Supporting Ecosystem Services provision by Agricultural System: potential and limits of policy instruments in Costa Rica and France

M. Bonin (CIRAD/UNA), JF Le Coq (CIRAD/UNA), O Aznar (VetAgro Sup)

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Objective and methodology

• Draw insight on the implementation of two policy instruments thanks to empirical evidences confronted to theoretical references

• Comparative analysis of two policy instruments and their implementation in local case studies:
  • Agri-environmental measures (*Mesures agri-environnementales, MAE*) in France, case of Guadeloupe
  • Program of recognition for environmental benefits (*Reconocimiento for beneficios ambientales, RBA*) in Costa Rica, case of Guanacaste

• A two level analysis
  ✓ Description of policy design and implementation
  ✓ Effect analysis based on primary data at households level
A framework of analysis based on the literature on PES instruments

<table>
<thead>
<tr>
<th>Criteria of analysis of PES</th>
<th>Effectiveness (and efficiency)</th>
<th>Additionality</th>
<th>Legitimacy (implementation organization, beneficiary)</th>
<th>Distributional implications</th>
<th>Equity</th>
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<tbody>
<tr>
<td>Engel et al, 2008; Wunder, 2013</td>
<td>Muradian et al., 2013; Corbera et al., 2007</td>
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Two cases studies

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<th>RBA Costa Rica / Guanacaste</th>
<th>MAE France / Guadeloupe</th>
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<td><strong>Implementation</strong></td>
<td>From 2007</td>
<td>From 2007</td>
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<tr>
<td><strong>Budget</strong></td>
<td>17,6 M$ for 2006-2010</td>
<td>22,4M$ for 2007-2013</td>
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<td><strong>Design and administration</strong></td>
<td>Extension service of Ministry of agriculture</td>
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<td><strong>Objective</strong></td>
<td>Increase productivity + improvement of water and soil</td>
<td>Reduce the use of pesticides</td>
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| **Actions**                | Direct incentive to farmers’ “environmental-friendly” investments (within a list of 81 eligible technology ), from 20 to 30% of the total cost excluding labour costs. Conditional payment (ex-post) | Direct incentive: 100 % of the cost of change of practice to adopt “environmental-friendly” practices  
Practice of fallow (from 658€ to 900€/ha/year) |
Local context and material

RBA in Costa Rica

• Case of North of Guanacaste region
  – Dry area – Water issue
  – Livestock extensive raising
  – Main sub sector and area for RBA use

• Survey (in march – may 2014)
  – Civil servants
  – 63 households random from RBA database

MAE in France

• Case of Guadeloupe
  – Dominant agricultural sectors (banana, sugar cane) that benefit from political support coexist with a pluriactive agriculture oriented to local market

• Survey (in February – April 2012)
  – Civil servants
  – 44 beneficiaries in a selection of agri-environmental operators
Implementation process, use of the instrument

- **RBA and MAE**: Lack of demand from potential beneficiaries
  - Lack of information, of promotion
  - Administrative complexity
  - Low financial amount (**RBA**)

- **MAE**: marginal funding compared to financial support to production

- **RBA**: almost the only direct financial support to farmers from the Ministry of Agriculture
Effectiveness (to provide ES) and additionality

• Effectiveness
  - **RBA and MAE**: Often limited because low contracting, spatial dispersion of parcels under contract
  - **MAE**: higher when involvement of agri-environmental operator from environmental institution or association in implementation

• Additionnality
  - **RBA Guanacaste**: Clear positive effect on fixed capital (building, equipment, machine). No significant effect on specific investment for environmental practices adoption (silvopastoral management, pasture optimization, fodder production), (Le Coq et al, 2014)
  - **MAE Guadeloupe**: No additionality, financial support for existing practices (Bonin et al, 2013)
Distributional implications - Equity

• **MAE Guadeloupe:**
  – Problem of access for small and pluriactive farmers
  – Maintain the existing unequal distribution of agricultural subsidies. Concentration of the budget on the dominant sectors (banana): 56% of the global budget of MAE (2009) / 10% of farms producing banana

• **RBA Guanacaste:**
  – Limited restrictive access condition to program
  – Clear orientation towards small and medium holders.
## Legitimacy

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<th>Organizations in charge of the implementation</th>
<th>Agri-environmental issues</th>
<th>Distribution of economic outcomes</th>
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<td><strong>MAE and RBA</strong>:</td>
<td>Legitimacy of public intervention on agri-environmental issues arise from negative environmental externalities that are not regulated by the market (public good), need for public policy in a context of market liberalization, removal of barriers to international trade (MAE in “green box” of WTO, RBA in the rural development pillar of agricultural sector strategy)</td>
<td><strong>MAE (Guadeloupe)</strong>: unequal distribution of agricultural subsidies as a result of power asymmetry (agricultural lobbys). No implementation of aid capping</td>
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<td><strong>Beneficiaries</strong></td>
<td><strong>MAE</strong>: raising awareness of the need to reduce the use of pesticides by banana producers in Guadeloupe following a serious pollution (chlordecone)</td>
<td><strong>MAE (Guadeloupe)</strong>: Denunciation from small and medium producers of the concentration of public funds on the largest farms in Guadeloupe</td>
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<td><strong>RBA</strong>: diversity from awareness of preserving natural resources to an opportunity of intensification of cattle raising</td>
<td><strong>RBA</strong>: no distribution issue denunciation, but negative perception of the very limited supports regarding investment done</td>
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Conclusion

• Proximity of the two instruments (RBA and MAE)
• Efficiency and additionality are limited
• Difference regarding equity and legitimacy issues (although Guadeloupe is different from France conclusion)
• In Costa Rica, RBA is the main policy instrument / in France, MAE is a policy instrument among others
• In Costa Rica, RBA: global approach with investment at farm level / In France, alternating between global approach at farm level and MAE contract at plot level
• Research perspective: RBA and MAE as part of a policy mix (conservation and agricultural policies).