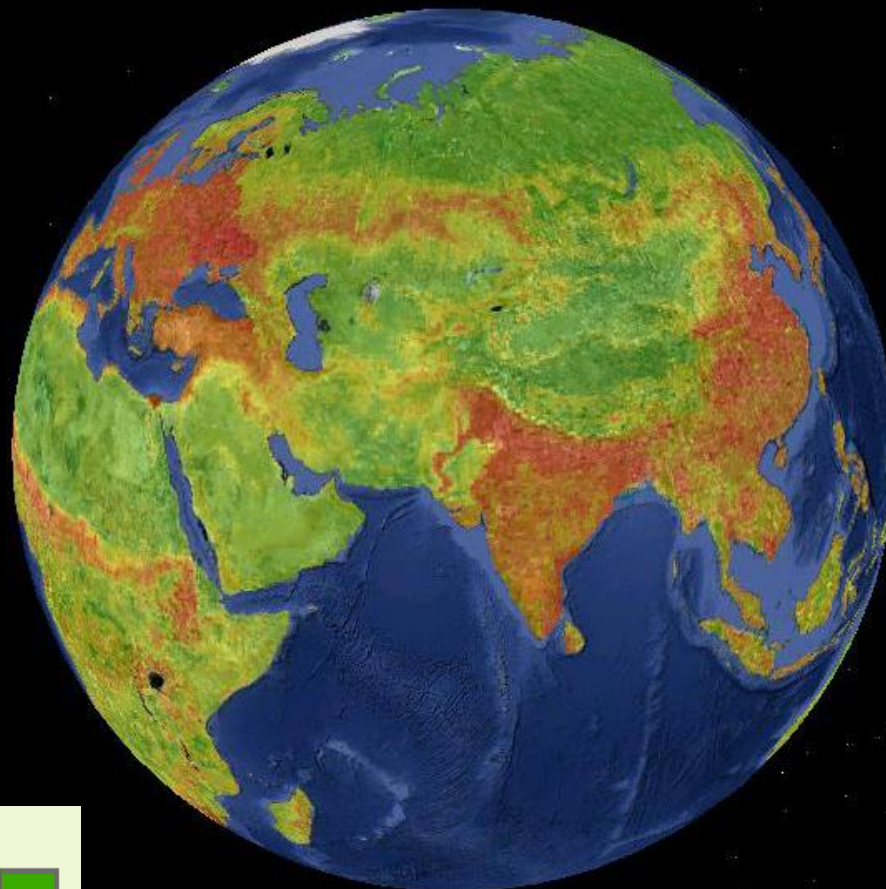
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2050



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Mean Species Abundance (%)



0 20 40 60 80 100

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**Why is this
happening?**

**How can we
stop this?**

Example : Kampala Wetland

Nakivubo swamp provides natural water purification and sewage treatment

**Nature Services
of swamp equal
USD 1 million -
1.75 million / year**



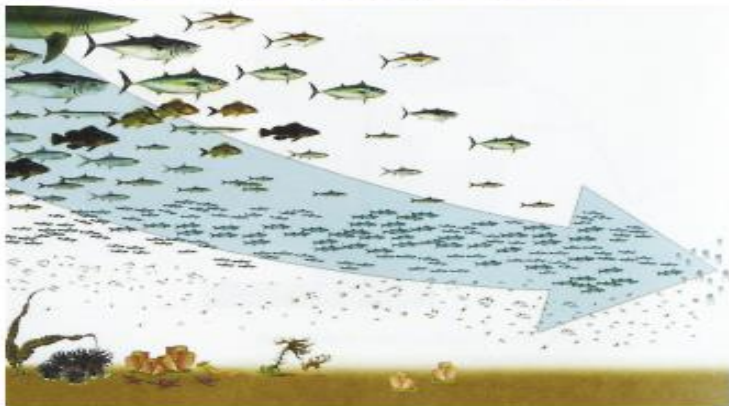
(Nakivubo now part of
city' s greenbelt zone)

**Can we make
sea fish last?**



GLOBAL LOSS OF FISHERIES **IS THERE A SOLUTION?**

Open access & perverse
subsidies drive fisheries losses



We are fishing down the food web to
ever smaller species

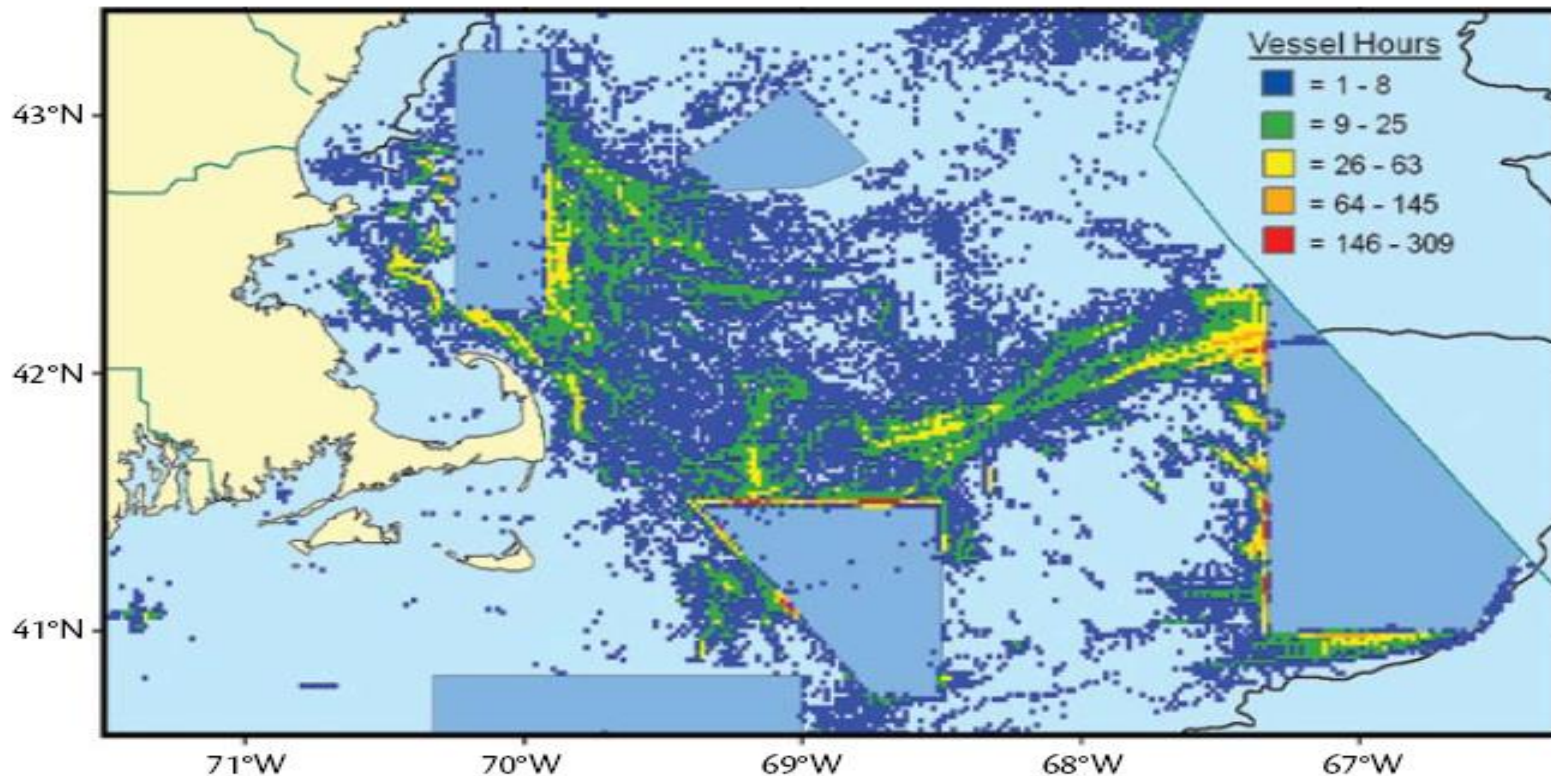
And do reserves work ?



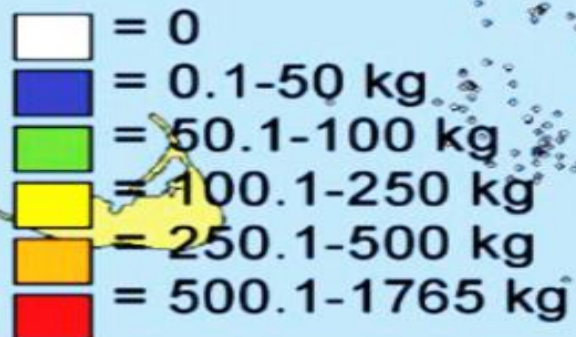
Reserves all over the world show
large increases in spawning stocks



Distribution of fishing effort around Georges Bank closed areas

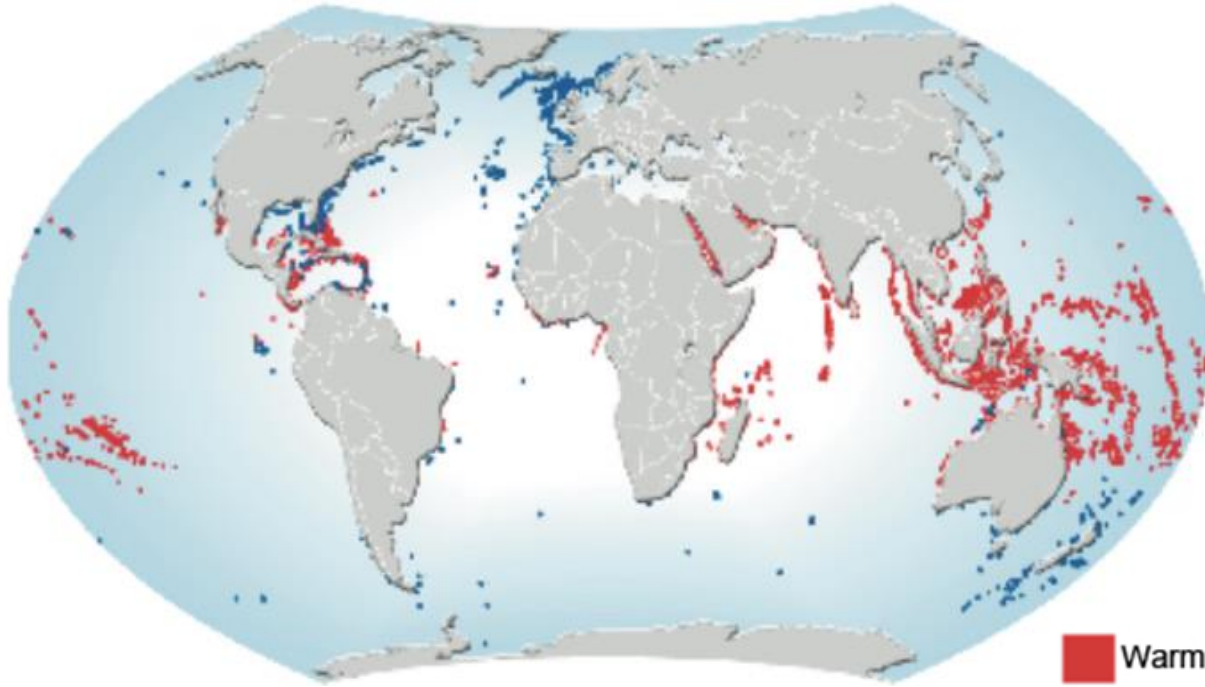


Haddock catch



Source: Fogarty et al. (2007)

And what's too late to stop?



Warm water
Cold water

We target:

450 ppm CO₂
(not 350 ppm)

2 °C increase
(not 1.5 °C)

Recognize & value “Natural Capital”



Thank You



www.gistadvisory.com

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The Economics of Ecosystems and Biodiversity