



# Total Economic Valuation of Natural Resources in Kenya

*Mr. Wilfred Osumo, National Environment Management Authority (NEMA)  
Dr. Joram Kagombe, Kenya Forest Research Institute (KEFRI)*



# Introduction

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- Natural resources (forests, water Towers, wetlands etc) play an important role in the livelihoods of the population.
- Ecosystems degradation continues to compromise the supply of ecosystems services.
- Undervaluation of natural resources - resulting in marginalization in national budget allocation, land-use changes and decisions -excisions for settlement and farm lands

# ECOSYSTEM SERVICES VALUATION

## Total Economic Value

Use Value

Non-Use Value

### Direct-Use Value

Provisioning  
(Food, water,  
timber, raw  
materials, energy)

### Indirect-Use Value

Regulating  
(Flood control,  
water purification,  
climate, air)  
Supporting  
(Nutrient cycling,  
soil erosion control,  
pollination)

### Bequest Value

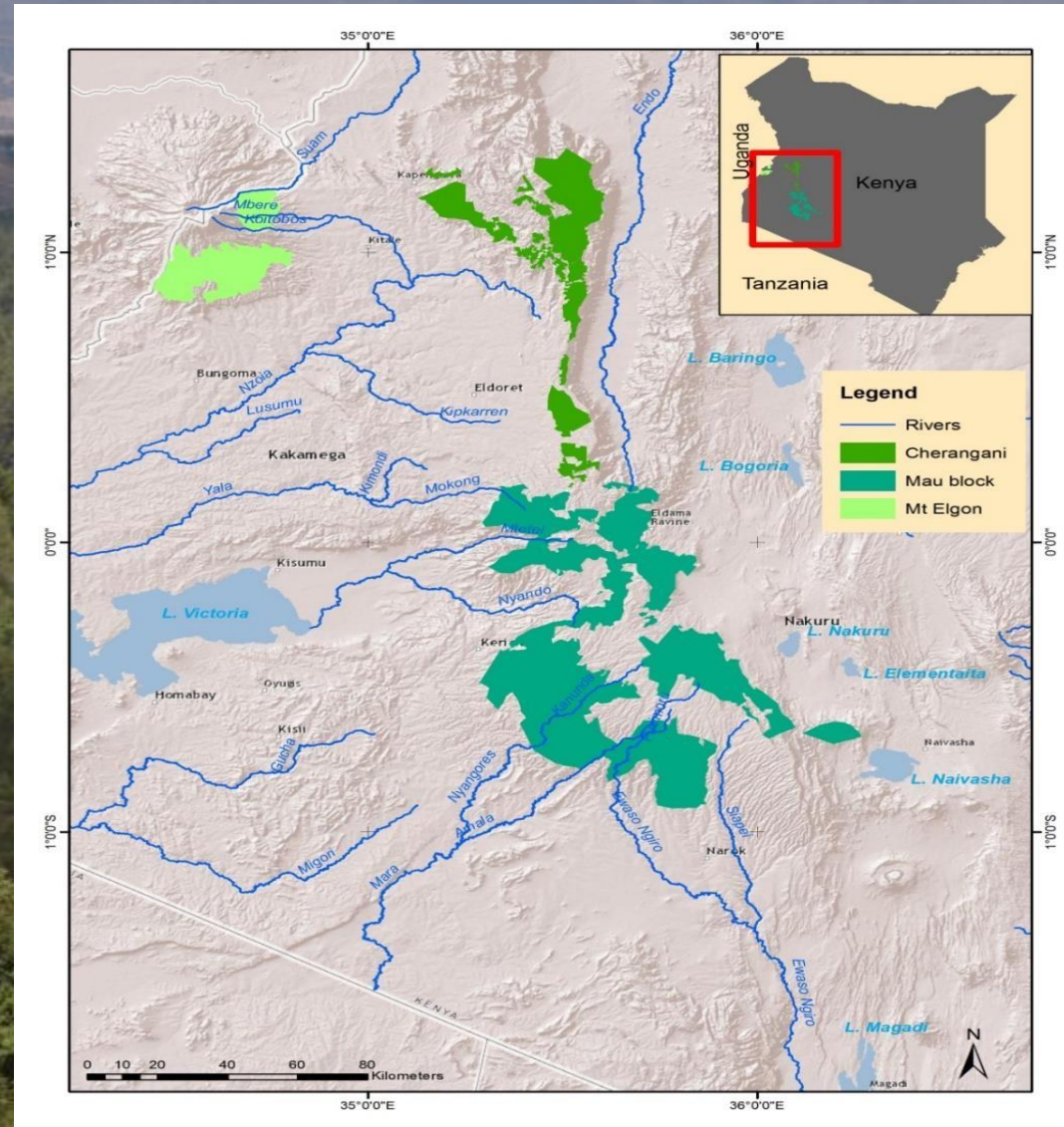
Possible use by  
future  
generations

### Existence Value

Right of existence  
(Aesthetic,  
cultural, religious,  
ritual, heritage)



# Valuing Ecosystem Services of the Water Towers - Mau, Cherangany and Mt. Elgon

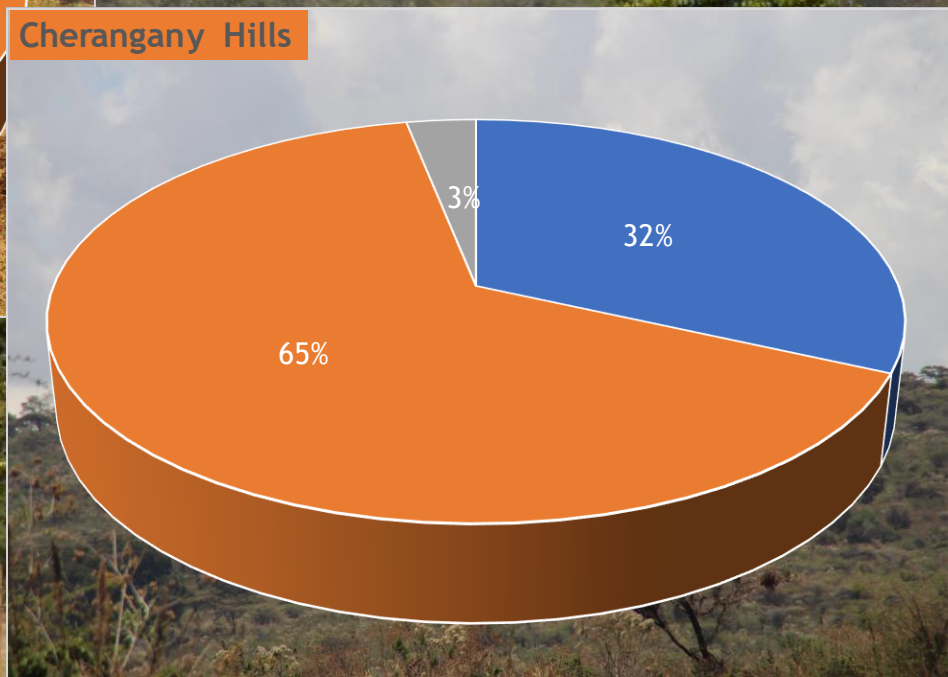
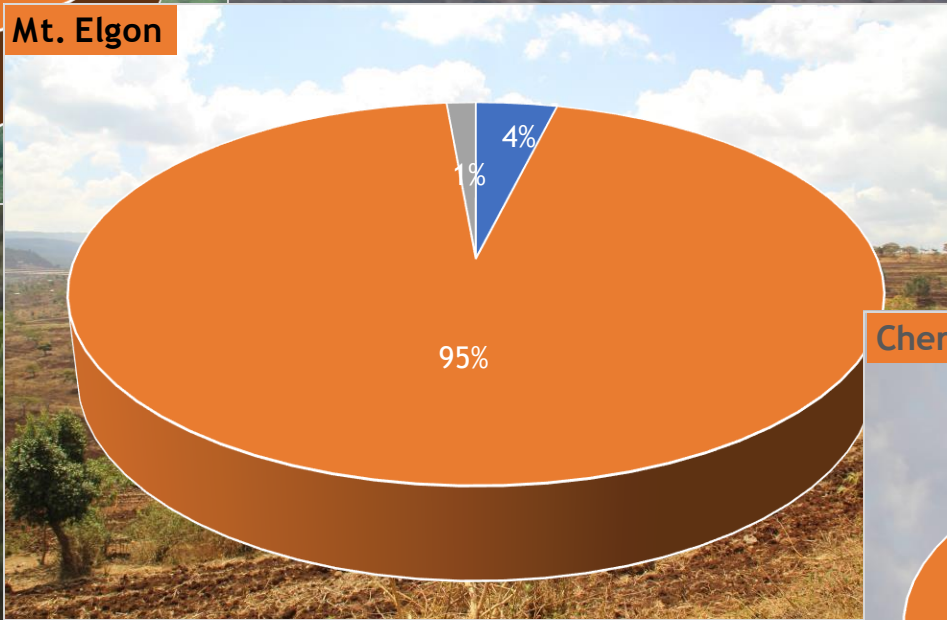
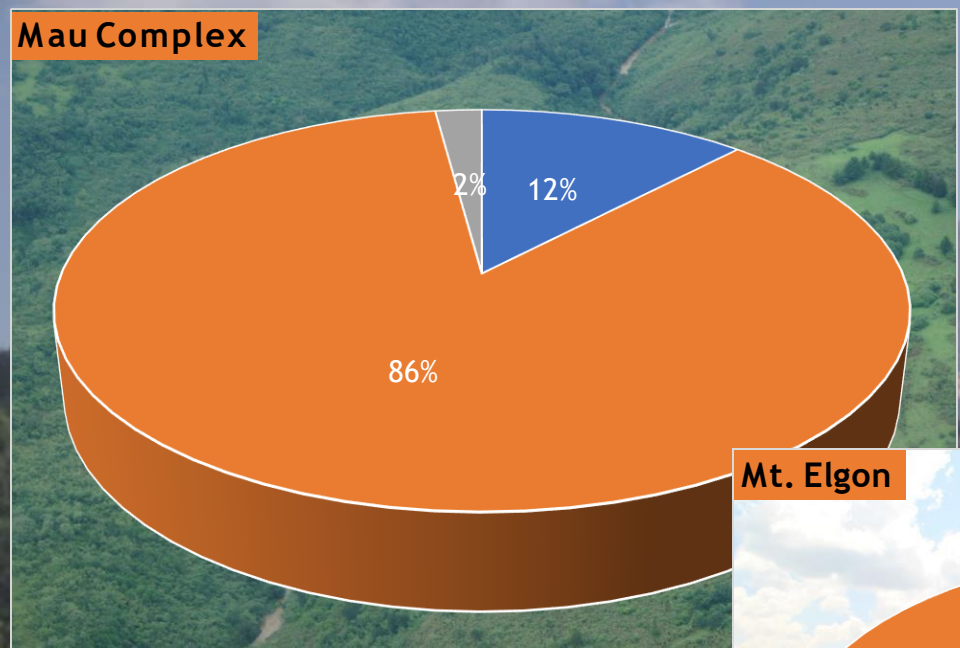




# SUMMARY VALUES

ES Type	ES	Annual (KES)	Annual (USD)	Contribution to TEV (%)
Cultural	Cultural and Spiritual	235,358,000	2,353,580	0.07
	Bequest	297,905,000	2,979,050	0.08
<b>Subtotal</b>		<b>533,263,000</b>	<b>5,332,630</b>	<b>0.15</b>
Provisioning	Timber and Non-timber	22,941,590,363	229,415,904	6.43
	Food Production	634,770,000	6,347,700	0.18
	Water	3,427,027,000	34,270,270	0.96
	Hydropower	11,983,679,000	119,836,790	3.36
	Biodiversity	309,665,000	3,096,650	0.09
	Tourism	9,300,000,000	93,000,000	2.61
<b>Subtotal</b>		<b>48,596,731,363</b>	<b>485,967,314</b>	<b>13.61</b>
Regulating	Water Flow	2,960,143,000	29,601,430	0.83
	Water-Quality Regulation	1,155,366,000	11,553,660	0.32
	Carbon Sequestration	176,657,067,000	1,766,570,670	49.49
	Oxygen Generation	118,461,049,000	1,184,610,490	33.19
	Microclimatic Regulation	2,099,161,000	20,991,610	0.59
	<b>Subtotal</b>		<b>301,332,786,000</b>	<b>3,013,327,860</b>
Supporting	Soil Conservation	1,060,000,000	10,600,000	0.30
	Nutrient Conservation	4,499,000,000	44,990,000	1.26
	Pollination	930,564,000	9,305,640	0.26
<b>Subtotal</b>		<b>6,489,564,000</b>	<b>64,895,640</b>	<b>1.82</b>
<b>Grant Total</b>		<b>356,952,344,363</b>	<b>3,569,523,444</b>	<b>100.00</b>

# Proportions of Ecosystem Services



- Provisioning Services
- Regulating Services
- Cultural and Supporting Services





What? What, How, Where and When?

Live in harmony within their ecosystems.

- Implement community-led landscape and watershed interventions
- Reduce forests, wetlands, rivers and land degradation
- Enhance soil conservation,
- Improve water resources such as wetlands, restore riparian areas and enhance climate resilience of communities and ecosystems.
- Climate adaptation and mitigation interventions consistent with the National Landscape and Ecosystems Strategy

### **How?**

- Investments in landscape approaches to catchment management, payment for ecosystem services and low carbon focused interventions
- Community empowerment and gender transformative approaches
- Targeted natural resource specific interventions (forests and water towers, water resources, arable land, rangelands and wetlands) –institutional and community led interventions (Community Forest Associations, Water Resource Users Associations, County Environment Committees)
- Institutional Interventions Strengthening.

**Where and When?.....**



# Recommendations

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1. Total Economic Valuation be incorporated in KEWASIP baseline studies to inform effort and resource allocation.
2. Capacity building in Total Economic valuation of programme participating agencies..
3. Mainstreaming of Total Economic Valuation in Ministries, Departments and agencies policies and strategies..