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Institutions, Payment for Ecosystem Services and Collective Action
Importance of collective action for PES
- Lack of attention in the literature
- Implications of alternative payment types for collective action and conditionality
- Some implications and research questions

More questions than answers
PES: conditionality
Without conditionality...
Payment for environmental services

Initial programs: individual contracts for individual landholders

Subsequent expansion to collective contracts

Photo source: FONAFIFO
Transaction costs

- Identify, negotiate, establish contracts, monitor, enforce, pay.
- ranged from $1.48 to $14.78 per tCO$_2$ in CDM carbon sequestration projects (Michaelowa and Jotzo, 2005)

Image source: Chicago Climate Exchange
Lands held in common

- About a quarter of developing country forests are community owned or managed (Rights & Resources, 2012)

- They must contract as a group and absorb transaction costs internally
PES literature focuses primarily on individual contracts
Commons are different
Commons literature focuses little on effects of financial incentives

“It worked where it was going to work anyway”
Collective action requires local rules, which take time to establish.

- Connect your "..." to the central picture.
- Then add second and third level branches.
- Curve your branches as it helps the eye and mind — straight is boring.
- Use an appropriate central picture for the theme of your mind map.
- Use colour and pictures — they enhance creativity and make your mind map more memorable.
- Make it fun and it will be memorable.

For more comprehensive info, seek out books by Tony Buzan and visit his websites.
It requires trust, which takes time to build
High local demand for well-managed resource facilitates collective action
How to secure collective action in PES?

Payment types and collective action
Alternative payment types and collective action

- Cash
- Conditional land tenure security
- In-kind services & development support
  - training, employment, market access, infrastructure

Image sources: USAID
Cash

- Direct
- Facilitates annual payments
- Divisible
How do people respond to money?
But...

- Substantial experimental evidence of unexpected response to incentives

Image sources: galleryhip.com, dircoolclips.com
Acceptance of Swiss nuclear waste facility, by compensation amount (Frey & Olberholzer-Gee 1997)

![Bar chart showing acceptance rates by compensation amount.](chart.png)

- 51% for 'none'
- 25% for $2,000
- 25% for $4,000
- 25% for $6,000

% yes, by compensation amount
Incidence of late arrival in day care centers, before and after initiation of small fine
(Gneezy & Rusticini 2000)

**Figure 1.** Average number of late-coming parents, per week
Social norms have independent motivating power (Cleaver 2000, Vatn 2009)

Social vs. money ‘markets’ (Heyman & Ariely 2004)

Motivations not additive
- (Frey & Oberholzer-Gee, 1997)
Cash and collective action
Individual cash payments to stop freeriding (Narloch et al. 2012)
Collective cash payments

Image source: timeshighereducation.co.uk

Image source: www.tos.ohio.go
Supportive program design
(Child & Clayton, 2004)
Mexican PES villages: will you work for two hours to help pick up trash in your village?

(Kerr, Vardhan, & Jindal 2012)
### Five villages, 560 people

<table>
<thead>
<tr>
<th>Village</th>
<th>Community work frequency</th>
<th>% familiar with PES payment allocation</th>
<th>% who say it’s common to have a good leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Annually</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Monthly</td>
<td>55</td>
<td>22</td>
</tr>
<tr>
<td>3</td>
<td>Weekly</td>
<td>67</td>
<td>43</td>
</tr>
<tr>
<td>4</td>
<td>Weekly</td>
<td>44</td>
<td>21</td>
</tr>
<tr>
<td>5</td>
<td>Weekly</td>
<td>83</td>
<td>58</td>
</tr>
</tbody>
</table>
% who participated in trash pick-up, by incentive

- No pay: 25
- Pay: 31
- Community pay: 19
% who participated in trash pick-up, by incentive and village

- Yellow bars: no pay
- Blue bars: pay
- Pink bars: community pay

<table>
<thead>
<tr>
<th>Village</th>
<th>No Pay</th>
<th>Pay</th>
<th>Community Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<td></td>
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<td>5</td>
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<td></td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
When to use carrots (payment) vs. sticks (regulation)?

- Cooperative groups respond better to carrots
- Uncooperative groups better to sticks (Vollan 2008)
Conditional land tenure security & collective action

Sumberjaya, Indonesia
In-kind services/development support

Image source: thehindu.com

Image source: aljazeera.com
In-kind payment and collective action
Payment types and conditionality

- Cash
- Conditional land tenure security
- In-kind services & development support
  - training, employment, market access, infrastructure

Image sources: USAID
1. For groups with less established cooperation, there is a tradeoff between approaches promoting conditionality and those promoting collective action.

2. Where there is such a tradeoff:
   • ...if collective action is a prerequisite for successful conservation behavior,
   • ...then approaches that promote collective action may be a better bet than those that promote conditionality.
Is conditionality always the right model?
Principal-agent problem (Bromley, 2008)

- Compliance, not agreement
What happens when the money runs out?
(Lapinski, Kerr & Zhao 2013)
NSF project on influence of short-term incentives on social norms and behaviors
(Lapinski, Kerr & Zhao 2013)
Noneconomic sources of motivation: Sumberjaya, Indonesia
Self-targeting and peer pressure

(Jindal et al., 2012)
PES is usually top-down, may ignore local knowledge
Reconciling potential tradeoffs between promoting collective action and conditionality

- Conservation Stewards Program
Three alternative ways to think about conditionality (van Noordwijk & Leimona, 2010)

1. PES as commodity (e.g. carbon market)
   - Actual delivery of ES
2. PES as compensation for opportunities lost (e.g. typical PES)
   - Maintenance of ecosystem in desirable state
   - Performance of agreed actions
3. PES as co-investment in mutually agreed upon management plan (more of a partnership)
Can different conditionality approaches operate simultaneously at different scales?
Why should the central government get cash but the actual ES providers don’t?
Main conclusion

- Financial incentives are powerful but less straightforward than they appear, so care is needed in their use
Some research questions

- Motivation crowding out: under what conditions?
  - Experimental evidence but what about real field settings?

- Institutional crowding out:
  - Under what conditions do cash payments undermine institution-building for collective action?
  - What steps to avoid it?
Research questions (cont.)

- When is strict conditionality the right approach and when is it not?
- How does an arrangement that focuses less on conditionality avoid devolving back to the ICDP experience?
What approaches to promote institution-building, & when to use them?

- CSP approach?
  - Long preparation to identify different interests
  - Multiple reward types to address those different interests
- Financial incentives with a focus on transparency?
How will different institutional arrangements & different reward types coexist at different scales and different cases?
For more details see:

References

- Bromley, D. 2008. Incentive-compatible institutional design: who’s in charge here? Keynote address for a conference “Designing Pro-Poor Rewards for Ecosystem Services” sponsored by the Land Tenure Center, University of Wisconsin, Madison, April 7, 2008.