



# Measuring the impact of livelihood initiatives in the conservation context

Initial results from Samburu National Reserve, Kenya



In collaboration with:



IUCN



Resources, Environment and  
Economics Center for Studies





# Today's presentation

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1. Overview: refinements to AWF's approach to socio-economic impact assessment
2. Case study from Samburu, Kenya

# Background

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AWF has five main types of Priority Interventions (PIs):

- Land
- Enterprise
- Capacity building and leadership
- Species and research
- Policy

New methodology: focused on improving measurement  
of SE impact of first three.

# Inadequacy of existing measures / Needs / New features

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- Cover some enterprise and some capacity building indicators.
- Need additional measures (donor and internally driven) notably:
  1. Need for aggregate measures of livelihood (beyond financial): how significant are non-financial factors compared to financial factors?
    - What are the non-financials? Guided by Sustainable Livelihoods framework
    - Uses participatory valuation for valuing non-financials
  2. Need for household level impact in addition to community
    - HH surveys
  3. Need to address equity: how do local costs and benefits vary between communities and/or within communities?
    - Disaggregated by wealth
    - Can be disaggregated by e.g. distance from PA, etc.
- Need for robust, credible, repeatable, data- and cost-light methodology



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# New Methodology: assessing impacts using combination of 4 methods

1. **Rapid social impact assessment (RSIA):** to identify which intervention-related benefits and costs are significant to households for 30-odd welfare indicators.
2. **Household economic (financial) analysis (HES):** to assess the value of RSIA *financial* gains and losses to households, and to wealth groups.
3. **Participatory economic valuation (PEV):** to assess RSIA *non-financial* gains and losses to households. Each household ranks and weights each 'strong' positive and negative impact identified in the RSIA. A financial item(s) ('numaire') is included, allowing comparison / equal calibration of financials and non-financials. Weights assigned can also be translated into dollar values.
4. **Focal Group Discussions (FDG):** to validate and/or modify results. These are ideally by wealth group and gender

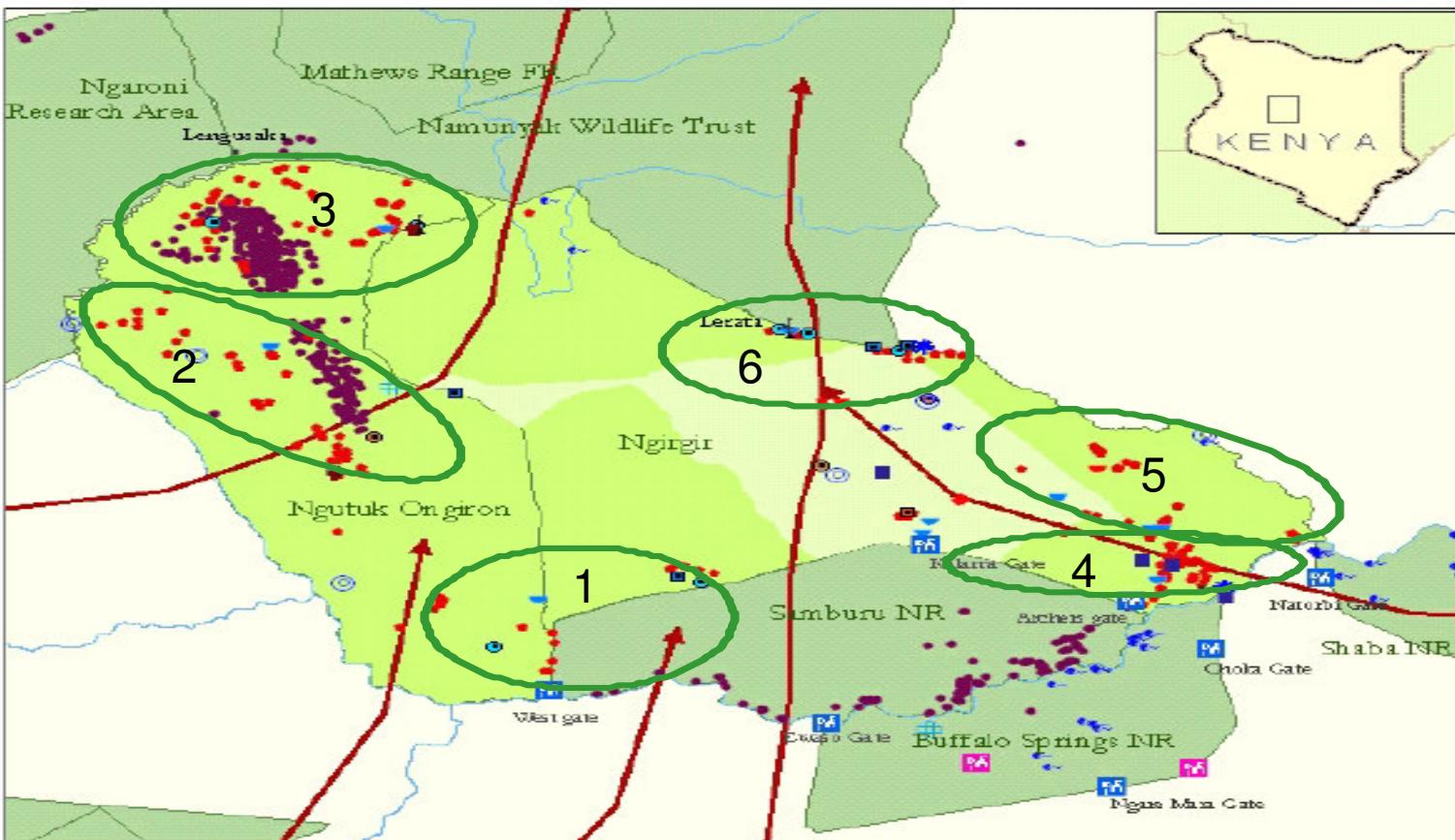
## Case Study:

# Assessment of the socio-economic impacts of the Samburu National Reserve:

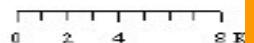


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- |                                                                                                                                                                                 |                                                                                                                                                                                          |                                                                                                                                                                                                                    |                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Ranger Base Water Scources</li> <li>Gate</li> <li>Bomas</li> <li>Major Town</li> <li>River</li> <li>Wildlife Migratory Routes</li> </ul> | <ul style="list-style-type: none"> <li>Borehole</li> <li>Dam</li> <li>Potential Borehole</li> <li>Potential Rock Catchment</li> <li>Potential Water Pan</li> <li>Proposed Dam</li> </ul> | <ul style="list-style-type: none"> <li>Spring</li> <li>Swamp</li> <li>Water Pan</li> <li>Water Pump</li> <li>Water Tank</li> <li>Weir</li> <li>Well</li> <li>Windmill</li> <li>Grevy Zebra Distribution</li> </ul> | <ul style="list-style-type: none"> <li>Conservation Management</li> </ul> |
|                                                                                                                                                                                 |                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>National Reserve</li> <li>Other Protected Area</li> <li>Community</li> <li>Conservation Area</li> <li>Kalama Conservation Area</li> </ul>                                   |                                                                           |



**A baseline for future intervention  
in surrounding communities**

Source: AWF, Survey of Kenya,  
O Africover

AWF Spatial Lab  
Oct-04

# Financial & non-financial costs & benefits

| <b>Annual HH Costs (n=157)</b> | <b>USD</b>   | <b>Annual HH Benefits (n=157)</b> | <b>USD</b>  |
|--------------------------------|--------------|-----------------------------------|-------------|
| Loss from wildlife             | -444         | Security to people                | 295         |
| Livestock health               | -425         | Knowledge and exposure            | 259         |
| Grazing access                 | -308         | Livestock marketing               | 196         |
| Grazing quality                | -288         | Employment                        | 118         |
| Livestock water access         | -242         | Health access                     | 80          |
| Timber                         | -226         | Illegal hunting                   | 71          |
| Household water                | -127         | Water infrastructure              | 49          |
| Relations internal             | -120         | PA related income                 | 25          |
| Emigration                     | -96          | Transport                         | 19          |
| Firewood                       | -81          | Road                              | 11          |
| NTFP                           | -71          | School bursaries                  | 6           |
| Immigration                    | -53          |                                   |             |
| Time                           | -38          |                                   |             |
| Fines                          | -27          |                                   |             |
| Relations external             | -9           |                                   |             |
| Social status                  | -3           |                                   |             |
| <b>TOTAL:</b>                  | <b>-2730</b> |                                   | <b>1300</b> |

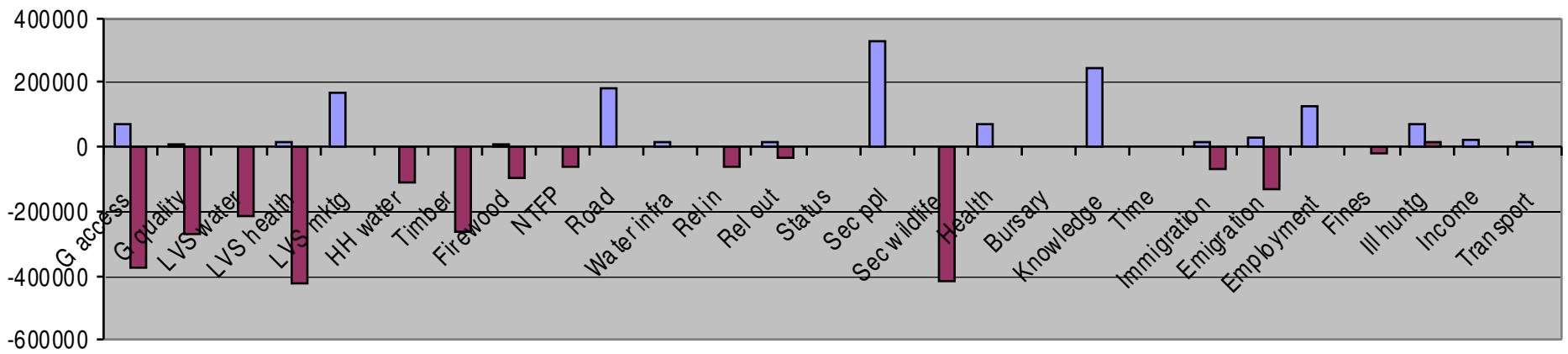


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# Financial & non-financial local impacts

Total community financial and non-financial costs-benefits (annual USD)

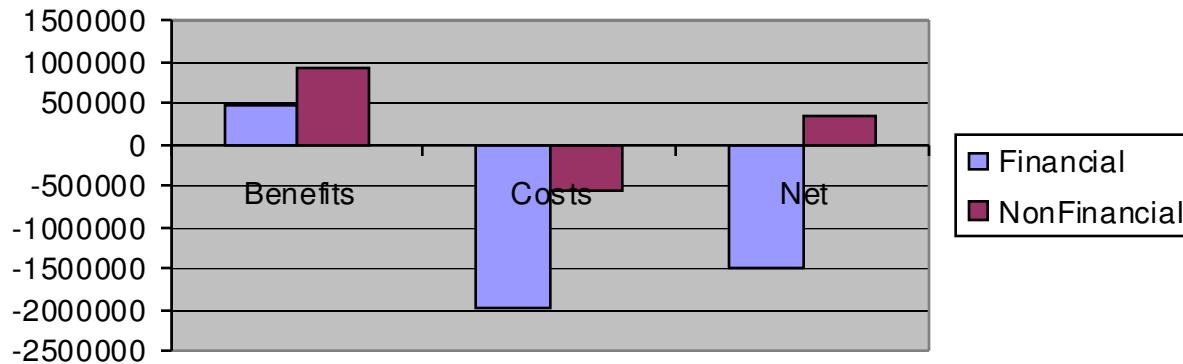


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# Financial vs non-financial impacts - aggregate

**Financial vs non-financial contributions at local level  
(annual USD) Samburu NR**

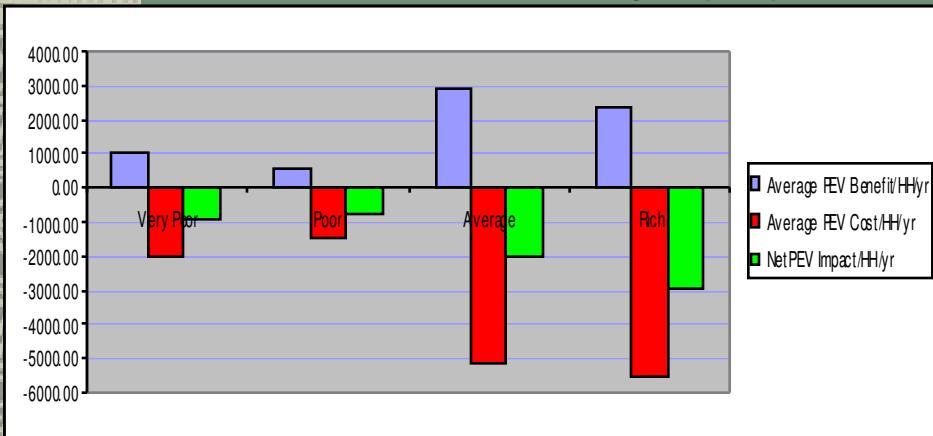


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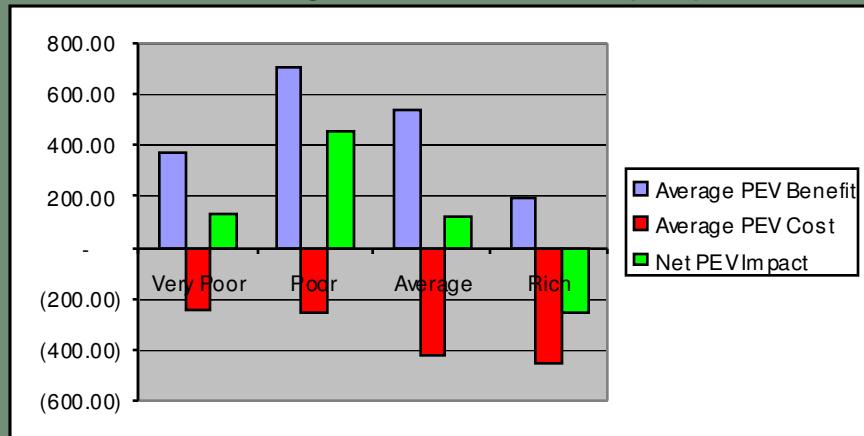


# Wealth groups: benefits, costs and net cost-benefit distribution (significant)

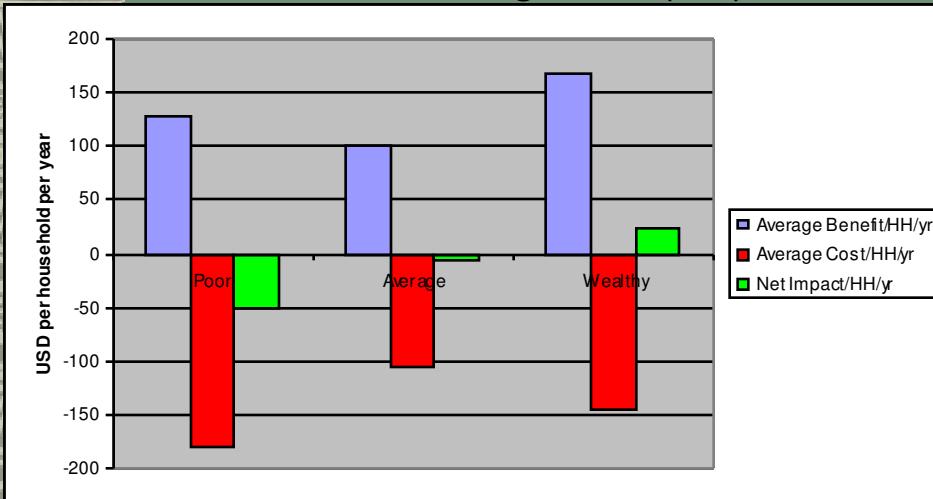
Samburu NR Kenya (A1)



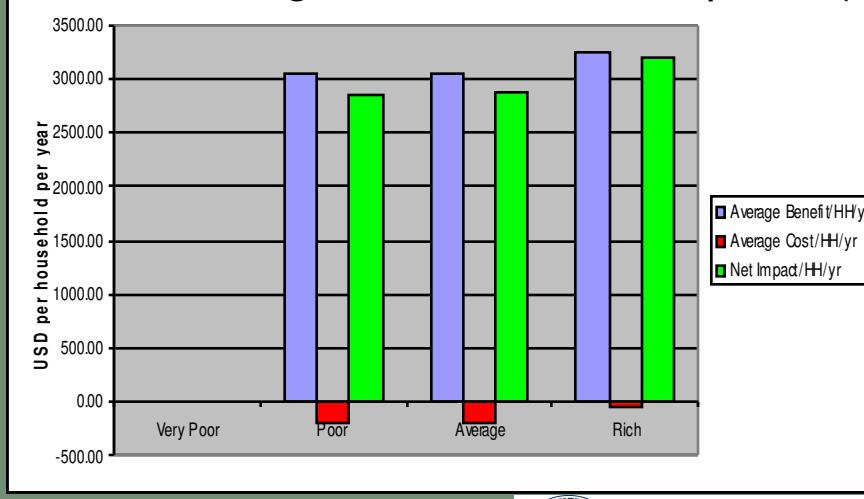
Ob Luang NP Thailand (A2)



Bwindi NP Uganda (B1)



Balbalasang Balbalan NP Phillipines (D2)

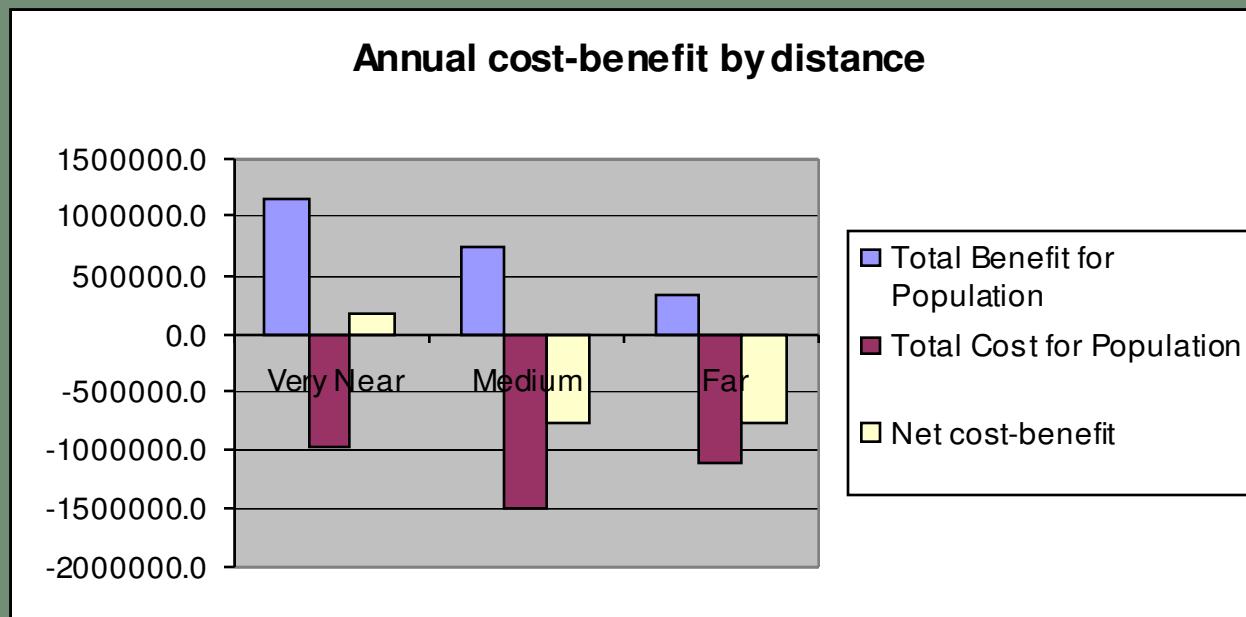


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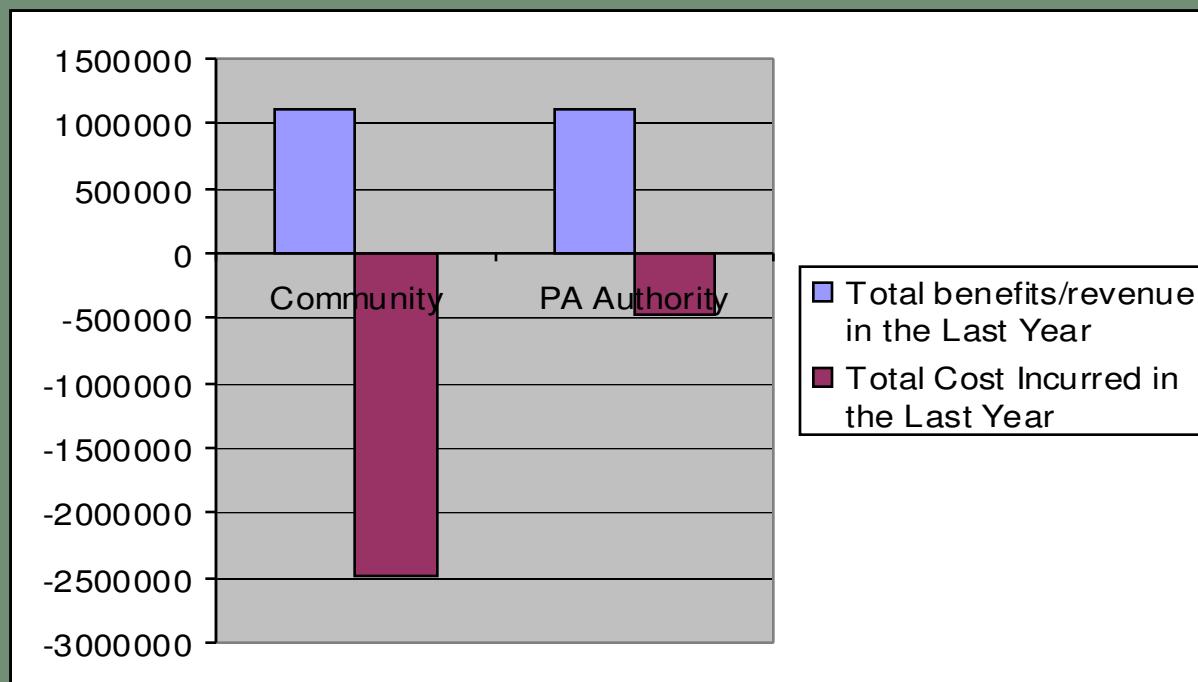
# Distance from PA: benefits, costs and net cost-benefit (sign)



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## Q4: PA cost share between community & PA authority



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# Focal Group Discussions

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## **Q: Do some groups in the community receive more benefits from the PA?**

Perception is that: benefits are captured by communities located nearer to the PA, and households nearer to the SNR gates. Tourists are also an important vehicle for indirect benefits to surrounding communities. They provide access to health and school, as well as direct income by buying local artefacts but tourists are only brought to the nearest communities and households.

## **Q: Do some groups in the community bear more costs than others from the PA?**

Perception is that : (A) costs are wider spread than benefits. There is consensus that some of the costs, especially in terms of natural capital are borne relatively more by communities far from the PA (people migrating to their area to collect the resources). (B) People who own livestock are more affected than others by costs (fines, access to grazing, access to water, wildlife attacks, disease....).



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# Methodological issues / conclusions

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- Even in a simplified valuation framework such as this, a myriad of technical considerations
- Accuracy of the valuation process greatly enhanced by iteration with community
- Needs a ‘poverty adjustment’ to put the impact values into livelihood perspective
- Need to be very careful on *numaire* choice (over / under-estimation danger)
- Impact types need further refining to distinguish between e.g. inputs vs outputs (double-counting danger)
- Who are the community? (the scaling-up issue)



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# Initial positive conclusions

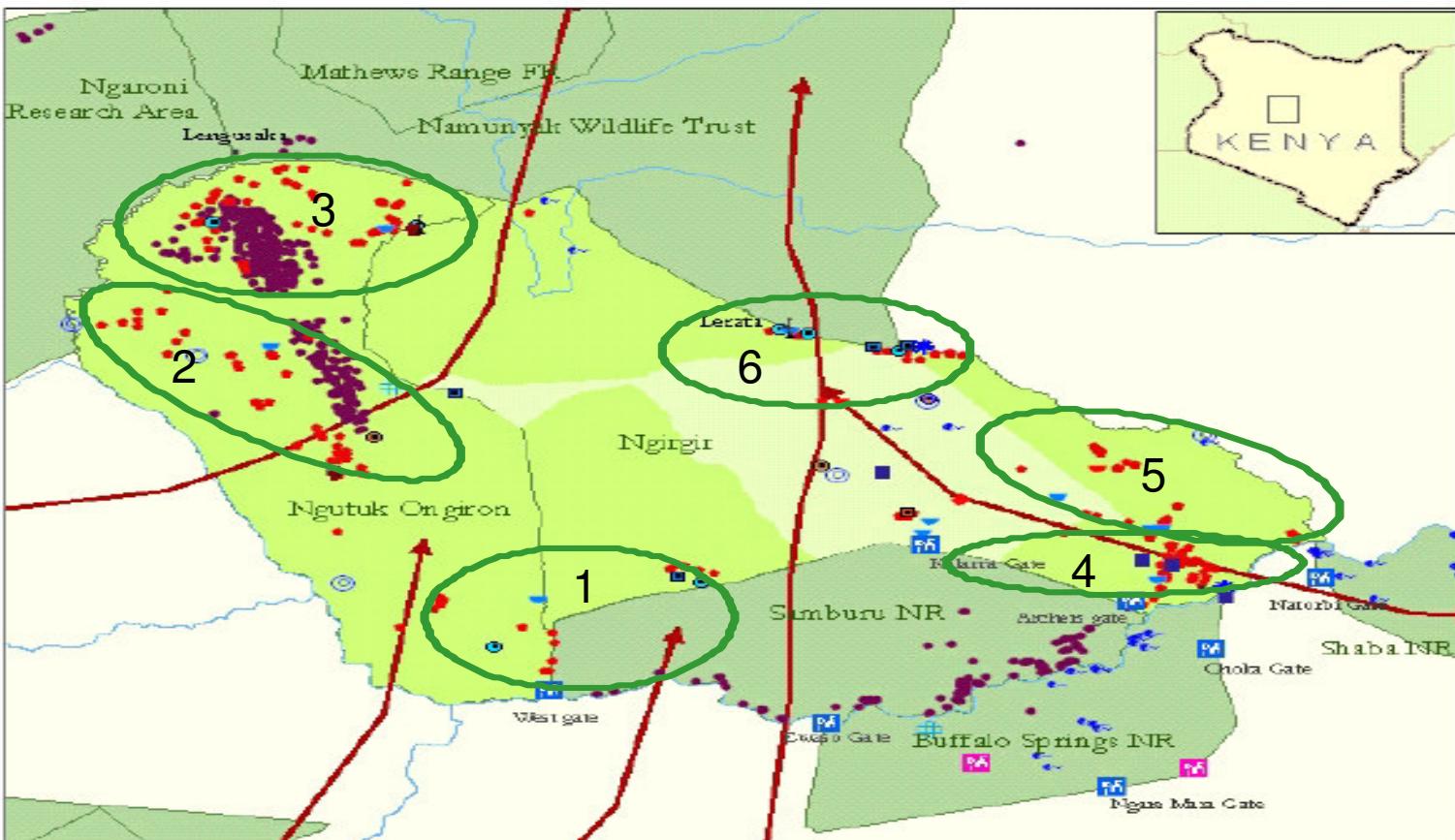
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- Researchers felt that the PEV method has integrity in terms of relative magnitudes. Less certain about absolute magnitudes.
- Delivering aggregate impact information to donors and connecting socio-economic and conservation impacts
- Non-financial impacts / values are significant
- Should help strengthen intervention design and modification, identify suitable entry-points
- Improve management of expectations, enhance ownership of projects of beneficiaries, particularly use of community enumerators – which also builds local M&E capacity



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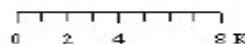


■ Ranger Base Water Scources  
■ Gate  
● Bomas  
▪ Major Town  
— River  
↔ Wildlife Migratory Routes

● Springs  
■ Swamp  
■ Water Pan  
■ Water Pump  
■ Water Tank  
■ Weir  
○ Well  
\* Windmill  
• Grevy Zebra Distribution

Conservation Management

- National Reserve
- Other Protected Area
- Community
- Conservation Area
- Kalama Conservation Area



**Moving forward:  
A baseline for future intervention  
in surrounding communities**

Source: AWF, Survey of Kenya,  
O Africover

AWF Spatial Lab  
Oct-04

# Community indicators for interventions 1

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## ***Conservation Intervention Component 1: Institution-bldg***

- Harmonisation of GRC (governance-mgmt) & conservancy roles
- Capacity built for effective implementation of GR projects (conservancy); GRC (governance) (a) technical skills (b) appropriate management structures functioning
- GR strategic plan – long-term plan + short term action plan

## ***Impacts:***

- Systematic management / sustainable-improved use of resources
- Improved decision-making
- Development roadmap guiding actions

## ***Indicators: ....?***



# Community indicators of success 2

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## ***Conservation Intervention Component 2: Enterprise development***

- Strategic Business Plan for maximisation of revenue potential
- Revenue-sharing mechanisms developed
- Appropriate contracts secured with tourism operators
- Strategic Plan for community enterprise development/capacity e.g. micro-enterprise

## ***Impacts:***

- Employment, skills, enterprise-income, funding self-sufficiency for GR operations, enhanced hospitality, water access, education, health, investor confidence

## ***Indicators: ...?***

# Community indicators of success 3

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## *Conservation Intervention Component 3: NRM planning & implementation*

- NRM Action Plan – zonation
- Management by-laws developed for each land use type
- GR constitution developed and adopted
- Implementation initiated of NRM priorities

### *Impacts:*

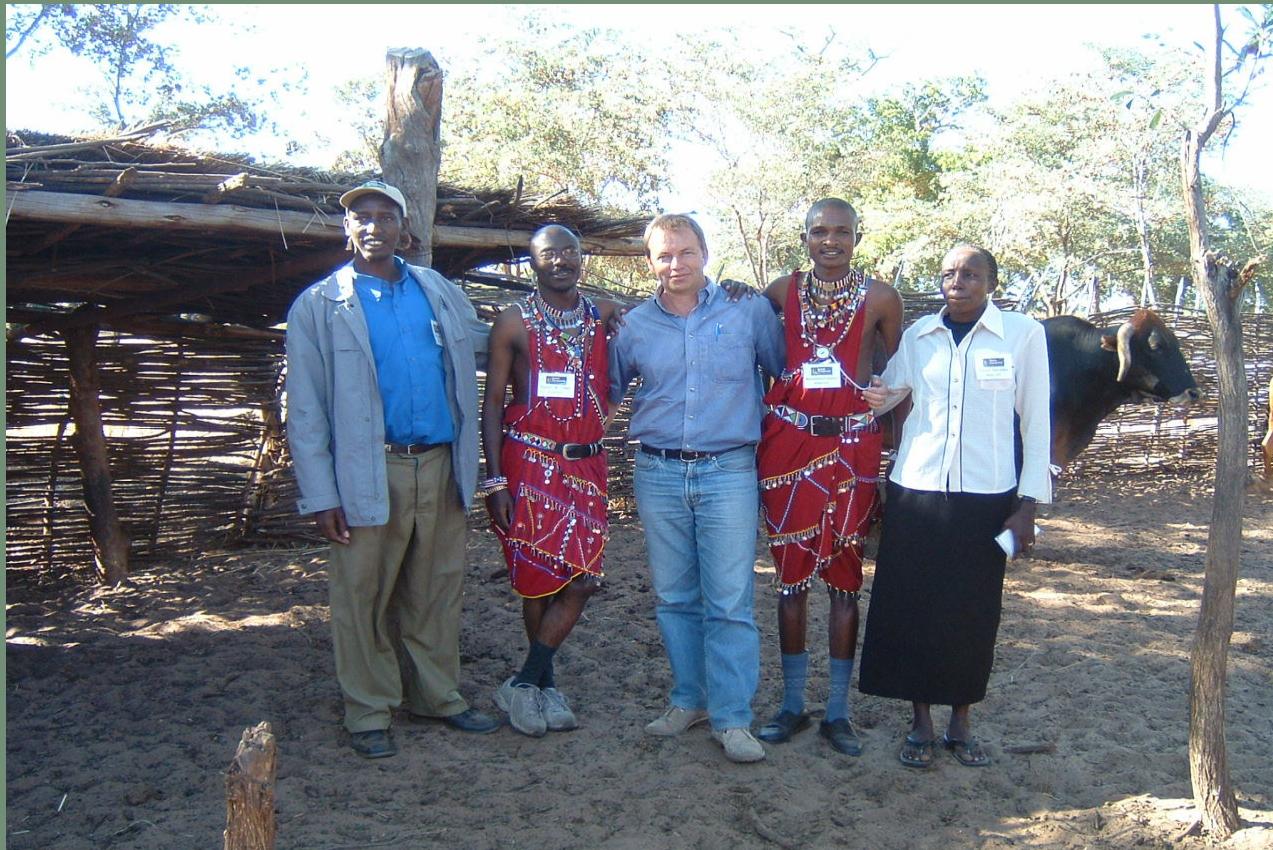
- Equitable use of resources
- Reduction of conflict – human-wildlife, livestock-wildlife, e.g. water, tolerance levels; between neighbouring communities; within community
- Each individual becomes responsible for conservation
- Improved NRM productivity & management
- GR water management & development plan

### *Indicators: ....?*



# Learning together:

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5 Maasai in Zimbabwe



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