Context-Based Approaches and the Jag Bacias Project

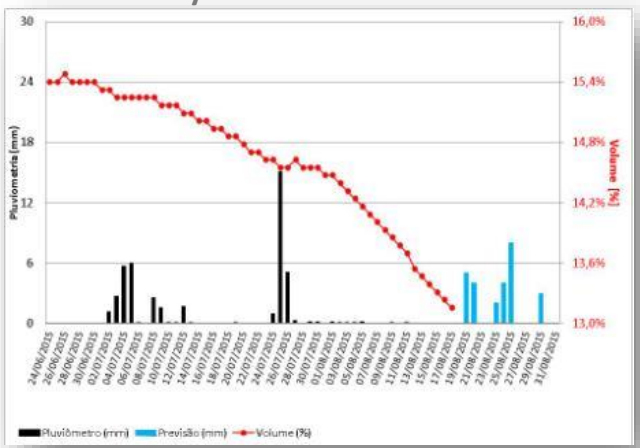
2017 Environmental Goals

São Paulo Water Crisis

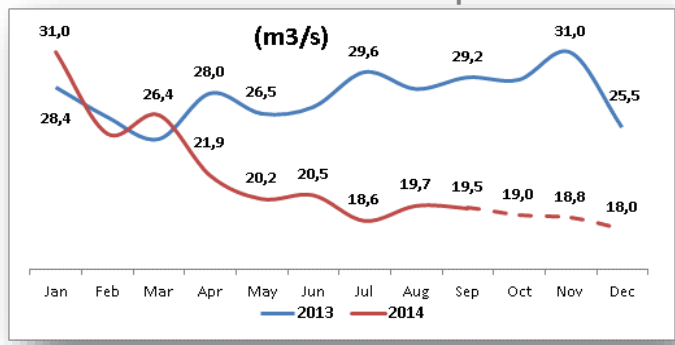
Sediment-filled pools in the Cantareira System (which accounts for 45% of SP water supply and provides water to 9million people in the Sao Paulo metropolitan area) is nearing dead volume limit

- State-run water utility is reviewing water allocations
- Cannot ask for additional water permit if production needs go up and rely on improved efficiency to manage capacity needs.

Cantareira System rainfall and forecast



Flow from Cantareira to SP metropolitan area




Brazil's worst drought in history prompts protests and blackouts

Lights go out, internet is cut for days, and agriculture is suffering as crisis spreads from São Paulo to Rio de Janeiro and beyond

The Jacarei river dam is part of São Paulo's Cantareira system of dams. Photograph: Nelson Almeida/AFP/Getty Images

Jaguari River

Bacias (Basin) Project methodology and approach

2014 - Development Phase

2015 - Implementation Phase

- Stakeholders mapping
- Local Management Unit (partners coalition) creation

- Surveys (population, farmers)
- Degraded areas
- Water Balance
- WASH
- Forest fire risks
- Sedimentation and erosion rate
- Waste disposal
- Land and soil use

- Priority actions and pilot area selection
- Hydrological monitoring plan
- Local synergies
- Funding and leverage resources opportunities
- Expected outcomes

PES Model: Encourage environmentally responsible land management and the conservation of natural resources in order to prevent erosion and sediments

Context-based approach driven by PES model

Partners: TNC, WWF, Mayor's office, the Jaguariúna Bureau of the Environment, the Brazilian Agricultural Research Corporation, the Brazilian National Water Agency and various watershed committees.

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PROGRAMA BACIAS JAGUARIÚNA

The Nature Conservancy

PHASE 2:
Implementation

- Implementation of field actions
- Land owners selection and sign-on
- Rural properties executive Projects
- PES contracts signed
- Recovery and conservation initiatives
- Tracking impact and monitoring interventions

Working with farmers outside supply chain

Objectives

- **Reduce the amount of sediments in the water catchment area**
- **Restore priority areas for water production**
- **Conserving forest fragments**
- **Improving soil conservation practices and roads**
- **Develop and implement a watershed management model based on the generation of environmental services**

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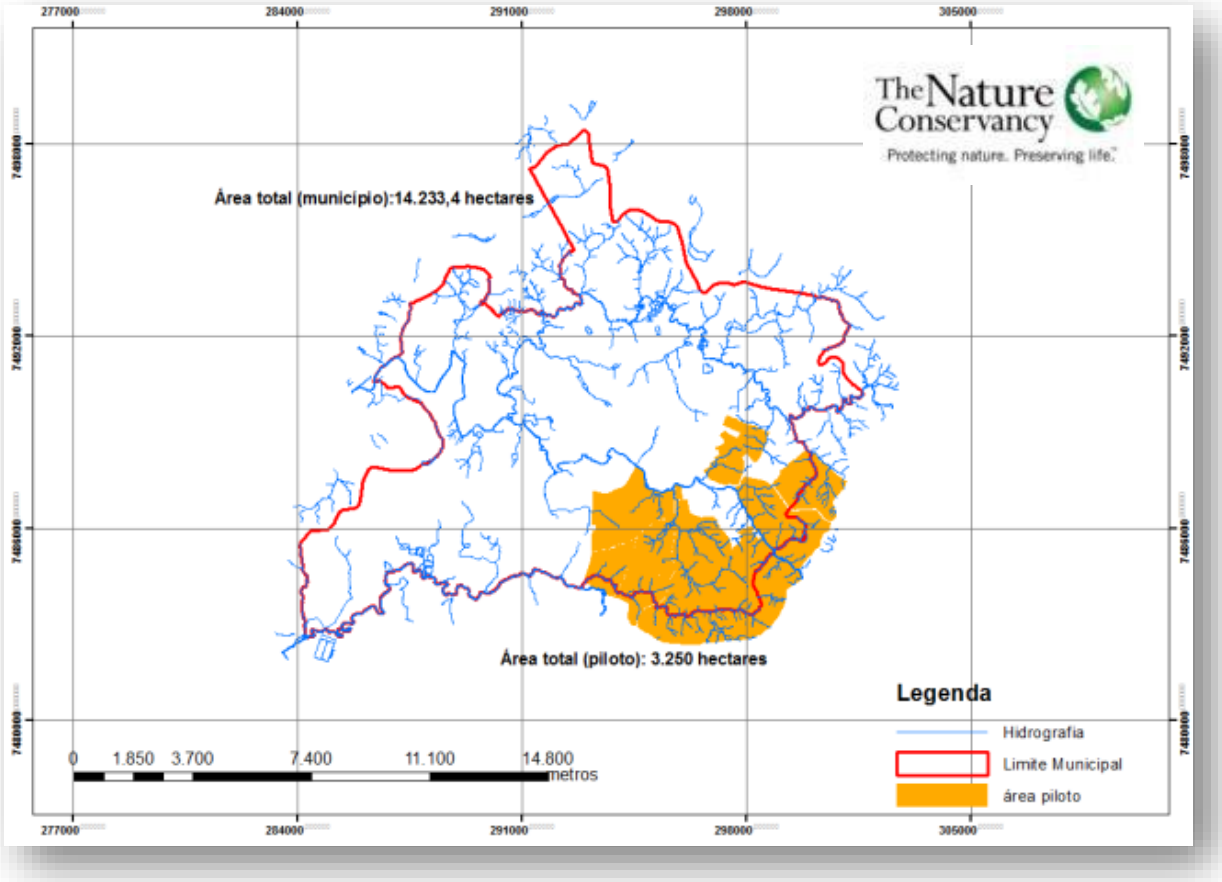
PROGRAMA BACIAS JAGUARIÚNA

2015/2016 - PHASE 2 – IMPLEMENTATION



- Priority conservation area for pilot: 3.25ha
- 38 farms mapped
- 28 potential participants (land owners)
- Signed contracts with 5 farmers representing 1,000ha area
- 100ha of riparian forest to be recovered
- 120ha of forest to be preserved

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PROGRAMA BACIAS JAGUARIÚNA

- *Ecological restoration*
  - Reforestation
  - Soil enrichment
  - Fencing

- *Soil conservation practices:*
  - Contour farming and terracing
  - Dams
  - Road and channel maintenance (abaulamento, canaletas, etc.)

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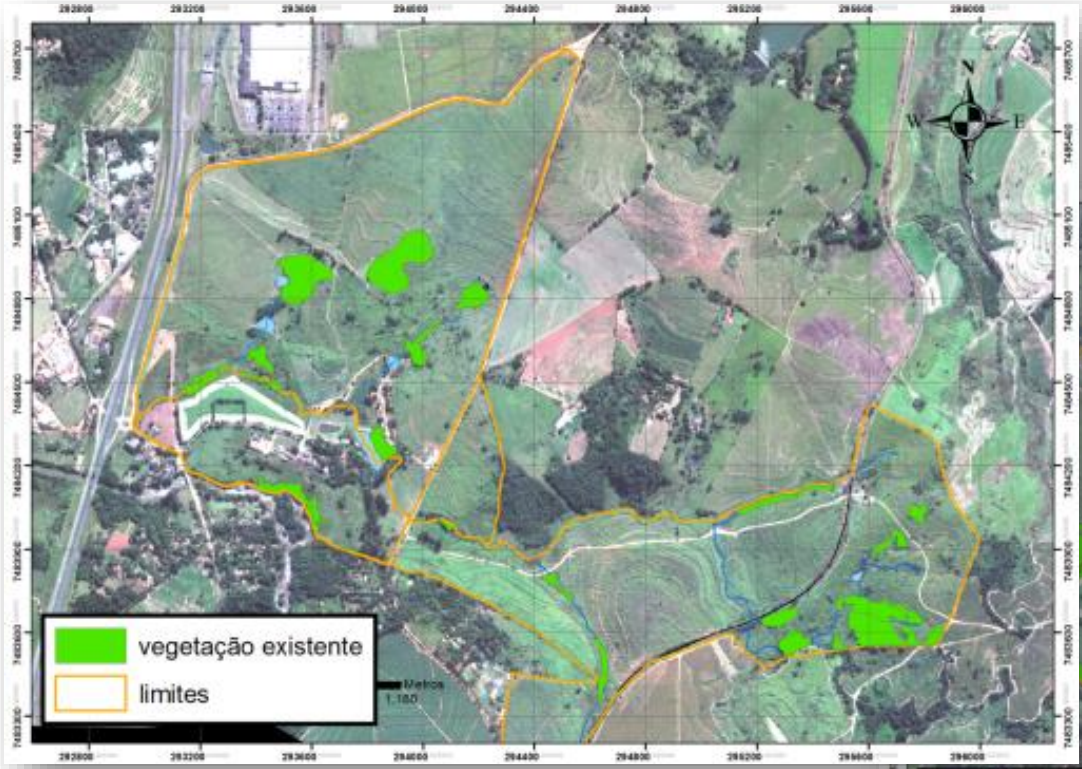
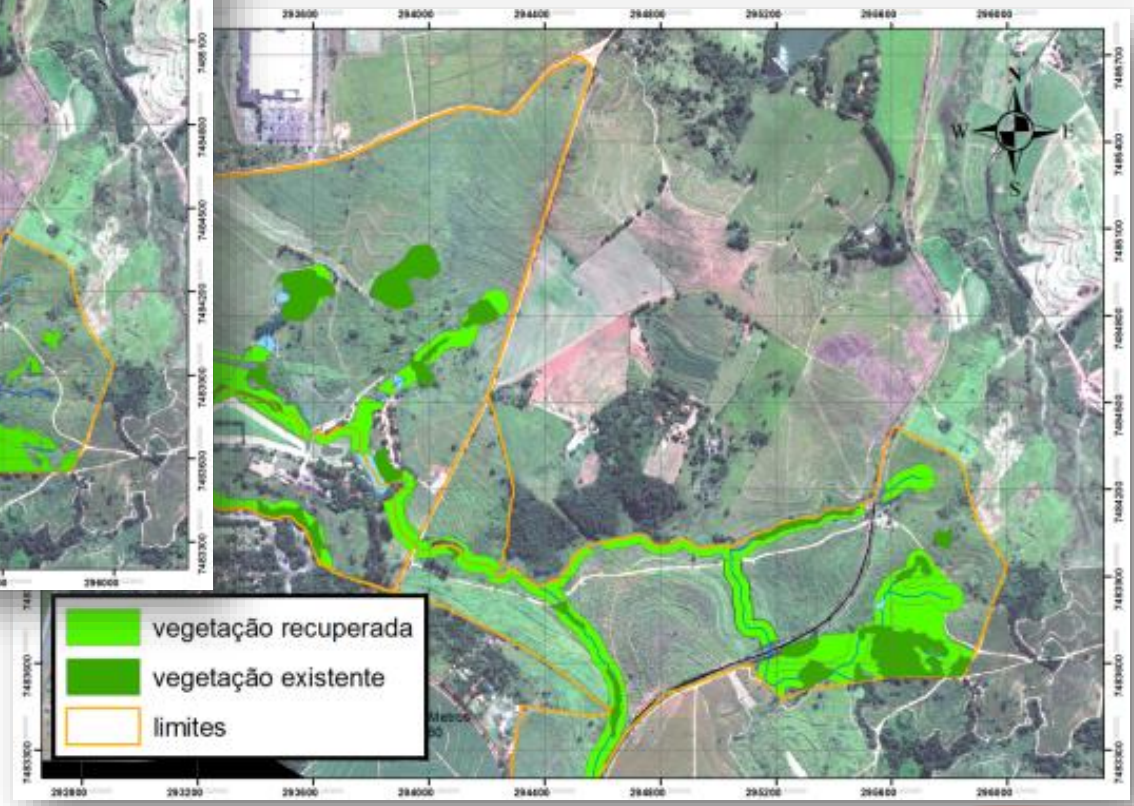
Sample restoration simulation

Before restoration



After restoration
(light green)



Final thoughts on context-based target setting and SDG planning

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• Great watershed work • Technology/science is getting better • SDGs can provide a common framework	• Crowded space but still fragmented • SDG national plans still developing • Alignment of these efforts with the SDGs to inform policy • Rarely a clear endpoint • Must remain pragmatic

Opportunities

- Bring the context-based approach to water access and ag management
- Guidance is evolving but important to identify where gaps exist and where you can make a difference and how you can mitigate risk
- **Ultimate goal is to influence governance**

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