Aligning ecological fiscal transfers in national and state policy mixes

Irene Ring, Peter H. May and Rui Santos
Overview

1. What are ecological fiscal transfers?
2. Ecological fiscal transfers in POLICYMIX case studies
   - Brazil
   - Portugal
   - Germany
3. Aligning ecological fiscal transfers in policy mixes
1. What are ecological fiscal transfers?

**Fiscal transfer schemes:**
Public revenue is redistributed through transfers from national and subnational governments to local governments

<table>
<thead>
<tr>
<th>Federal</th>
<th>State (Länder)</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>Local</td>
<td></td>
</tr>
</tbody>
</table>

**Purpose:**
- Help lower-tier governments cover their expenditure in providing public goods and services
- Compensate decentralised governments for expenditure in providing spillover benefits to areas beyond their boundaries

Ring 2008
Mostly not considered:
Ecological services involving spatial externalities: spillover benefits

Why consider fiscal transfer systems for conservation purposes?

Substantial source of income for subnational governments:
e.g., on average 60% in developing and transition countries,
non-Nordic Europe 46%, Nordic Europe 29%

Fiscal compensation today

Urban agglomerations

Rural and remote areas

Mostly not considered:
Ecological services involving spatial externalities: spillover benefits
Rationales for ecological fiscal transfers

Benefits:
Goods and services of national and global relevance

Costs:
Regionally and sectorally unequal distribution

- Environmental services involving **spatial externalities**: Local / state costs and spillover benefits
- **Opportunity costs** of conservation; usually reduced tax income (land, business, income taxes)
- Conservation **management costs**
- **Fiscal equalisation** / distributive fairness

Ring et al. in POLICYMIX Report No. 2/2011
2. Ecological fiscal transfers (EFT) in POLICYMIX case studies

- **Impact evaluation** of existing EFT to the local level:
  - Brazil (cross-state comparison, NW Mato Grosso)
  - Portugal

- **Scenario evaluation** of EFT as a new instrument from federal to state level:
  - Germany
Ecological fiscal transfers in practice

**Portugal**

Local Finances Law 2007

- promote sustainable local development
- Natura 2000 and other nationally protected areas as indicators for fiscal transfers to municipalities

**Brazil (since 1991)**

13 out of 26 states consider protected areas for distributing state-level value-added tax to municipalities (ICMS Ecológico)

Ring et al. in POLICYMIX Report No. 2/2011
# Brazilian states with ICMS Ecológico (ICMS-E)

<table>
<thead>
<tr>
<th>State</th>
<th>Year</th>
<th>Environmental criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Biodiversity conservation (%)</td>
</tr>
<tr>
<td>Paraná</td>
<td>1991</td>
<td>2.5</td>
</tr>
<tr>
<td>São Paulo</td>
<td>1993</td>
<td>0.5</td>
</tr>
<tr>
<td>Minas Gerais</td>
<td>1995</td>
<td>0.5</td>
</tr>
<tr>
<td>Rondônia</td>
<td>1996</td>
<td>5.0</td>
</tr>
<tr>
<td>Amapá</td>
<td>1996</td>
<td>1.4</td>
</tr>
<tr>
<td>Rio Grande do Sul</td>
<td>1998</td>
<td>7.0 (¹)</td>
</tr>
<tr>
<td>Mato Grosso</td>
<td>2001</td>
<td>5.0</td>
</tr>
<tr>
<td>Mato Grosso do Sul</td>
<td>2001</td>
<td>5.0</td>
</tr>
<tr>
<td>Pernambuco</td>
<td>2001</td>
<td>1.0</td>
</tr>
<tr>
<td>Tocantins</td>
<td>2002</td>
<td>3.5</td>
</tr>
<tr>
<td>Acre (²)</td>
<td>2004</td>
<td>20</td>
</tr>
<tr>
<td>Rio de Janeiro</td>
<td>2007</td>
<td>1.125</td>
</tr>
<tr>
<td>Goiás (²)</td>
<td>2007</td>
<td>5.0</td>
</tr>
<tr>
<td>Ceará</td>
<td>2007</td>
<td>-</td>
</tr>
<tr>
<td>Piauí</td>
<td>2008</td>
<td>-</td>
</tr>
<tr>
<td>Pará (²)</td>
<td></td>
<td>Undergoing definition</td>
</tr>
</tbody>
</table>

Ring et al. in POLICYMIX Report No. 2/2011
Evaluation of EFT in the policy mix

Effectiveness?
Could be related to the quantity and quality of the conservation indicator that is newly introduced in fiscal transfers, here protected areas (PA)

Recent introduction:
Changed revenues due to EFT / Protected areas

Ring et al. in POLICYMIX Report No. 2/2011
Growth in protected areas up to 1991 and from 1992 to 2009, Paraná, Brazil

<table>
<thead>
<tr>
<th>Protected areas</th>
<th>Prior to 1991 (ha)</th>
<th>Up to August 2009 (ha)</th>
<th>Increase (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal conservation units</td>
<td>584,622.98</td>
<td>714,913.10</td>
<td>22.3</td>
</tr>
<tr>
<td>State conservation units</td>
<td>118,163.59</td>
<td>970,639.05</td>
<td>721.4</td>
</tr>
<tr>
<td>Municipal conservation units</td>
<td>8,485.50</td>
<td>231,072.02</td>
<td>11,338.8</td>
</tr>
<tr>
<td>Indigenous areas</td>
<td>81,500.74</td>
<td>83,245.44</td>
<td>2.1</td>
</tr>
<tr>
<td>RPPN</td>
<td>0</td>
<td>42,012.09</td>
<td>0</td>
</tr>
<tr>
<td>Faxinais (traditional community)</td>
<td>0</td>
<td>17,014.56</td>
<td>0</td>
</tr>
<tr>
<td>Permanent Protection Areas - APP</td>
<td>0</td>
<td>17,107.69</td>
<td>0</td>
</tr>
<tr>
<td>Legal Reserves – RL</td>
<td>0</td>
<td>16,637.73</td>
<td>0</td>
</tr>
<tr>
<td>Special Sites – SE</td>
<td>0</td>
<td>1,101.62</td>
<td>0</td>
</tr>
<tr>
<td>Other connective forests – OFC</td>
<td>0</td>
<td>3,245.62</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>792,772.81</td>
<td>2,096,988.92</td>
<td>164.5</td>
</tr>
</tbody>
</table>

Cross-state comparison: Creation of protected areas before and after ICMS-E

No clear explanatory power of before/after ICMS-E introduction in relation to average PA creation per year

May et al., POLICYMIX Report No. 5/2012
Creation of protected areas before and after ICMS-E

No clear explanatory power of before/after ICMS-E introduction in relation to average PA creation per year

May et al., POLICYMIX Report No. 5/2012
Detailed analysis of ICMS-E in North West Mato Grosso

- 5% for Conservation Units and Indigenous Lands (2002)
- Is the ICMS-E an effective instrument for conservation?
- How fair is the intra-municipal allocation of ICMS-E revenues?
- What legal and institutional arrangements could allow an improvement of effectiveness and equity effects?
- Comparison of 2 municipalities Juína and Cotriguaçu

ICMS-E revenues can compete with revenues from livestock and logging! But need for capacity building and qualitative criteria.
Art 6 – Promotion of Local Sustainability

Financial regime of municipalities shall contribute to the promotion of economic development, environmental preservation and social welfare.

This objective is assured namely by the:

Positive discrimination of municipalities with area under Protected Areas or Natura 2000 status, in the scope of FGM (General Municipal Fund)

Santos et al., POLICYMIX Report No. 6/2012
Ecological component in FGM

Local Finances Law establishes that 5 to 10% of FGM shall be distributed according to the area included in Natura 2000 and national protected sites.

Municipal general fund (FGM) allocation criteria:

- Equal allocation to all municipalities: 5%
- Population: 65%
- Total area: 20-25% (30% total)
- Protected Areas & Natura 2000: 5-10%

- Transfers per hectare PA are higher if protected area coverage in relation to municipal area is beyond 70%.

- Lump-sum payments: municipalities decide upon use of money.

Santos et al. (2012)
### Relevance of ecological signal for local budgets of a sample of municipalities (2008)

<table>
<thead>
<tr>
<th>Municipalities</th>
<th>Share of fiscal transfers as a proportion of total municipal revenue</th>
<th>Share of ecological fiscal transfers</th>
<th>Share of conservation areas to total municipal area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campo Maior</td>
<td>89%</td>
<td>25%</td>
<td>100%</td>
</tr>
<tr>
<td>Murtosa</td>
<td>78%</td>
<td>6%</td>
<td>80%</td>
</tr>
<tr>
<td>Porto de Mós</td>
<td>75%</td>
<td>11%</td>
<td>76%</td>
</tr>
<tr>
<td>Aljezur</td>
<td>70%</td>
<td>16%</td>
<td>73%</td>
</tr>
<tr>
<td><strong>Barrancos</strong></td>
<td><strong>97%</strong></td>
<td><strong>26%</strong></td>
<td><strong>100%</strong></td>
</tr>
<tr>
<td>Terras de Bouro</td>
<td>94%</td>
<td>22%</td>
<td>95%</td>
</tr>
<tr>
<td>Freixo Esp Cinta</td>
<td>93%</td>
<td>21%</td>
<td>91%</td>
</tr>
<tr>
<td><strong>Castro Verde</strong></td>
<td><strong>90%</strong></td>
<td><strong>34%</strong></td>
<td><strong>76%</strong></td>
</tr>
<tr>
<td>Lisboa</td>
<td>25%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Grândola</td>
<td>71%</td>
<td>2%</td>
<td>9%</td>
</tr>
<tr>
<td>Viana do Castelo</td>
<td>60%</td>
<td>0.5%</td>
<td>24%</td>
</tr>
<tr>
<td>Lamego</td>
<td>80%</td>
<td>1%</td>
<td>33%</td>
</tr>
<tr>
<td>Almeirim</td>
<td>62%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Peso da Régua</td>
<td>87%</td>
<td>0.4%</td>
<td>12%</td>
</tr>
<tr>
<td>Évora</td>
<td>62%</td>
<td>1%</td>
<td>16%</td>
</tr>
<tr>
<td>Vimioso</td>
<td>96%</td>
<td>8%</td>
<td>38%</td>
</tr>
</tbody>
</table>

Santos et al. (2012)
EFT in Portugal – problems

- **Crossover effects**: significant number of simultaneous changes – makes the ecological component of the new scheme difficult to grasp for the affected stakeholders

- **Economic crisis**: municipalities receive in 2012/13 more or less the same as in 2007

![Graph showing municipal revenues from 2007 to 2013](chart.png)
EFT in Portugal: Future design challenges

The EFT mechanism has a relevant potential but needs to be revised and improved.

- Fill the information gap – communication strategy to disseminate and interact with municipalities
- Isolate and make clear the incentive signal
- Complement with a quality criterion
Scenario evaluation: EFT in the German policy mix

EU → Germany/national level → State/Länder level → Local/regional level

- Intergovernmental fiscal transfers (IFT) from national to state level and each state to local level

Recent support programme for implementation of German biodiversity strategy

- EU co-financing of state agri-env. schemes and conservation support programmes
- State forestry conservation programmes

Schröter-Schlaack et al. 2013, POLICYMIX Report No. 1/2013
Stepwise integration of conservation indicators

Building on indicator “Nature and species conservation” (IÖR)
Future scenario for ecological fiscal transfers in Germany

“Ökologischer Länderfinanzausgleich”

Per capita changes (euros) in relation to current fiscal transfers to the German Länder as of 2010, if National Parks, Natura 2000-sites and Nature Reserves were included in German fiscal equalisation

Schröter-Schlaack et al. 2013, POLICYMIX Report No. 1/2013
Future of EFT in Germany?

- Zero sum-game, no earmarking, but.....
- Leverage effect of EFT:
  - acknowledging biodiversity conservation as public responsibility
  - recognising associated costs as eligible for compensation via fiscal transfers
- Provide impetus for EFT at municipal level
- Help mainstreaming biodiversity conservation into sectoral policies at state level (land-use planning, infrastructure development etc.)
- Provide / secure funding for PES schemes
- Extend to spatial externalities from ecosystem service provision
3. Alignment challenges of ecological fiscal transfers (EFT)

- **Goal:** Compensating subnational *govern-ments* for conservation costs (opportunity and/or management costs) as well as spillover benefits of protected areas (PA)

- **Actors addressed:** Public actors (national to local; state to local; national to state) – align with instruments for private actors

- **Conservation effectiveness:** Incentive to increase quantity and quality of PAs (especially when beneficiary of transfers can influence quantity and quality of PAs) – Monitoring important!
Alignment challenges of EFT

- **Associated costs:** low transaction costs, building on existing mechanisms (fiscal transfer schemes and PA regulation); **secure no double funding**

- **Social impacts:** depending on entry point of PAs in fiscal transfer scheme; fiscal transfers as such address inequalities between jurisdiction – **distributive instrument**

- **Legal and institutional requirements:**
  PA coverage as a indicator for biodiversity conservation: easy to grasp, monitor and information available; introduction of new indicators often needs constitutional changes and new laws, **requiring political majorities**
Ecological fiscal transfers in the conservation policy mix

**Autors addressed by incentive:** public actors

**Governance levels addressed:** governments at different levels – national / state / local

**Associated with:** Constitution, Protected area regulation

**Potential complement:** PES – private actors; Conservation support prog. – management costs

**Relevant:** Good information policy to increase knowledge and motivation of actors addressed

Schröter-Schlaack and Ring in POLYMIX Report No. 2/2011
...and the wider picture:

- CBD strategic plan to 2020: mobilisation of financial resources for implementing biodiversity targets
- **Mainstreaming** biodiversity in public finance and fiscal transfer schemes
- Raising biodiversity finance and promoting biodiversity conservation and sustainable use through **Environmental Fiscal Reform (EFR)**
- **Create synergies** between instruments addressing public and private actors
Further EFT presentations: this afternoon

Policy mixes for biodiversity conservation and species protection (2)

- **Schröter-Schlaack** et al.: EFT in **Germany** and their role in the policy mix for biodiversity conservation

- **Cassola** and Ring: EFT for biodiversity conservation in **Brazil**: options for a federal-state arrangement

- **May, Gebara** et al.: The effectiveness and fairness of the ICMS-E as a fiscal transfer for biodiversity conservation. A tale of two municipalities in **Mato Grosso, Brazil**
References


All POLICYMIX Reports available at http://policymix.nina.no
Thank you!