RESEARCH PROGRAM ON Water, Land and Ecosystems

CGIAR

Incorporating gendered landscapes into physically-based models via Participatory 3-D Mapping

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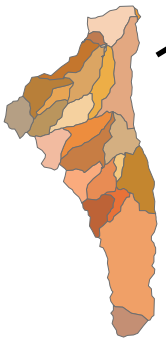
RESEARCH PROGRAM ON

Hydrologic model

1

Watershed delineation & discretization from DEM

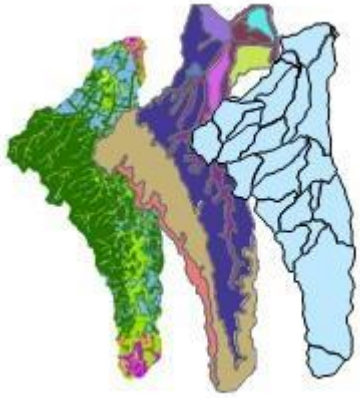


Discretized watershed (model elements)

+

Intersect model elements with…

2



Land cover, Soils, Weather

Run model

3

Visualize / Analyze Results

How to reconcile the biophysical with the social?

- Local knowledge identifies **most important** resources
  - Necessarily points out ESs
  - Connected to livelihoods
- Takes many forms (2D, 3D, drawing, community measuring, GPS)

Caution

- Who participates and why?
- Maps contain private information
- Have potential to **empower** or **marginalize**

Important Differences

	622	***584***
	389	***353***
	627	***703***
	10.3	***8.5***

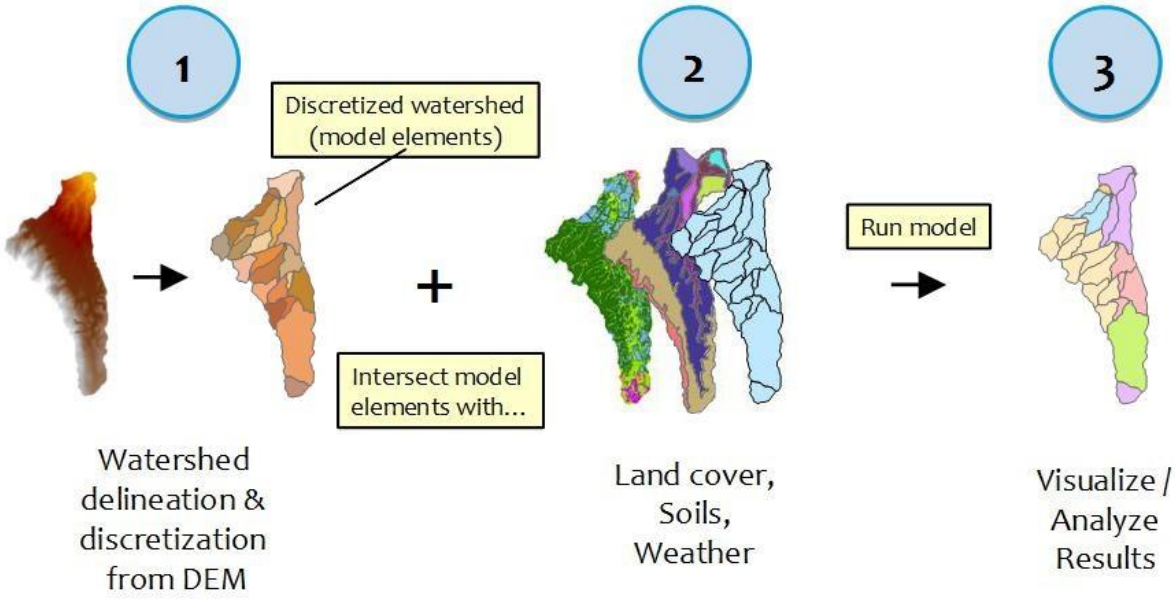
- Males identified
  - 11 Springs
  - 6 Sacred Trees
  - 3 Sacred Sites
  - More grazing land
  - More fertile soils
- Females identified
  - 15 Springs
  - 3 Sacred Trees
  - 4 Sacred Sites
  - 2 Holy Water Sites
  - 4 Quarries
  - More degraded & less fertile soils

Use models to …

- Evaluate multiple perceptions of landscapes and quantify impact on ecosystem services
- Assess how alternate future climates, land use, and attendant hydrologic response will impact ecosystem services as ***valued by communities***

Explore:

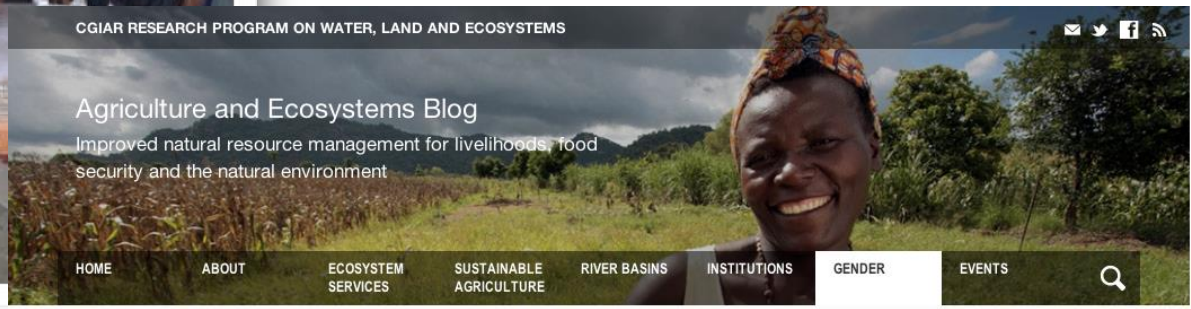
- Focused Site(s) for evaluating models
- Identification of ESs at multiple scales
- Alternative climate and land use scenarios



Run many scenarios

10 - 20 yr Management

If you're not on the map …
… then, *you don't exist*!



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Hydrologist reality check: impact rests on social inclusion

NOVEMBER 25, 2013 BY *TRACY BAKER* *Featured, Gender, IWMI*

I am a hydrologist. And I'm intrigued by the opportunities I see to incorporate gender into biophysical models.

To many of my hydrology colleagues it may sound like I should be standing up at a self-help meeting if I am going to make such proclamations. After all, we're concerned with the physical and quantifiable world. A world governed by physics, a world where variability and uncertainty are still somewhat quantifiable and predictable. Precipitation, streamflow, runoff, evapotranspiration, and groundwater. These are all measurable, and predictable, inputs and outputs of a system we call the water cycle. When we are asked about how we understand this system, it is quite simple: physics.

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Are you convinced?

Messages

- Getting the right information to the right people

- Closing the data gap

Fact Check

- 70% of the 1.3 billion people living below poverty line are women
- Closing the gender gap between men & women could reduce the # of under-nourished people by 100-150 million
- Women produce over half of all food grown in the world