

***IF YOU CUT THE FOREST,
WE WILL DIE OF THIRST:***

**How community EA made a
difference in Kenya**

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This presentation

SHOW HOW:

- community EA made a difference in a water project in Kenya

OUTLINE

- What is community EA?
- The Kenya case:
 - project overview
 - environmental issues
 - community responses
- Lessons learned

What is community EA?

the theory

- **“environmentally informed” neo-populism** (Hettne 1995)
 - bounded community managing local resources (territorialism)
 - self-determined human-nature relationships (cultural pluralism)
 - resource use within biophysical limits (ecological sustainability)
- **“community informed” EA** (Pallen 1996)
 - community information
 - indigenous ecological knowledge
 - transactive planning
 - participatory processes for all stages
 - co-management
 - community-based resource management

What is Community EA?

the practice

- a **rapid assessment** guided by scoping of key potential impacts and issues,
- analysis of available **documented information** and observations from **site visits**
- consultation with and **professional opinion** of disciplinary experts, and
- consultation with affected **communities and other stakeholders** in the project area

What is Community EA?

the tools

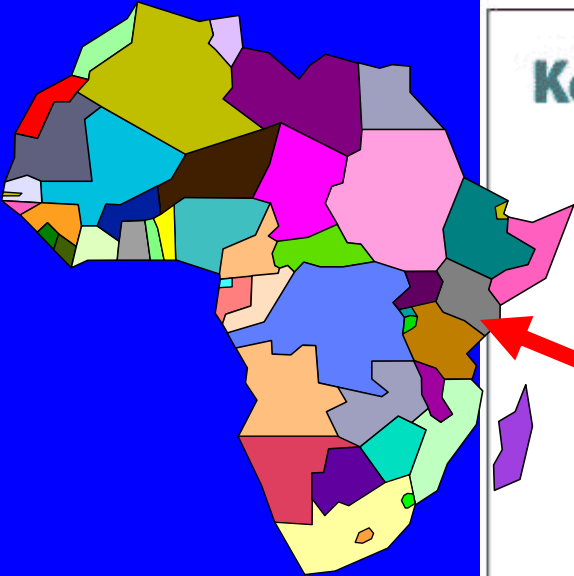
- Participatory Learning & Action (PRA/RRA)
 - processes for people to gather, analyse and use information for their own benefit
- Tools
 - resource mapping
 - transects
 - calendars



Kisayani Community Water Supply Project

- Provide 11,380 residents with clean water by a 23-km gravity fed pipeline from Umani Springs to the Kisayani area
- fifth extraction& pipeline
- Proponents:
 - WVC, CRWRC and ADA
 - Kisayani Christian Community Development Group
- US\$500,000





Food Insecurity In Kenya

Kenya—Currently Food Insecure Districts

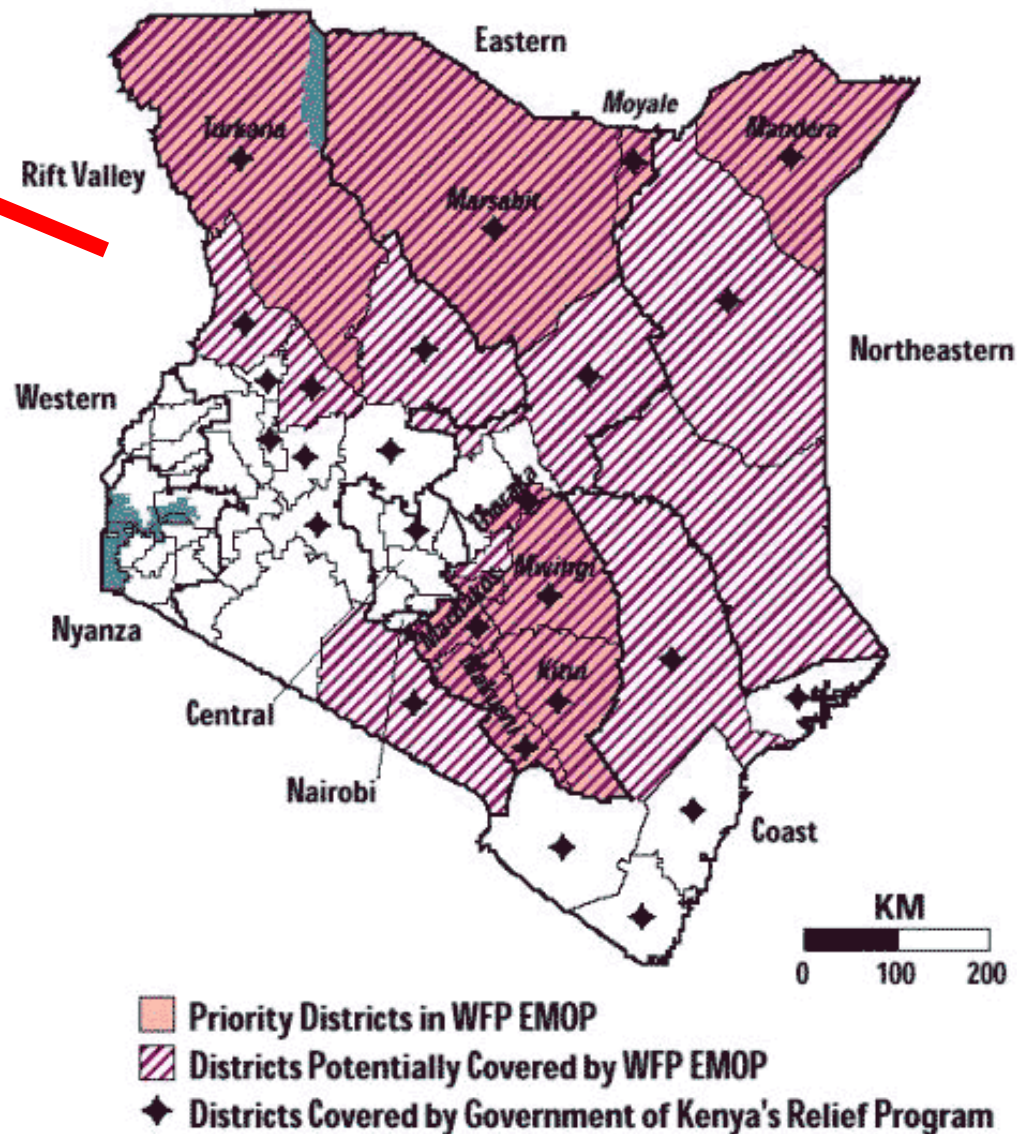
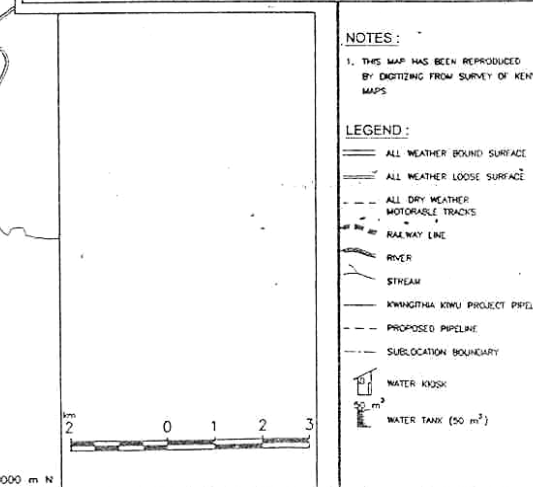


Figure 1

Source: FEWS/Kenya
FEWS, March 2000

[illegible]

1. THIS MAP HAS BEEN REPRODUCED
BY DIGITIZING FROM SURVEY OF KENYA
MAPS

	ALL WEATHER BOUND SURFACE
	ALL WEATHER LOOSE SURFACE
	ALL DRY WEATHER
	MOTORABLE TRACKS
	RAILWAY LINE
	RIVER
	STREAM
	KWANGGITHA KIMU PROJECT PIPELINE
	PROPOSED PIPELINE
	SUB-LOCATION BOUNDARY

 WATER KIOSK
 WATER TANK (50 m³)

KISAYANI WATER SUPPLY PROJECT

TITLE: PROPOSED WATER SUPPLY
PROJECT LAYOUT

DATE	REVISIONS	SCALES: AS SHOWN	DRG. No.:
		DATE: FEBRUARY, 2001	SHEET No.:
DRAWN BY: F.W.		DESIGNED BY:	CHECKED BY:

Source: MENR 2001.

MOWIN, NAIROBI

Environmental setting

- Climate: semi-arid
 - mean rainfall: 600 mm (bimodal)
 - mean evaporation: 2000 mm
- Geology
 - fractured volcanic
- Topography
 - Chyulu Hills



- Vegetation
 - savannah
 - forest
- Wildlife & Birds
 - elephant, rhino
 - Abbot's starling?
- Land Uses
 - agro-pastoral
 - forest reserve

Community participation

- Member of EA Team
- Community meetings (PMC)
- 2 members every site visit
- informal household interviews & focus groups (PRA)



Key Stakeholder

Umani Springs Camp

- forest-based ecotourism (\$)
- wildlife & forest protection
- flora & fauna inventories
- surveillance of in-take & pipes



Impacts on the camp

- construction:
 - noise, debris, access, & road damage
 - wildlife out-migration
 - trail & camp closure
- marketing image & business decline

Camp perceptions



Communities want to:

- take too much water
- poach wildlife
- cut the forest illegally
- retaliate for incident reporting
 - “fish kill”



Community perceptions

Camp wants to:

- control water
 - “fish kill”
- promote wildlife (pests)
- ban harvesting of forest products and control access
- co-operate with corrupt authorities

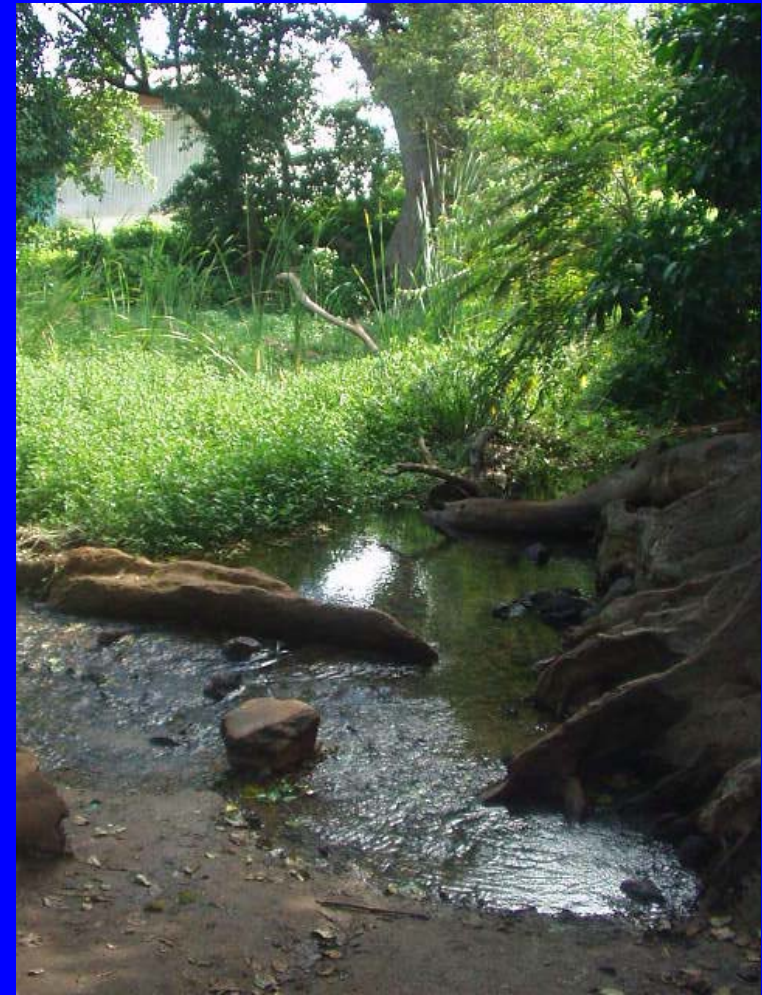


Hydrology: community misconceptions



source?

seasonal flow?



Hydrology: scientific misconceptions

Scenarios of Spring Flow and Abstractions from Umani Springs

Source	Mean flow (m ³ /day)	Permitted abstractions (m ³ /day)			Available net flow (m ³ /day)	25% minimum net flow (m ³ /day)
		Existing	Kisayani ⁷	Total		
Kisayani Project Design ¹	18,513	7,487	747	8,234	10,279 (56%)	4,628
Chyulu Hills Study ²	14,050	7,487	747	8,234	5,816 (41%)	3,513
Chyulu Hills Study ³	13,910	7,487	747	8,234	5,676 (41%)	3,478
Hydrological Study⁴	10,022	7,487	747	8,234	1,788 (18%)	2,506
Rural Focus 1999 ⁵	10,177	7,487	747	8,234	1,943 (19%)	2,544
Rural Focus 1999 ⁶	18,481	7,487	747	8,234	10,247 (55%)	4,620

1 single flow reading on 15/11/00 (MENR 2001)

2 flow readings for 21 days (1984-87) (see Appendix 5)

3 mean flow of the study period (1984-1987) (see Appendix 5)

4 mean flow in note #3 adjusted against the historic record (1951-1973) (see Appendix 5)

5 mean flow for the historic record (Rural Focus Ltd. 1999)

6 single flow reading on 22/01/99 (Rural Focus Ltd. 1999)

7 water permit (#28843) issued to Kisayani Christian Community Development Project



Impact summary



Impact on:	Assessment	+/-	Comment
Threatened plant species	Significant	-	Proximity to large trees
Threatened large mammal and bird species	Insignificant	-	
Ecological biodiversity (forests, wetlands)	Insignificant	-	
Water quality	Significant	+	Chlorinating water supply
Hydrology	Significant	-	Less than 25% minimum net flow
Soil erosion	Insignificant	-	
Noise	Significant	-	Equipment, vehicles and workers
Land/resource use	Significant	-	Intensified use of forest and range
Population growth and human health	Significant	+	Reduced vector diseases
Ecotourism (forest reserve)	Significant	-	Business decline
Fire risk	Insignificant	-	

Community's approach to impact management

- adopt lowest spring yield data
 - precautionary principle
- community & camp co-management
 - joint flow monitoring & data sharing
 - shared wildlife & forest management
- multi-stakeholder partnership
 - Umani Springs Users Group

What difference did the Community EA make?

- Kisayani Christian Community Development Project
 - Stopped construction for EA (contract penalty)
 - Selected and sensitized construction workers
 - Provided voluntary labour for road repair (future: reservoir desilting & emergency fire-fighting)
 - Built bird hide and cleaned up construction areas



What difference did the Community EA make?



- Kisayani Christian Community Development Project
 - Convened Umani Springs Users Group (water & forestry departments, camp, District, water projects, KWS)
 - prepare guidelines for Umani Springs use
 - implement water conservation & rationing scheme
- Agreed to pay camp a fee for monitoring flow and cleaning screens (water sales)
- *If you cut the forest, we will die of thirst!*

Lessons learned from Community EA

- contributed to the sustainability of a local resource-based project
 - conflicting scientific data led to informed choice
 - corrected traditional knowledge increased environmental understanding
- reconciled differing community & stakeholder perceptions and needs
 - led to a partnership approach to impact management
- empowered communities politically to manage their local environment
- motivated by faith-based stewardship



Community EA of Water Project

Why an EA?

- Kenya's *Environmental Management & Coordination Act*
- Water permit (issued to community)
- Project Design (supply sustainability)
- Demonstrate stewardship

1. Who is the partner? What is the project?
2. Do you need to do an environmental assessment?
3. What is the environment like in the community?
4. What parts of the environment are most valued?
5. How might the project impact the valued parts of the environment?
6. How will you change the project to avoid negative impacts and promote positive impacts?
7. What decision will you make about the project?
8. How will you monitor the project's impact(s) on the environment?

UMANI SPRINGS CAMP

BOUNDARY PLAN

SURVEY

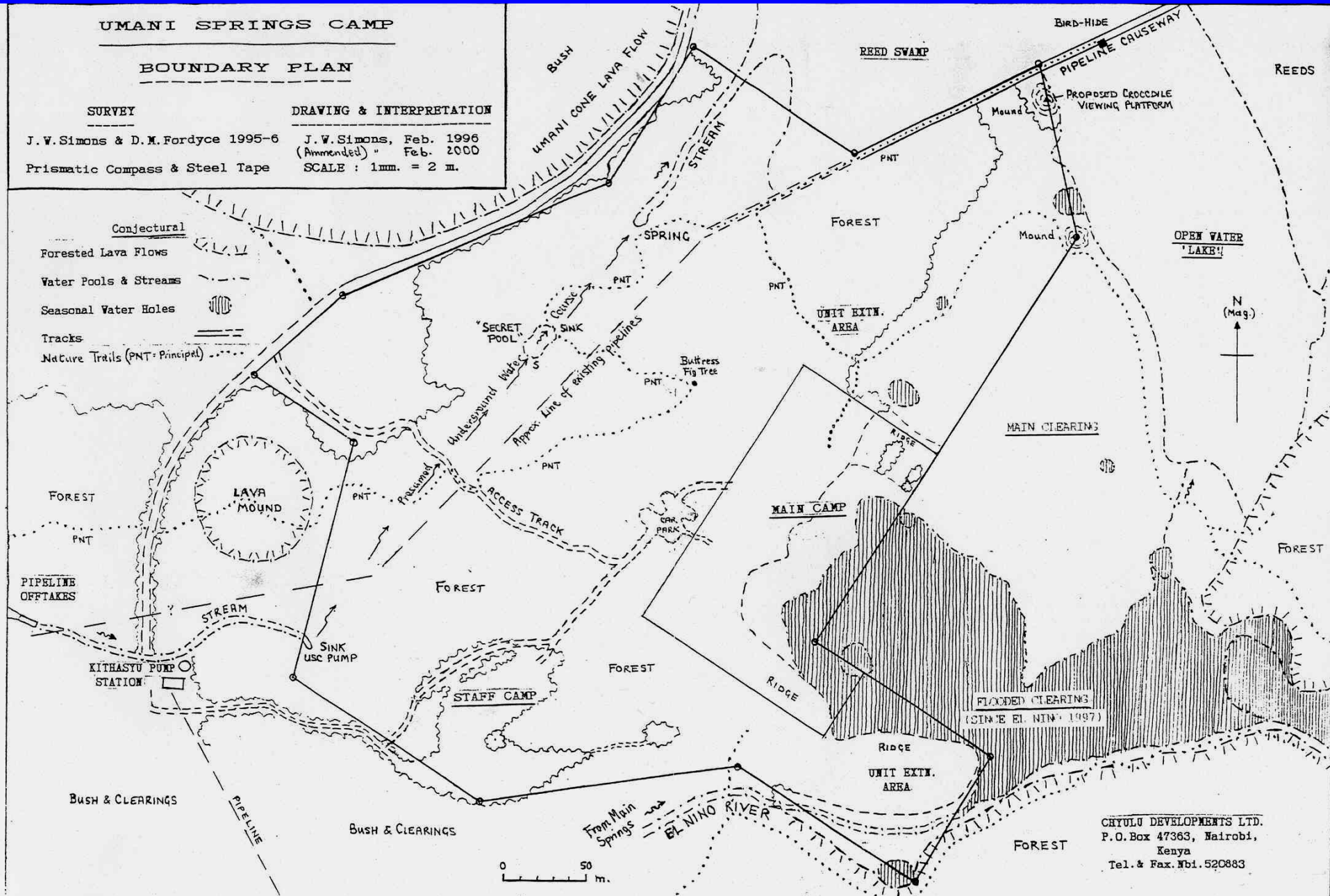
J.W. Simons & D.M. Fordyce 1995-6

Prismatic Compass & Steel Tape

DRAWING & INTERPRETATION

J.W. Simons, Feb. 1996
(Amended) " Feb. 2000

SCALE: 1mm. = 2 m.



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