

THE INFLUENCE OF PAYMENTS FOR ECOSYSTEM SERVICES ON BEHAVIOURS IN CAMBODIA

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AICHI TARGET 3
ON POSITIVE INCENTIVES:

CAN MARKET-BASED INSTRUMENTS MAKE A DIFFERENCE?

RESULTS FROM
THE INVALUABLE PROJECT

THURSDAY, 9 OCTOBER 2014,
PYEONGCHANG (REPUBLIC OF KOREA)



CONTEXT

COP NEGOTIATIONS

- Item 12: technical and scientific needs:
 - Understanding **behavioral change** associated with economic instruments
 - Evaluating the **performance** of economic instruments
- Item 14 on financial flows
 - voluntary **guidelines on safeguards** in biodiversity financing mechanisms

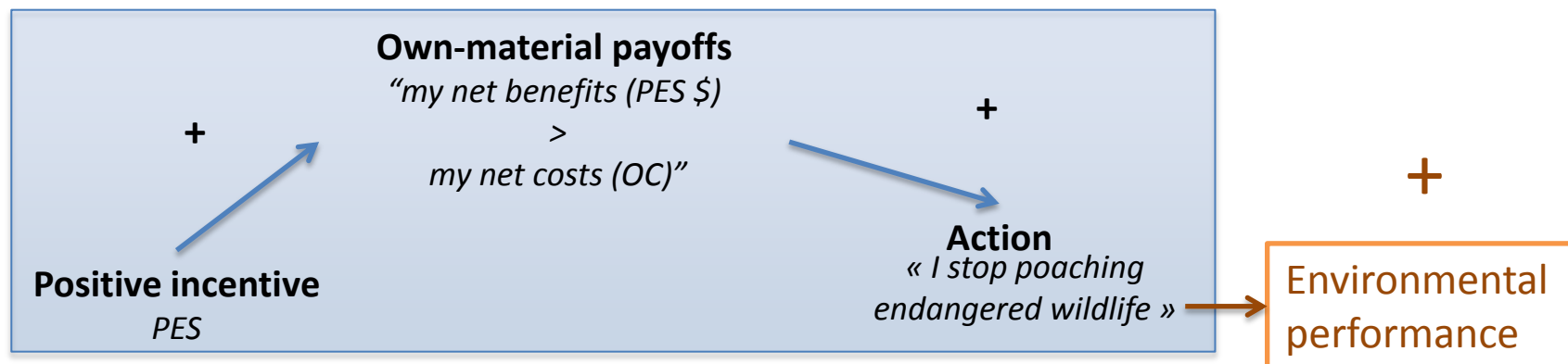
SCIENTIFIC PROGRESS ON PES EVALUATION

- Progress have been made in terms of impact evaluation of PES:
 - Refined methods (e.g. matching)
 - Better understanding of heterogeneity of impact
- However, impact evaluations usually:
 - Focus on **observable variables** (deforestation, income)
 - Assess the **short-term effectiveness** (while payments are still running)
- **Hidden effects** on motivations and long-term effects on behaviors are usually overlooked

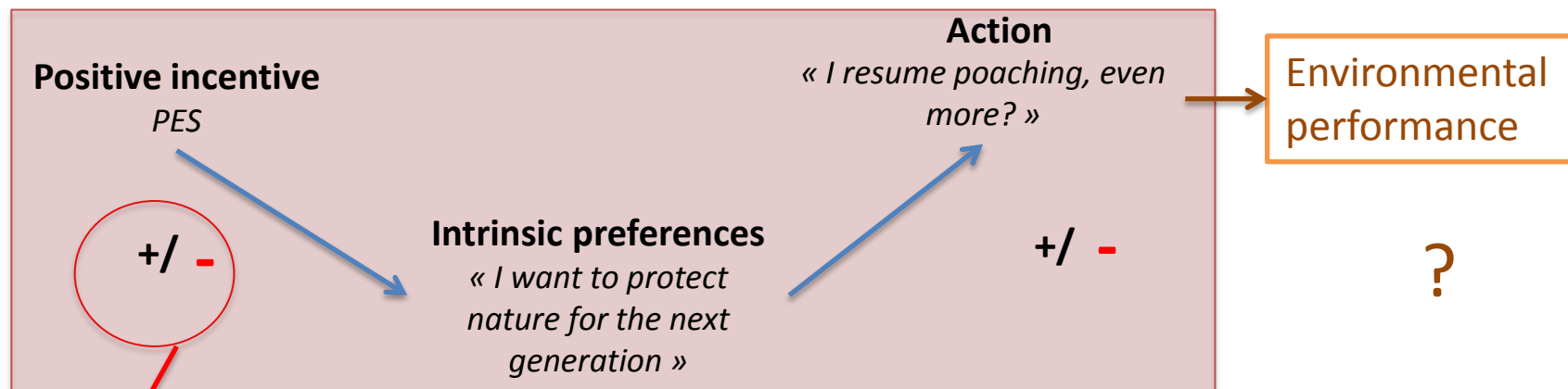


Motivation crowding theory

Homo economicus



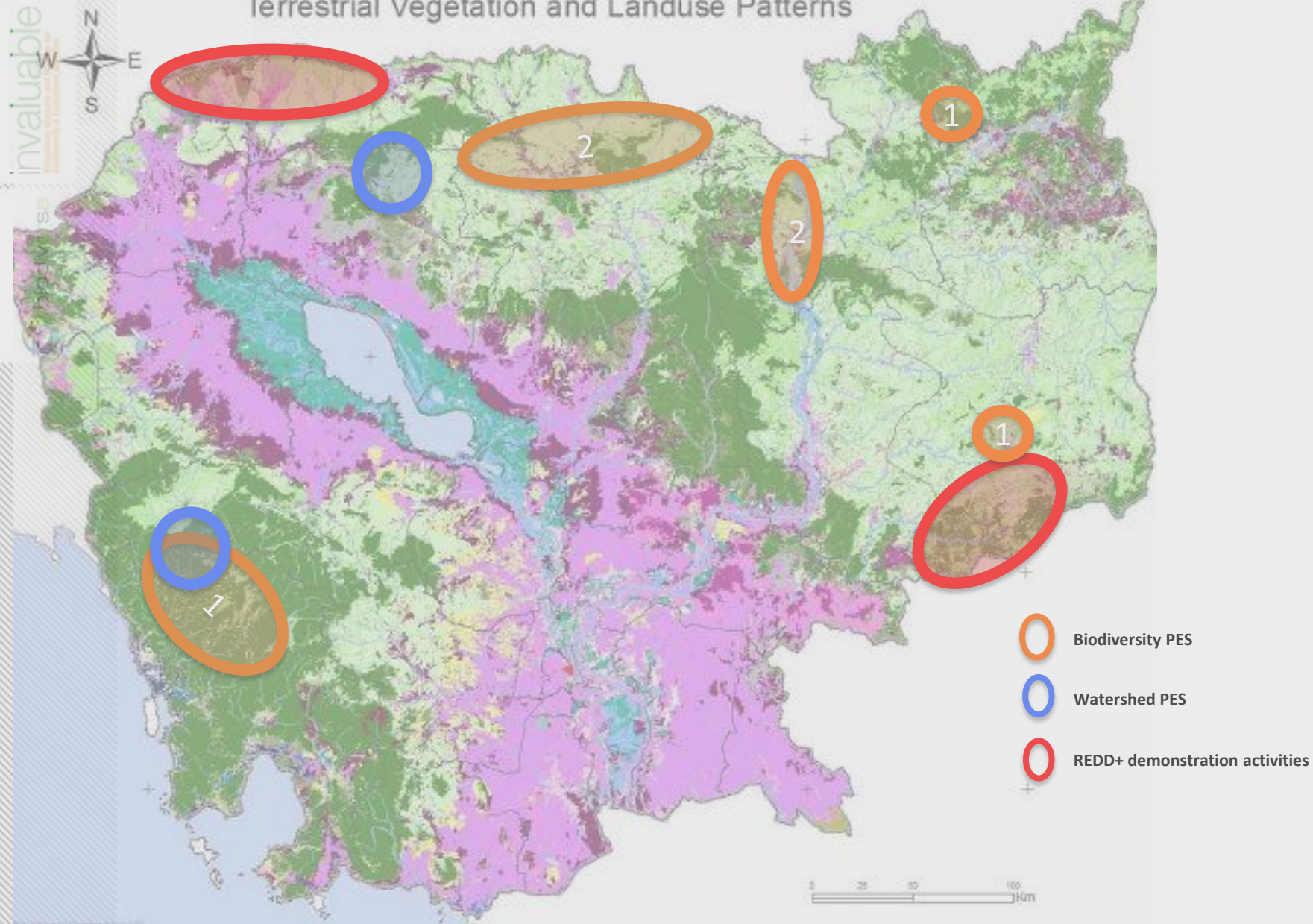
Motivation crowding theory



Homo socialis

- Different mechanisms (control aversion, changes in values and mindsets...)
- Different factors (type of scheme, preexisting motivations, management practices...)

Terrestrial Vegetation and Landuse Patterns



Terrestrial Vegetation and Landuse Patterns



Scheme	Directness of transfer	Link between conditions and level of payment: commodification	Importance of the economic incentive vs. other interventions	Significance at individual and landscape levels
1. Conservation agreements (2006 -)	+ CI → Commune & CBOs → individual farmers (Non-voluntary)	+ Compliance with land-use, non-logging & non-hunting rules (livelihood, law) → Level of payment do not depend on level of ES / effort	+ Mix of communal in-kind and individual in-cash payments Community-based institutions Strong law enforcement	++ 17 out of 23 villages around CCPF (920 HH) Between 8000 to 21000USD/commune / Year ; 100 and 300USD / HH/ year
2. Turtle nest direct payments (2008-)	+++ CI → individual farmers (voluntary)	++ Stop harvest eggs & protection of nests (tradition) → # hatchlings	+++ Monetary and individual payment	+ About 26 people in the whole landscape Up to 1000USD/HH/Year

Method

- Survey (N= 205 + 120)
- With-without impact assessment, bias control
- 3 main types of motivations “to conserve surrounding forests”: utilitarian, monetary, intrinsic



Impact on motivations

- PES emphasized monetary motives ...
- ... over preexisting utilitarian motives and, to some extent, intrinsic motives

Motivation classes	Benefit name	Frequency analysis	
		<i>Control</i> <i>total %</i>	<i>Treated</i> <i>total %</i>
MONETARY	NTFPs / Luxury wood / Wildlife hunting / Ecotourism	19	27
UTILITARIAN	Soil fertility / Climate regulation / Food & medicine / Timber for housing	68	62
INTRINSIC	Next generation / Wildlife habitat	13	11

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	Mean Non-monetary	Mean Monetary
Average payment per year	154 USD	261 USD

Underlying mechanisms

- Changes in motivations directly induced by the scheme are mainly driven by the level of payments people receive at the individual level.
- CI message focus on land-sparing-based livelihood strategies and forest-based income generation strategy

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Link with env. Effectiveness

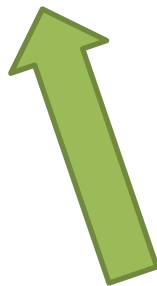
- Monetary-motivated people intend to break conservation rules more than others if payments stop

Behavior	After payments stop	
	Non-monetary	Monetary
Participation in illegal trades	16%	37%
Opening illegal upland plots	7.2%	16.3%



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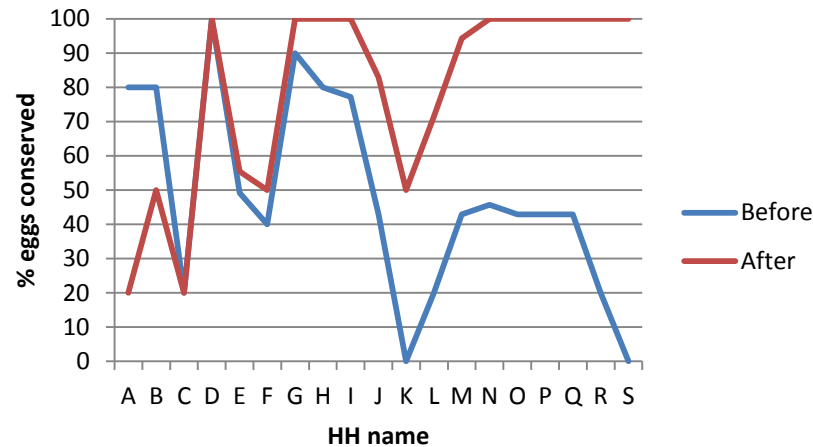
Method

- Survey (N=19)
- Before-after comparison of behaviors with qualitative justification of insignificant bias
- Calculate the probability to conserve turtle eggs based on 3 behavior changes induced by PES



Crowding in ?

- People would conserve more after payments stop.



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Crowding in ?

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Reason	Frequency (%)
Increased awareness about conservation importance of turtles	100
Habit to protect	21
Care for the next generation	26
Future consumption	5
Ecotourism	5



Qualitative explanation of crowding in

- Most quoted reason is the fact that people “learn that this species is critically endangered and that it is important to help increasing its population “

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Behavioral additionality

LOW

Relatives strongly influence participation

Monetary reasons do not motivate participation

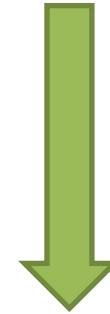
Low education

HIGH

Relatives do not influence participation

Monetary reasons strongly motivate participation

High education



Quantitative explanation of differences

- Type of motivations to participate in the scheme (monetary & voluntary vs. coerced & social)
- Personal characteristics (education)



Qualitative explanation of crowding in

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Concluding remarks (1/3)

On the links between motivations, long-term behavior and sustainability

- ❖ PES seems to influence motivations and behavioral implications of motivational changes seem to remain hidden in the short run because PES widely leads to intended behavioral changes.
 - ❖ However, behavioral implications of motivation change become visible when the payments stop (*a realistic scenario*)
 - ❖ It poses problems for the sustainability of environmental effects when payments lead to higher prevalence of monetary motives
- Need to take these issues into account (anticipate & monitor) when designing and evaluating PES

Concluding remarks (2/3)

On the need to better take into account factors affecting motivations

- ❖ We identified a number of transversal factors that might help anticipating adverse effects associated with motivations
- ❖ A. Preexisting motivations and personal characteristics of beneficiaries: who do we pay?
 - ❖ e.g. dominant preexisting motivations have more chance to be affected
- ❖ B. Payment is not only about affecting costs and benefits of target behaviors & the nature of the message conveyed with or by the payment matters
 - ❖ e.g. promoting land sparing, raising awareness about conservation

Concluding remarks (3/3)

On the need to conduct further research with appropriate research design

- ❖ Changing scale, comparison of cases and generalization of conclusions: more cases needed
 - ❖ Hard to jump to a conclusion like: direct payments are more likely to strengthen motivation crowding.
 - ❖ We are talking about 2 different behaviors (tradition vs. key livelihood-supporting activities) and about 2 different scales (small vs. large scale projects)
- ❖ Missing mechanisms? Literature reveals many more factors and mechanisms, which we did not evidence in our case
 - ❖ E.g. negative impact of scheme management such as bad perception about distributive fairness...see review by Rode et al.
- ❖ Appropriate research design and better planning of evaluation studies
 - ❖ Long-term longitudinal studies
 - ❖ Counterfactual design



Thanks for your attention