

Ecological fiscal transfers for biodiversity conservation in Brazil



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Key Messages

- **The role of subnational governments**, and related costs, in biodiversity conservation policy implementation has to be acknowledged
- **Ecological fiscal transfer as suitable policy instrument to provide incentives** for subnational governments and support implementation of biodiversity conservation policies
- Ecological fiscal transfers **use has been limited**, there is **potential for a greater role** in the context of scaling up financing for conservation

The problem

Costs → subnational governments

Benefits → national/global level

decisions and an allocation of resources that might **not be the most efficient** in a national perspective



The instrument

Intergovernmental fiscal transfers → mechanisms higher levels of government adopt to share revenues with lower levels

Ecological fiscal transfers (EFT)- any kind of intergovernmental grants that explicitly incorporates ecological indicators

In developing countries, grants represent 60% of subnational government budgets, in comparison to about 30% in OECD countries



Brazil: EFT experience



ICMS ECOLÓGICO

- **Target local level**
- **Compensatory**
- **Protected areas as primary indicator**

ICMS-E: Parana



- **Since early 90's**
- **5% of mandatory ICMS transfers**
- **US\$ 70 million (2009)**
- **Quantitative criteria plus "quality index"**

Cassola (2010)

ICMS-E: Mato Grosso



- **Since 2002**
- **5% of mandatory ICMS transfers**
- **US\$ 25 million (2009)**
- **Quantitative assessment**

May et al. (2012)

ICMS-E: Para

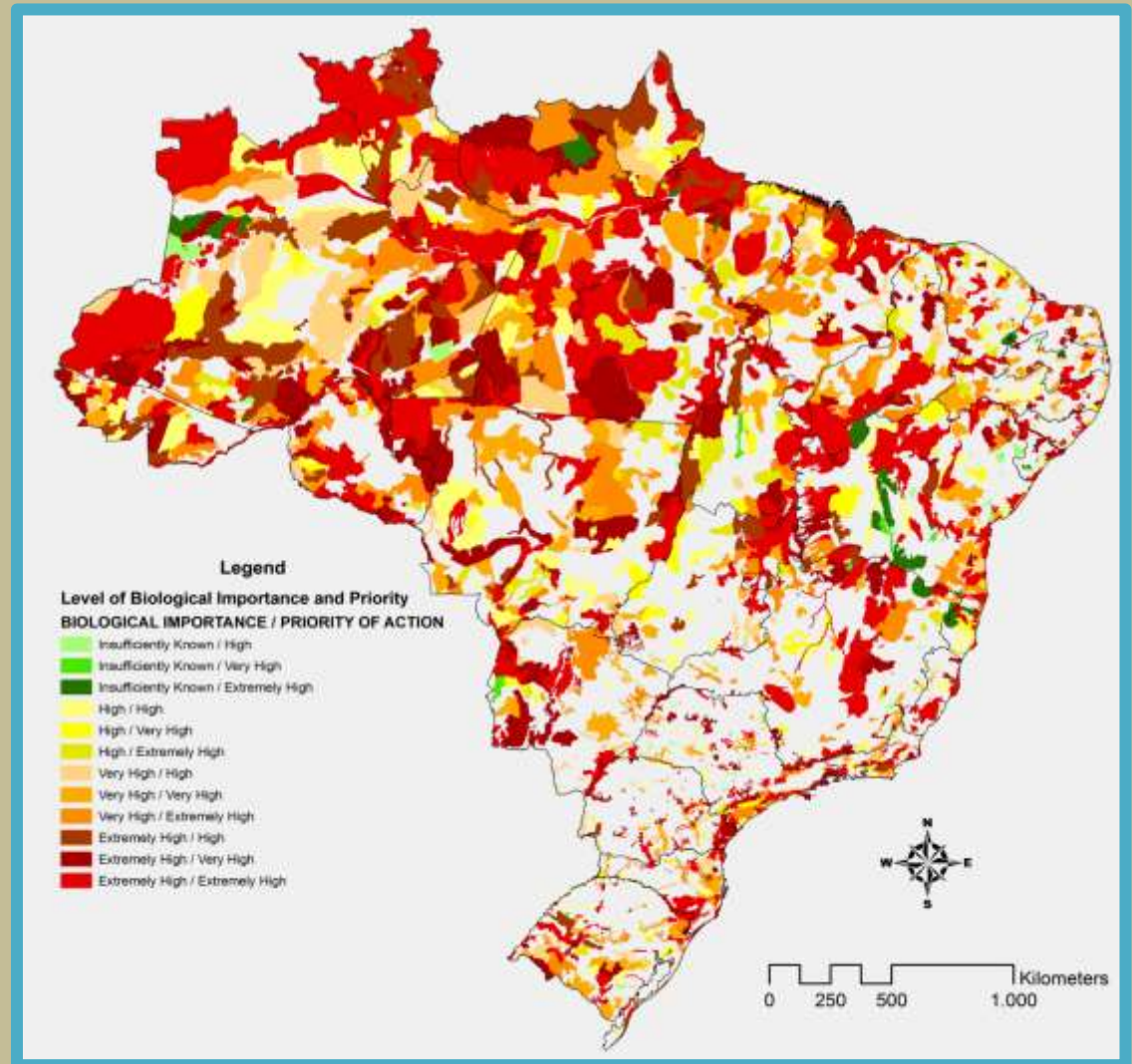


- **Since 2013**
- **8% of mandatory ICMS transfers**
- **Still no transfers**
- **Prerequisites**
- **Relevant new criteria**
 - **Avoided deforestation**
 - **Forest stock**
 - **Forest Law implementation**

Source: icmsecologico.org

The case for a Federal-state EFT in Brazil

Reward commitment
to national targets
(Spillover benefits)



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Compensate costs of
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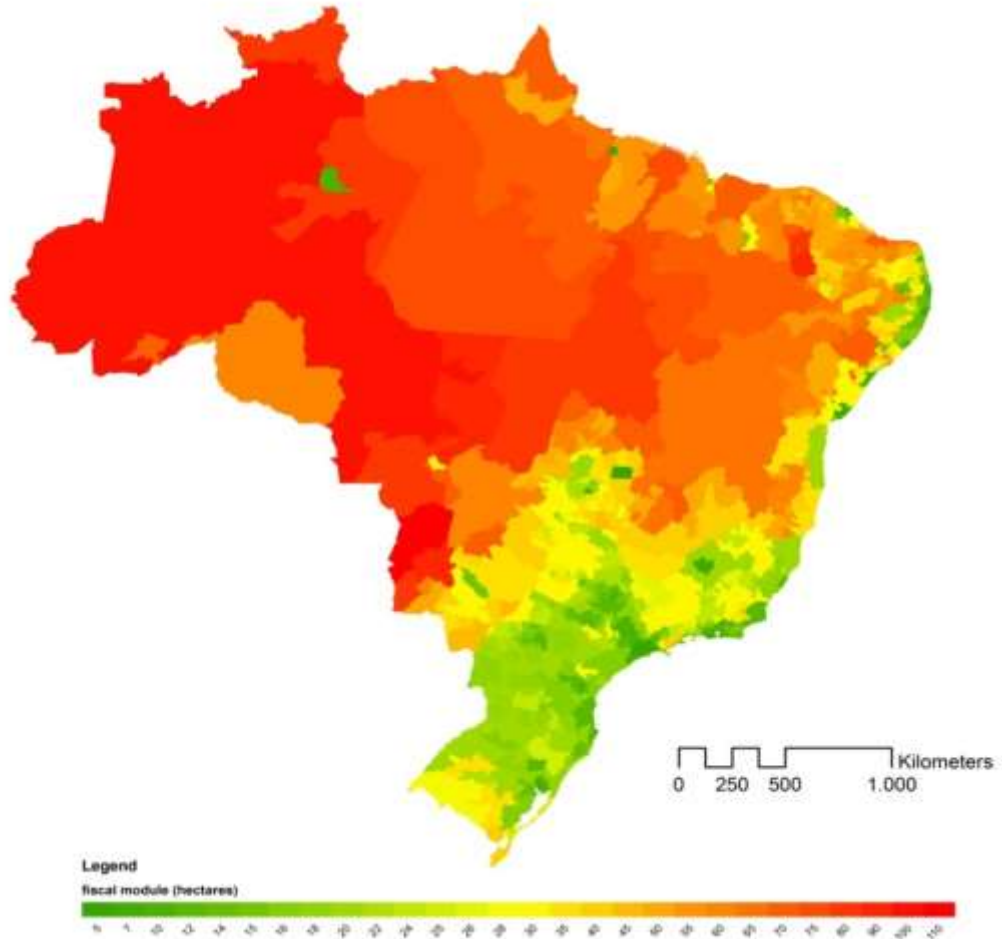
The case for a Federal-state EFT in Brazil

**Reward commitment
to national targets
(Spillover benefits)**

**Compensate costs of
biodiversity policy
implementation**

**Compensate land
use restrictions
(Opportunity costs)**

Distribution of fiscal module sizes in Brazil (by municipality)

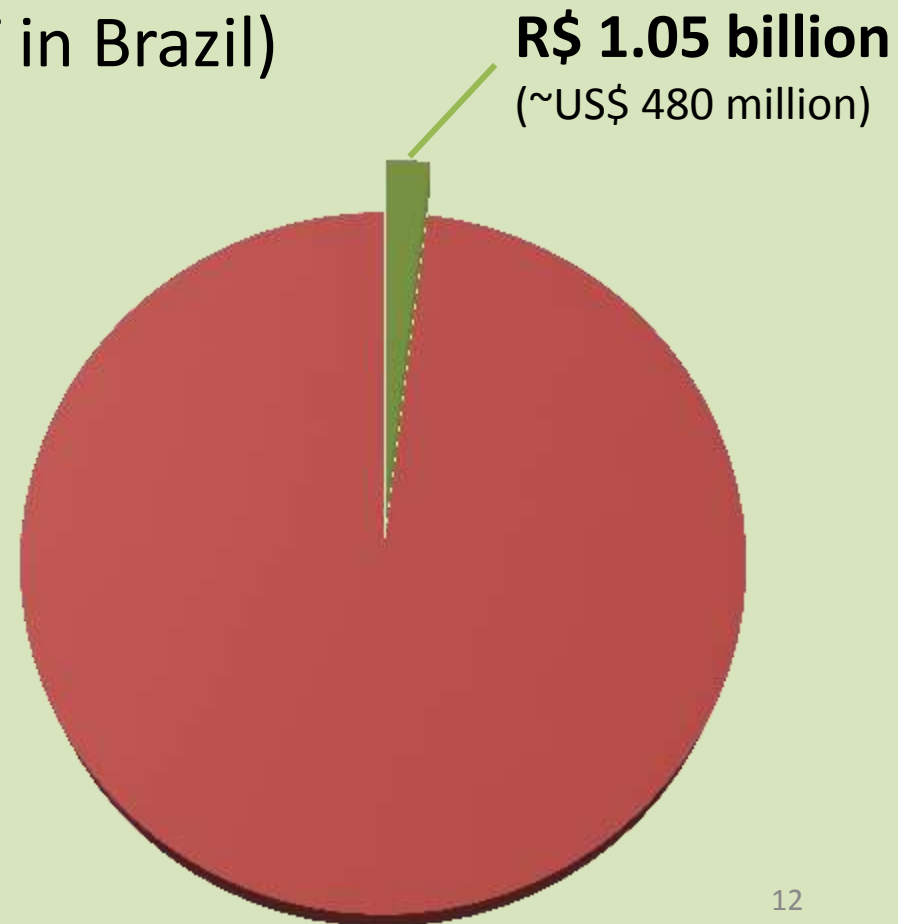


An option: FPE Verde

- Adding ecological indicators to the **Fundo de Participação dos Estados** (largest federal-state IFT in Brazil)

FPE Verde = 2% of FPE funds

R\$ 53.3 billion (2013)
(~US\$24 billion)



FPE Verde: indicator selection

Relevance for
biodiversity
conservation

Possible
incentive effects

Availability of
data

Protected area coverage

Protected area category

Protected area management level

Biological importance

National conservation targets

Protected area management effectiveness

Opportunity costs

Deforestation and land degradation rates

Vegetation fire frequency

FPE Verde: indicator selection

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FPE Verde: scenarios

EX-ANTE SCENARIO ANALYSIS

BASIC

Existing law proposal



Classify States into 7
classes of protected area
coverage

ALTERNATE

Product of this study.



Incorporate selected
indicators.

BASIC 2 and ALTERNATE2

Same design as previous
two, only difference:
how to get the 2% that
forms FPE Verde

FPE Verde: winners and losers

| STATE | BASIC | ALTERNATE | BASIC2 | ALTERNATE2 |
|---------------------|--------|-----------|--------|------------|
| DISTRITO FEDERAL | 7.69% | 2.56% | 6.28% | 1.15% |
| RORAIMA | 7.47% | 2.82% | 6.06% | 1.41% |
| AMAZONAS | 6.58% | 19.97% | 5.17% | 18.56% |
| RONDÔNIA | 5.50% | 2.55% | 4.09% | 1.14% |
| AMAPÁ | 5.27% | 2.67% | 3.86% | 1.26% |
| ACRE | 5.26% | 0.66% | 3.85% | -0.76% |
| MATO GROSSO | 4.36% | 4.47% | 2.95% | 3.06% |
| PARÁ | 2.68% | 9.24% | 1.27% | 7.83% |
| MATO GROSSO DO SUL | 1.56% | 0.36% | 0.15% | -1.05% |
| TOCANTINS | 1.39% | 0.33% | -0.03% | -1.09% |
| PIAUÍ | 0.73% | -0.06% | -0.68% | -1.47% |
| GOIÁS | 0.42% | -0.24% | -1.00% | -1.65% |
| MARANHÃO | 0.20% | -0.07% | -1.21% | -1.49% |
| SERGIPE | 0.10% | -0.57% | -1.31% | -1.98% |
| ALAGOAS | 0.10% | -0.56% | -1.31% | -1.97% |
| RIO GRANDE DO NORTE | 0.10% | -0.58% | -1.32% | -1.99% |
| PARAIBA | 0.01% | -0.55% | -1.40% | -1.96% |
| PERNAMBUCO | -0.17% | -0.52% | -1.59% | -1.93% |
| CEARA | -0.20% | -0.54% | -1.61% | -1.96% |
| BAHIA | -0.28% | -0.27% | -1.70% | -1.68% |
| SÃO PAULO | -7.14% | -2.75% | 0.86% | 5.25% |
| SANTA CATARINA | -7.77% | -8.72% | 0.23% | -0.72% |
| ESPIRITO SANTO | -8.10% | -9.66% | -0.10% | -1.66% |
| RIO DE JANEIRO | -8.13% | -8.50% | -0.13% | -0.50% |
| RIO GRANDE DO SUL | -8.79% | -9.61% | -0.79% | -1.61% |
| PARANÁ | -9.01% | -9.01% | -1.01% | -1.01% |
| MINAS GERAIS | -9.36% | -9.07% | -1.36% | -1.07% |

Policymix: other economic instruments in Brazil

IN PLACE / ONGOING

1. Environmental compensation schemes (infrastructure projects)
2. Environmental funds (Fundo Amazônia & FUNBIO)
3. State and Municipal PES Laws and schemes
4. Green procurement
5. Forest allowance programs (Bolsa Floresta and Bolsa Verde)
6. ...

PERSPECTIVES / ON STUDY

1. Federal PES Law
2. Green Infrastructure Bonds
3. Tradable conservation certificates (Forest Law – needs regulation)
4. EFT targeting Amazon States based on deforestation results
5. ...



Thank you for your attention

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Note: The views and opinions are mine and do not necessarily reflect the position of the Brazilian government

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