

PROTECTING DUGONGS CONSERVING SEAGRASS CHANGE FOR COMMUNITIES



# THEMATIC GROUP: XXX

INCEPTION WORKSHOP THE GEF DUGONG AND SEAGRASS CONSERVATION PROJECT 20-21 October 2015 Colombo, Sri Lanka

# **ADVANCED CONSERVATION STRATEGIES**

- We focus on outcomes, <u>incentives</u>, and sustainable finance (markets).
- Our foundation is science, yet we work and collaborate outside of science to <u>design</u> and implement new solutions and ventures.
- We work across sectors to integrate behavioral economics, finance, human-centered design, markets, science, and technology for organizations trying to <u>solve problems</u>.

# Incentives & Program Design

- a payment or concession to stimulate greater output or investment
- a thing that motivates or encourages one to do something



## WHO?

# What things?

Internally Motivated Incentives – "do the right thing"



Externally Motivated Incentives - value transfer mechanism



CASH

**PRODUCTIVE ASSETS** 

SERVICES

ACCESS TO CREDIT

Incentives & Program Design

- do or plan (something) with a specific purpose or intention in mind

- the most successful products and services embrace three design elements



**EMPATHY WITH USERS** 

#### A DISCIPLINE OF PROTOTYPING



TOLERANCE FOR FAILURE

"I HAVE NOT FAILED. I'VE JUST FOUND 10,000 WAYS THAT WON'T WORK." ~THOMAS EDISON

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# **Incentives** & Program Design

#### WHO'S YOUR "CUSTOMER"?



#### **EMPATHY WITH USERS**



How would you like it if the mouse did that to you?

VALUE TRANSFER MECHANISM



#### **EMPATHY WITH USERS**



# Tools to understand your target stakeholders

the ability to understand and share the feelings of another.









Central Chile, coastal zones, and fishing co-operatives (~40 fishers).

Managed through territorial user rights (TURFs). Local governance is often present.

Co-management plan approved by the government.

Co-operatives do day-to-day enforcement.



**Objective**: program that compensates fishers for opportunity costs of setting aside a portion of their TURF as a no-take zone with anti-poaching enforcement.

Outcome: A scalable program that provides supplementary revenue to fishers in exchange for actions that produce verified and enforced biodiversity benefits.

Challenge: (co)design a program that would result in a high percentage of fishing cooperatives participating (e.g. 50%).



#### **PROGRAM STRUCTURE CHARACTERISTICS**

- **1. CONTRACT LENGTH**
- 2. ANNUAL PAYMENT
- **3.** ANTI-POACHING REQUIREMENTS

#### **PROGRAM EXPECTED EFFICACY**

- **1.** INCREASE IN TARGETED RESOURCE (ECONOMIC)
- 2. INCREASE IN BIODIVERSITY (PRO-SOCIAL)

#### **PARTICIPANT CHARACTERISTICS**

- **1. TRUST: TRUST THAT FACILITATING CONDITIONS EXIST**
- **2. ATTITUDE: PERSPECTIVE ON THE PROGRAM**
- **3.** LIVELIHOOD: DEPENDENCE ON FISHING FOR LIVELIHOOD



Set de elección #1 Suponga que su caleta tuvo una asamblea para decidir participar en uno de los acuerdos de las áreas protegidas no extractivas que se muestran a continuación. Por favor lea cada par de acuerdos cuidadosamente y dígame por cuál votaría.			
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Duración del acuerdo PIOS	, ai	II # 1	
Pago anual a la caleta	1.8 millor	nes de pesos	
	2.7 millones de pesos		
	3.6 millor	nes de pesos	
	4.4 millor	nes de pesos	
	5.3 millones de pesos		
Requerimientos de monitoreo	Video costero fijo		
	nescadore	stero njo y monitoreo marino por	
Aumento en loco	Sin camb	io (0%)	
	Aumento	moderado (10%)	
	Gran aum	iento (20%)	
Aumento en la variedad de especies de peces	Sin can	Sat da alacción #1	
litorales de roca en la zona no extractiva	Aumen	Suponga que su caleta tuvo una asamblea para de	ecidir participar en uno de los acuerdos de las áreas protegidas no
	Gran at	extractivas que se muestran a continuación. Por fa	ivor lea cada par de acuerdos cuidadosamente y dígame por cuál
¿Votaría por la Propuesta A, la Propuesta B o no ele	giría ning	votaria.	
Continuer la rutina para los set de elección #2.41			
[Continual la futilla para los set de elección #2-4]		Atributos Dro	aram #2
		Duración del acuerdo	
			0
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		r ugo unuur u nu ouroui	2.7 millones de pesos
			3.6 millones de pesos
			4.4 millones de pesos
			5.3 millones de pesos
		Requerimientos de monitoreo	Video costero fijo
			Video costero fijo y monitoreo marino por
		A	Pescadores
		Aumento en 1000	Aumento moderado (10%)
			Gran aumento (20%)
		Aumento en la variedad de especies de peces	Sin cambio (0%)
		litorales de roca en la zona no extractiva	Aumento moderado (10%)
			Gran aumento (20%)
		¿Votaría por la Propuesta A, la Propuesta B o no e	elegiría ninguna de ellas?
		[Continuar la rutina para los set de elección #2-4]	



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Some factors had significant impact on fishers' intention to enroll. Built the most and least desirable program from a fisher's perspective.



- 50-73% in the most desirable program
- 10-32% in the undesirable program.
- Payments influenced participation overall by ~25%.
- A desirable program increased participation by 40% on average.



# <u>Trust</u>, livelihood dependence, and attitudes strongly influenced potential participation



#### You can get more non-trusters if you design a program that people want.



For fishers with an average level of dependence on fishing, the probability of participation increased between 40-47% across payment levels for the most desirable program.



Program desirability increases the likelihood that fishers with diversified livelihoods would participate

#### **DESIGNING WITH EMPATHY**

A human-centered approach provides tools to assess inherent trade-offs by predicting program participation that differ in attributes.

A human-centered approach emphasizes fisher preferences (and trade-offs) rather than top-down program structures based on *a priori* preferences of conservation or government organizations.

Other factors are often more important than money (or other VTM) with respect to return on participation.

Efficient and affordable tools exist, and can be customized based on place, objective, and budget.



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# Thank you. Questions?



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# Extra Slides Follow



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Landowners expressed a high stated willingness to participate.

Landowners were generally more willing to participate under three conditions:

- increased payments.
- increased expectations of program success.
- <u>low requirements for landowner</u> <u>involvement.</u>

Tierra del Fuego landowners may not express the same preference for autonomy that exists elsewhere.

Program duration, social norms associated with participation of other landowners, and <u>implementing</u> <u>organization</u> were not related to willingness to participate.



Objective: remove non-native beavers from Tierra del Fuego (14 million hectares).

Outcome: prevent the spread of non-native beavers and impacts in South America and restore 20,000 km<sup>2</sup> of riparian areas

Challenge: (co)design a program that is supported by <u>all</u> landowners in Chile and Argentina. Access to private property is critical.



- Vignettes are hypothetical scenarios.
- Each vignette is unique, and respondents are randomly assigned a subset of all possible vignettes (e.g., 4 hypothetical programs).
- Respondents consider multiple independent factors simultaneously.
  - **1. CONTRACT LENGTH**
  - **2.** REQUIRED LEVEL OF INVOLVEMENT
  - **3. PROBABILITY OF SUCCESS**
  - 4. IMPLEMENTING ORGANIZATION
  - 5. MONTHLY PAYMENT
  - **6. PARTICIPATION OF OTHER LANDOWNERS**



The program would span <u>2 years</u> and would rely on <u>you</u> and your workers to kill beavers. You would report them to the program and allow program experts to verify the kills. The eradication program will be run by an <u>NGO</u>. You will be paid <u>\$400 each month</u> for your participation, and an additional \$10 for each verified beaver kill. Right now you <u>haven't heard of any other landowners participating</u>, but the program organizers estimate that there is a <u>66%</u> <u>chance</u> that the program will be successful if private landowners like you participate.

How likely are you to participate in the program? (1-7)

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Choice experiments allow you to evaluate payment metrics (e.g., willingness to pay). Choice experiments allow you to identify trade-offs.



#### **Desirable program**

- 2 year contract more desirable than 10 year
- Participation is 20% more on average.
- Over 50% participation is possible with the lowest payment and a 2-year contract.

#### WHAT ARE YOUR DESIGN PRINCIPLES?

- 1. Define clear group boundaries.
- 2. Match rules governing use of common goods to local needs and conditions.
- 3. Ensure that those affected by the rules can participate in modifying the rules.
- 4. Make sure the rule-making rights of community members are respected by outside authorities.
- 5. Develop a system, carried out by community members, for monitoring members' behavior.
- 6. Use graduated sanctions for rule violators.
- 7. Provide accessible, low-cost means for dispute resolution.
- 8. Build responsibility for governing the common resource in nested tiers from the lowest level up to the entire interconnected system.

