



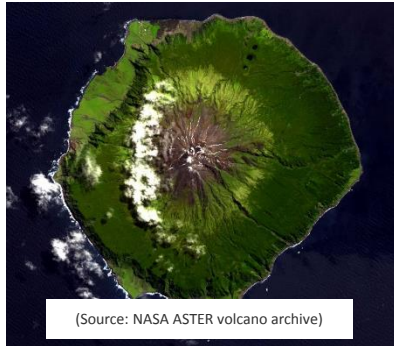
VALUING NATURE

Managing Marine Natural Capital: Assessing the Impact of Fisheries Management on the Utility of Recreational Sea Anglers

Candidate: Dr. Barnaby Andrews (UEA)

Supervisors: Dr. Kieran Hyder, Dr. Angela Muench
(Cefas) + Dr. Silvia Ferrini (CSERGE, UEA)

Dr. Barnaby Andrews: Background



- PhD: Quantifying the well-being benefits of urban green space.
- Value of Mitigating Volcanic Risks on Tristan da Cunha
- GIS Consultant
- Glass/Installation Artist
- Research Interests: spatial science, valuation, ecological psychology, decision heuristics

Why Examine the Utility of Recreational Sea Angling (RSA)

RSA is Important:

- Roughly 2% of the adult population participates
- Generates significant market and non-market benefits

HOWEVER.....

- Recreational catches impact stocks
- Catch restrictions are being introduced for the first time
- Impact of catch restrictions unknown



Using Choice Experiments to Measure the Impact of RSA Catch Restrictions

- Choice experiments allows us to observe changes in anglers preferences relative to changes in the characteristics of hypothetical fishing experiences

TRIP FEATURES		TRIP A	TRIP B	TRIP C
REGULATIONS	DAILY BAG (TAKE) LIMIT Number of fish you can <u>legally</u> keep per day.	4 Pollock	10 Cod	Do something other than saltwater fishing.
	MINIMUM SIZE LIMIT Smallest fish you can <u>legally</u> keep of this species.	23 inch Pollock	22 inch Cod	
CATCH	NUMBER OF LEGAL-SIZE FISH YOU CATCH These fish are <u>at least</u> <u>legal minimum size</u> . Some fish are released if you catch more than the daily bag limit.	10 Pollock	1 Cod	
	NUMBER OF UNDERSIZED FISH YOU CATCH These fish are <u>below</u> the <u>legal minimum size</u> . <u>All</u> of these fish <u>must</u> be released.	1 Pollock	3 Cod	
	NUMBER OF OTHER FISH YOU KEEP Other fish you catch on this trip that <u>can</u> be <u>legally kept</u> .	3 Cod 6 Haddock	1 Haddock 3 Pollock	
TRIP DETAILS	TRIP LENGTH Total time purchased for this trip.	8 Hours	12 Hours	
	TOTAL TRIP COST <u>YOUR share</u> of the fishing trip cost, including bait, ice, fishing equipment, daily license fees, boat rental fees, boat fuel, and round trip transportation costs associated with traveling to and from the fishing location. Travel costs may include vehicle fuel, car rental, tolls, airfare, and parking. This cost does <u>not</u> include the price of food or drink.	\$312	\$276	

- From this we can infer
 - mWTP for catch restrictions and other characteristics
 - Insights for co-management
 - Demand elasticity of RSA

(Source: Jarvis, 2011: <https://drum.lib.umd.edu/handle/1903/11556>)

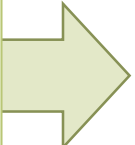
Candidate Host - Mutualisms



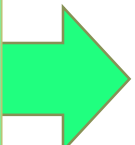
- Cefas providing access to Sea Angling Diary Project data and panel
- Providing access to RSA experts and networks
- Candidate brings experience in the design and analysis of valuation studies
- Collaboration between UEA and Cefas is aligned with the existing strategic alliance between these institutions (CCSUS)

Outputs and Outcomes

Outputs

- Peer Reviewed Journal Article
 - Report to DEFRA
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Outcomes

- Better understanding of the impact of management measures on the value of RSA
 - Recommendations for Future RSA Management
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Valuing Nature Community

- Improved understanding and representation of environmental variation in valuation
- Ensuring a consistent level of benefits through marine capital management