

Forests and Water Services in Northern Rio de Janeiro

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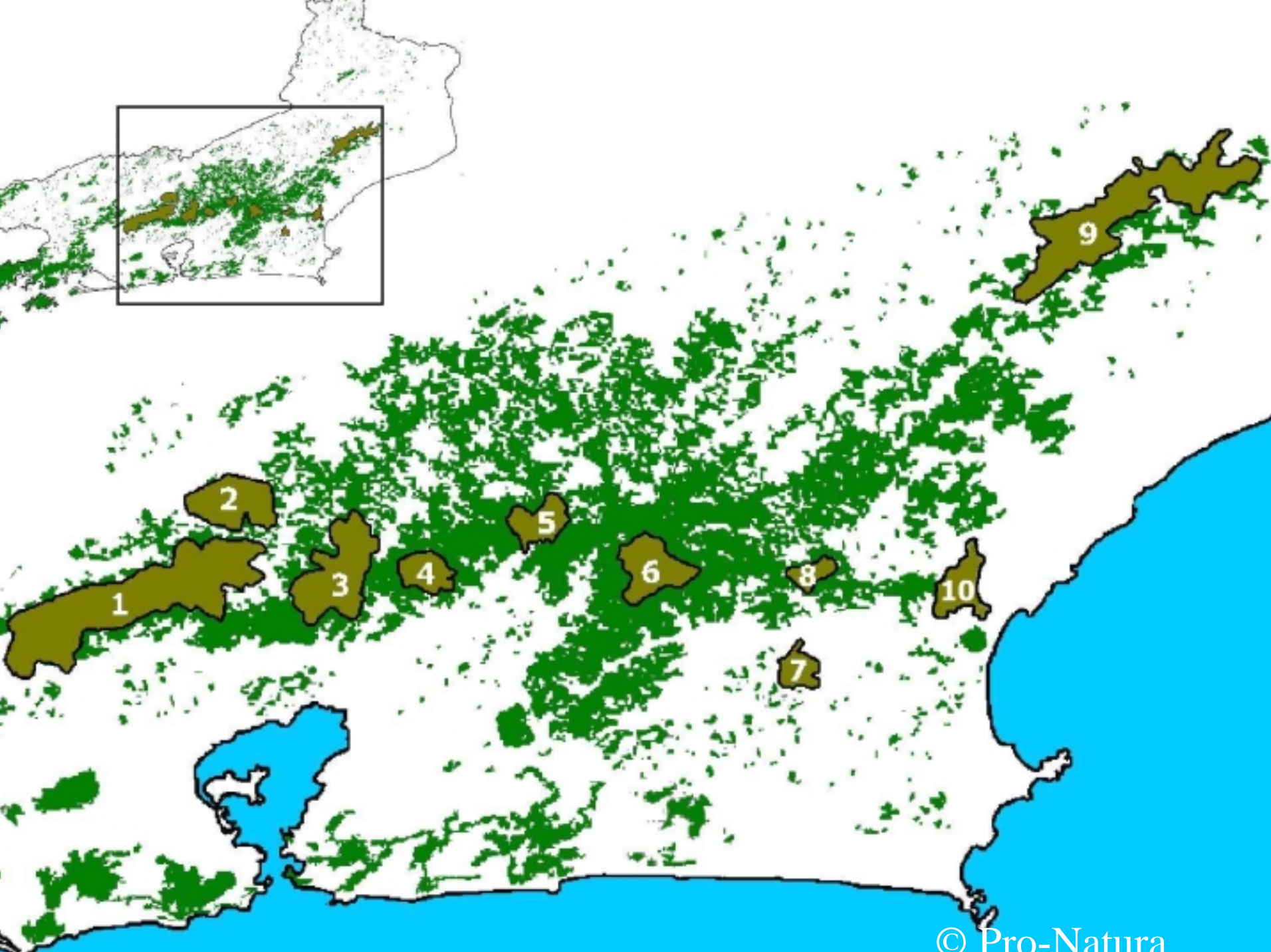
Katoomba Group Meeting III

Teresópolis, Rio de Janeiro, March 2001

www.pronatura.org







Initial Conditions

- Deforestation claims 93% of Atlantic Forest
- 500-year occupation: forest>coffee>pasture
- 80% of forest remnants are on private lands
- Low productivity dairy herds (2 liters/day)
- Extensive pasture managed by burning
- Low soil moisture, streamflow



SIG FIDELIS

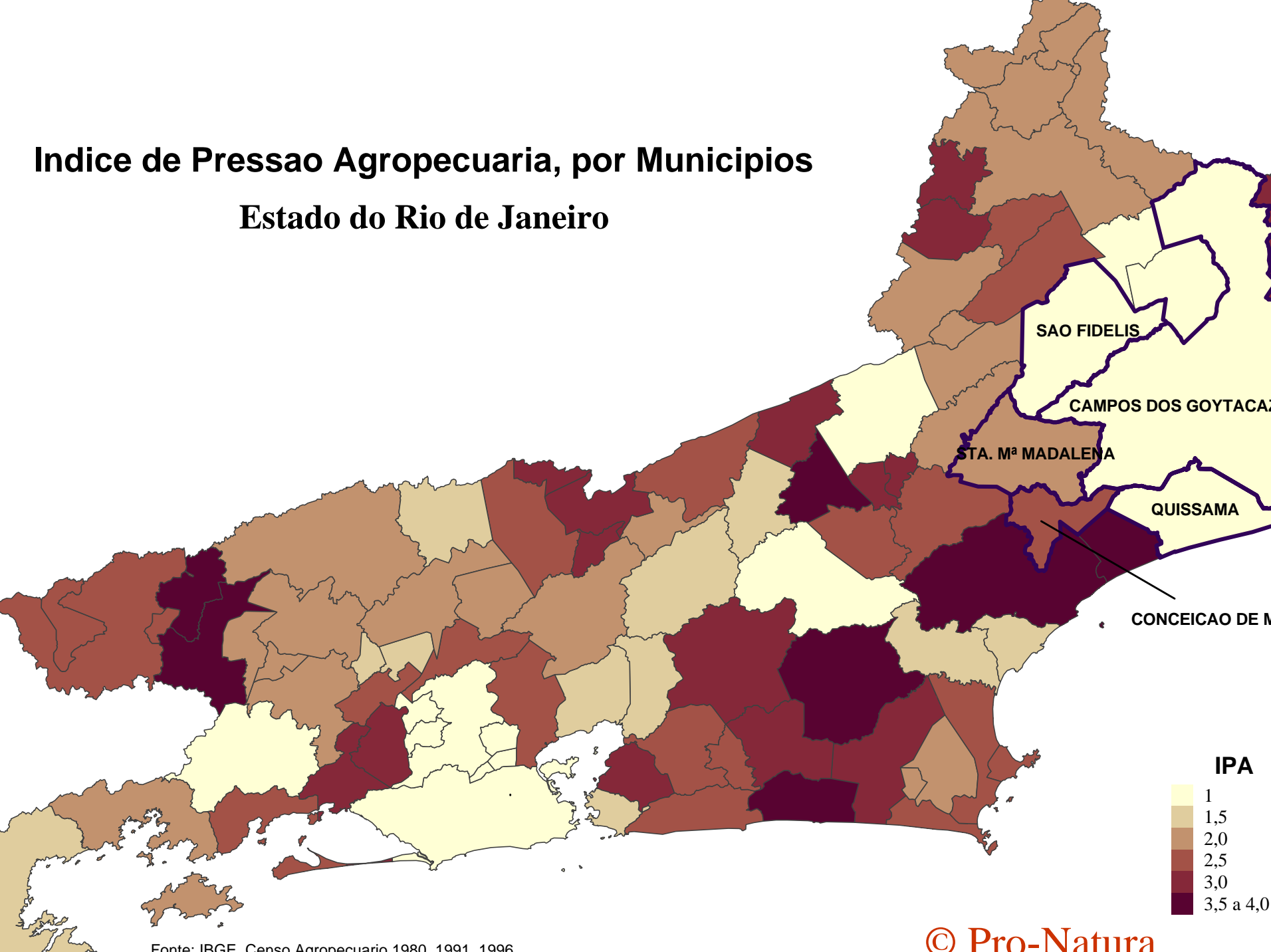
SANTO ANTONIO
NADALINA

CAMPOS DE GOYTACAZES

□ ÁREA DO PARQUE ESTADUAL DO DESENVOLVIMENTO
— LIMITE ORIENTAL DE 1970
— LIMITE LESTE DA DE 2010

Índice de Pressão Agropecuária, por Municípios

Estado do Rio de Janeiro



Pró-Natura's First Interventions

- Herd improvement, mineralization, fodder and silage (collaboration with UFRRJ)
- Up to triple milk yields (“Seu Geninho”)

RESULTS:

- Reduced pressure for pasture expansion
- Commitment to reforestation and regeneration





Reforestation

- **TARGETS:** regulate water flows, reduced erosion, protect streambanks, living fences, fodder, fruit, palmito
- **PUBLIC ROLES:** municipal nurseries, seedling transport, organization of *mutirão*, urban parks and ornamentals
- **EDUCATION:** technical agricultural school (RRA, nurseries, river cleanup campaign), UENF research on site recuperation, species efficiency



Municipal nursery and Technical Agricultural students



Water Valuation

- Legal context: 1997 water law - river basin management, abstraction rights and charges
- Local institutions: Macabú River Basin Committee and Center of Reference of Waters (CREA)
- Valuation: What is water worth? Who are the users? How can conflicts be reconciled?
- Focus groups, contingent value transfer from other studies: average value \$5/hhld/month x 100,000 households = \$6 million/yr “for a clean, reliable supply of fresh water”
- Conditions for trade with forest landowners



Next Steps

- Opportunity costs of deforested land uses: WTA proxy?
- Municipal water distribution company: WTP for marginal reductions in sediment, chlorine
- Value Transfer Options:
 - Prototype water market/fund?
 - Credits for reforesting landowners?
 - RPPN creation incentives?
 - Ecological ICMS for watershed protection?
 - Reallocation of petroleum royalties?

