



# ¿What is happening in Latin American “Water Markets”?

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## Forest Protection Subsidies/Incentives

- Costa Rica (1997):
  - 3,5% tax on gas (US\$14-16M/yr)
  - Channelled through FONAFIFO to pay landowners (US\$14,5 M/yr) for:
    - 85% forest protection (water protection, biodiversity)
    - 15% carbon sequestration
    - Total area amounts to 587.000 has (1997-2007)
  - 2003 incorporated into water tariffs as user fees (\$0,002-6/m3)
- México (2003):
  - CONAFOR pays landowners for hydrological services (US\$20M/yr)
  - US\$30-40/hectare
  - Amounts to 500,000 has per year
  - Reserva Sierra Gorda (2003-7) registered 19,000 has
- Colombia (approved but not implemented)
- Ecuador (2008) approved US\$1M for pilot phase





## Watershed Protection User Fees

- **Colombia (1976/1993):**
  - 6% of sales of hydroelectricity (over 10 MW) -
    - 3% to the environmental authorities in the watershed
    - 3% to the municipalities in the watershed
  - 4% of sales of thermal electricity
  - 1% of projects investment
    - 1% de municipal and regional budgets
- **Brazil (1997) – establishes fees for all users**
  - Creates Watershed Councils per watershed
  - Resources channeled through Fehidrico Fund
  - Rio de Janeiro (2004) Paraibo do Sul watershed – US\$3.4M
    - US\$ 15/1000m<sup>3</sup> returned untreated
    - US\$ 4.2/1000m<sup>3</sup> returned treated
  - Sao Paulo state aims to make landowners payments
- **Perú currently committed to incorporate source protection, ecosystem services and wastewater treatment costs into water tariff structure**



## Watershed Userfees managed through Trust Funds

- **ECUADOR**
  - Fondo Ambiental del Agua en Quito-FONAG (2000):
    - Drinking water pays 1,25%- 2% sales of water and sanitation
    - Electricity utility US\$45.000/yr
    - Private users beer company and water bottling company pay US\$10.000/yr
    - Swiss cooperat US\$10.000/yr
    - Finance a annual budget US\$3 M (2008).
  - Replicated in different size cities:
    - Zamora (2006) y Espindula (underway) – Fondo Procuencas
    - Cuenca – Fondo de Protección de la Cuenca del Paute
    - Ambato – Fondo de Manejo de Páramos en Tungurahua – Seed capital \$450K
- **COLOMBIA - Bogotá (2008)**
- **PERU – Lima (under negotiation)**





## Forest Conservation User Fees

- **Brazil – ICMS-E – “Impuesto Ecologico”**
  - **Paraná (1992-2000)** generated US\$ 22.5 millones anually which allowed 1 million has to be conserved (increase of 165% in 9 yrs)
  - **Minas Gerais (1992-2000)** generated US\$ 6.7 M/yr which allowed 1 million has protected (increase of 62% in 5 yrs)
- **Ecuador – municipalities incorporate a charge into drinking water tariff to protect the source:**
  - **Pimampiro (2002):**
    - Increase of 20%
    - Payments US\$ 6 - 12/ha/yr to 19 families owners 600 has forest upstream
  - **Chaco (2005):** Approved city ordinance to pay userfee to protect the land around the drinking water source
  - **Celica (2006):**
    - US\$ 0,03 – 0,09/m3 increased every 3 years
    - Pay US\$52/ha/yr to 33 landowners (38 - 547 ha)
  - **Puyo (2007):** Approved city ordinance
  - Others Puyango (US\$0.04/m3), Piñas (US\$0.05/m3), Pinda, Joya de los Sachas

**ECODECISIÓN**  
inversión en el medio ambiente



## PES between upstream- downstream communities

- **Bolivia - Los Negros y Sta. Rosa (2003):**
  - Payment of bee box (US\$35) per 10 has and honey production training
  - A bee box can generate 20 - 30 kg honey = US\$38 -57
  - 1.000 has are part of the program
- **La Aguada:**
  - Community decided to compensate owners of 67 has in the drinking water source
  - Upstream owners “sold” their right to pasture cattle in the area

**ECODECISIÓN**  
inversión en el medio ambiente

# Wastewater discharge fees Ecuador



- Colombia:
  - 1997 regulation establishes:
    - Environmental Ministry determines national wastewater fee and semester increase
    - Regional pollution reduction goal is negotiated with polluters for 5 years
    - Fee is increased every semester unless goal is met
- Perú currently committed to incorporate wastewater treatment costs into water tariff structure



¡Muchas Gracias!  
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