

# **Environmental Markets**

*What might Africa offer?*

*Presentation from*

**BJ Heinzen**

*to*

***Africa Business Group, Centre of African Studies***

***SOAS 29 May 2009***

[www.barbaraheinzen.com](http://www.barbaraheinzen.com) → Barbets

# Outline of Talk

**Africa's Development ...**

**Environmental Markets**

**Barbets' Duet**

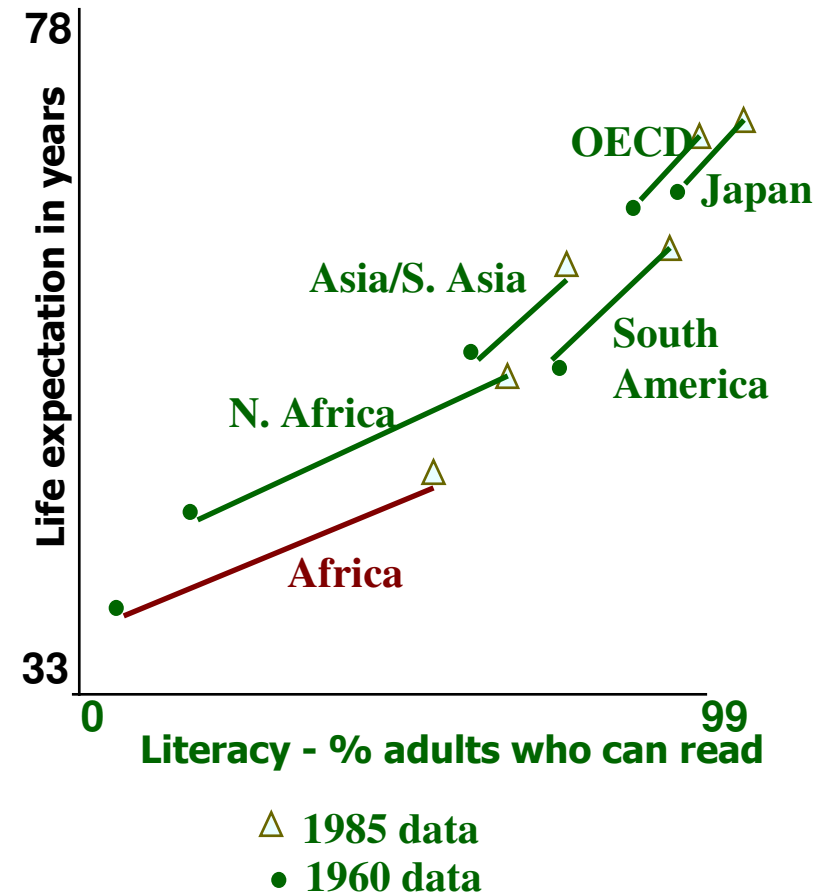
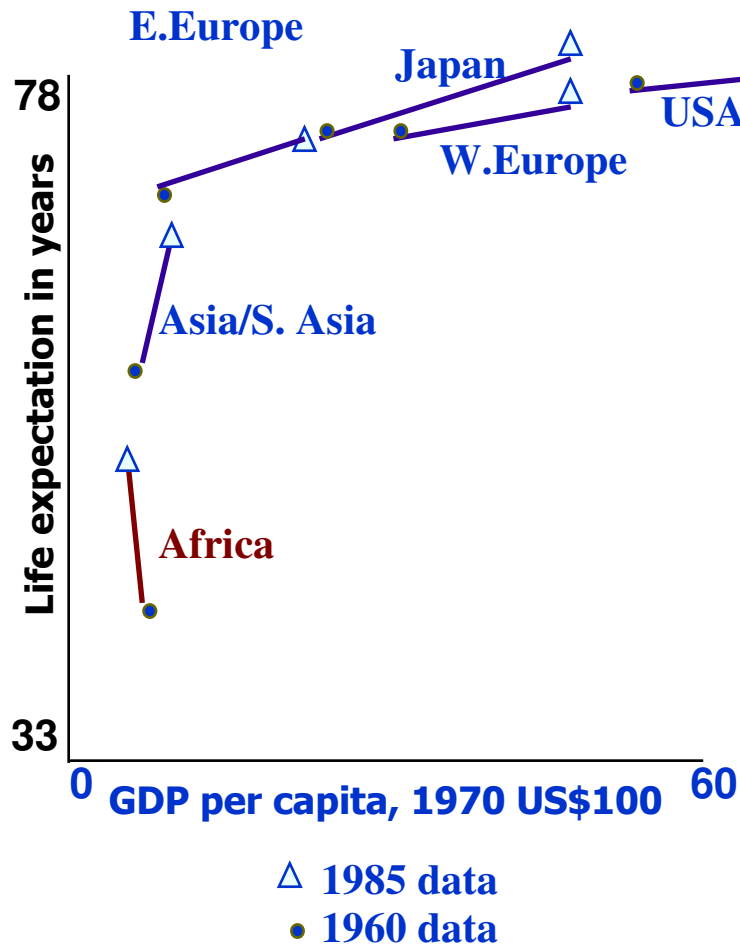
# Africa's Development ...

Africa's Development ...

Environmental Markets

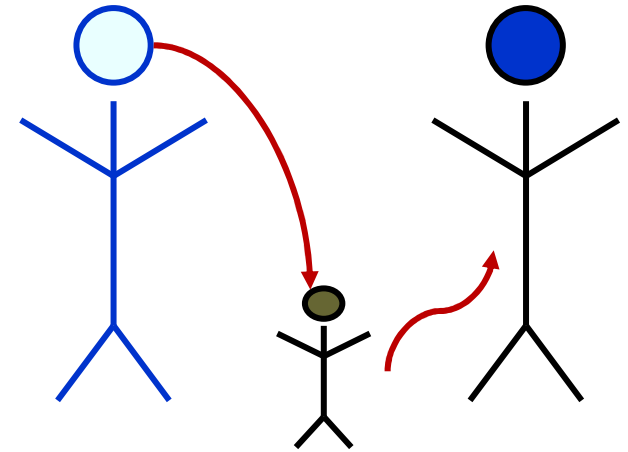
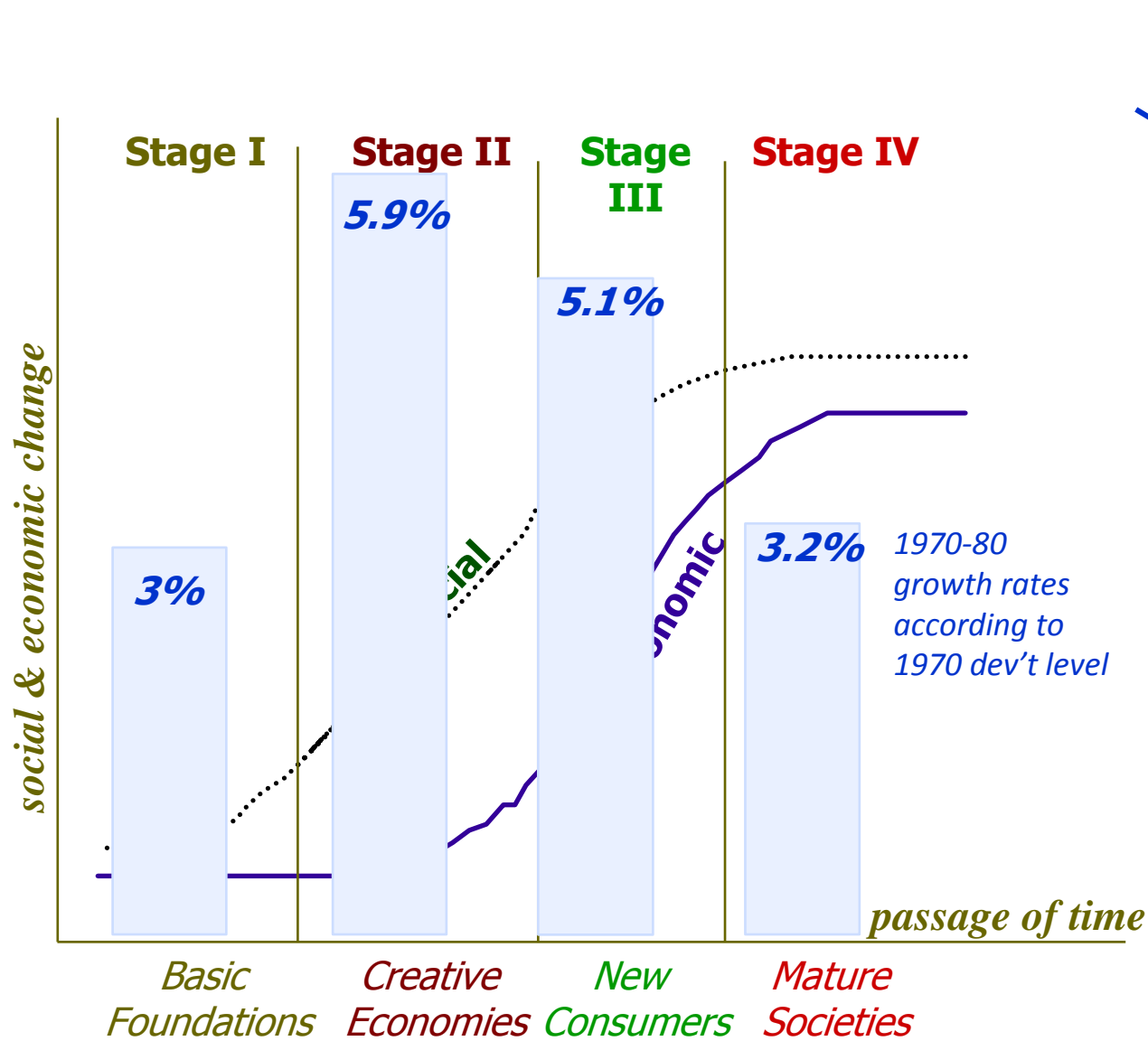
Barbets' Duet

# 1985: Africa at the Back of the Queue



Source: B Heinzen, "Unfinished Revolutions: The Fate of Developing Nations at the Turn of the Century", in *The Deeper News*, vol. 2, no. 3, January 1991, Global Business Network; hand drawn copy

# 1985: Africa's Turn Will Come

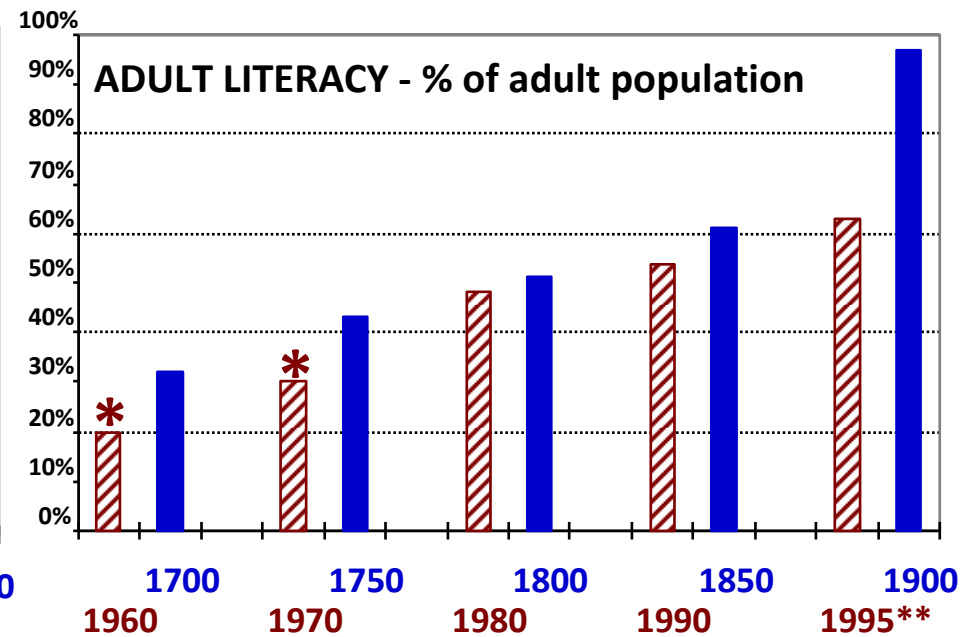
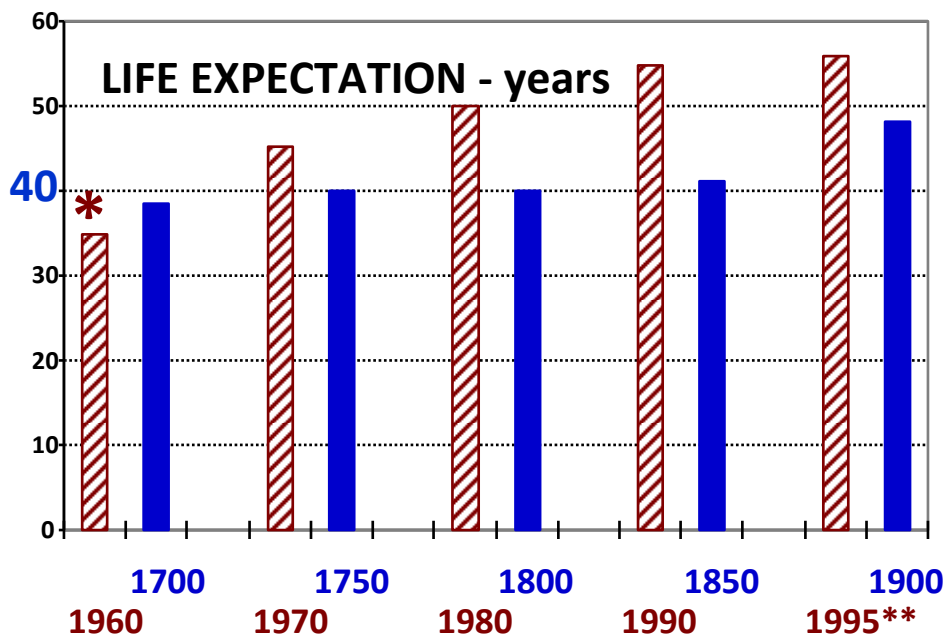
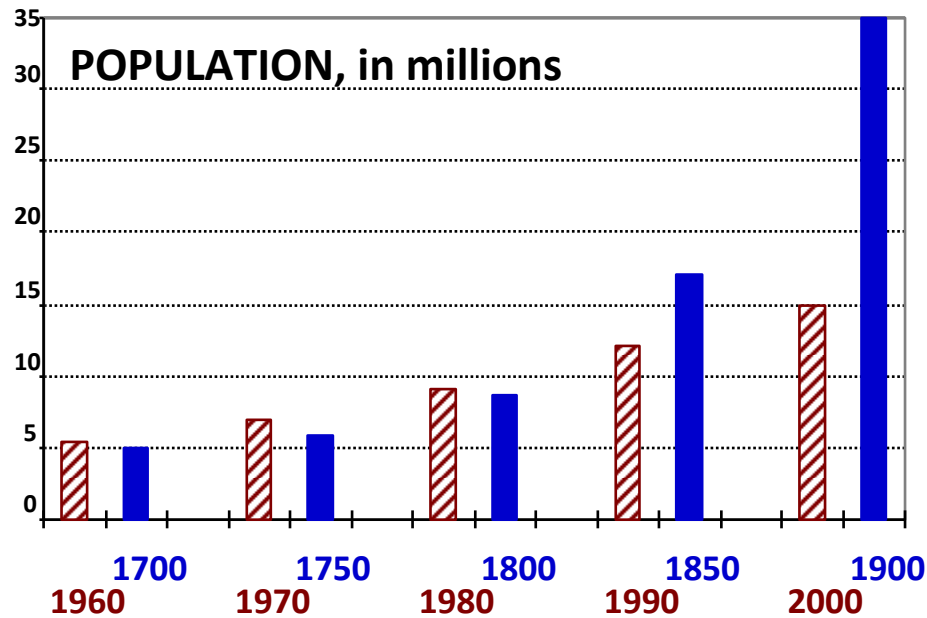


(More development required...)

# 1960-2000: Stronger Social Foundations

*"The Great Acceleration"*  
A global phenomenon

▨ Cameroon    ■ England  
40 yrs        200 yrs  
1960-2000    1700-1900



\* Note: Cameroon's literacy for 1960 & 1970, plus life expectation for 1960 are my own 'best guesses'; no data available. \*\* Cameroon data for 2000 not available when this graph was drawn.

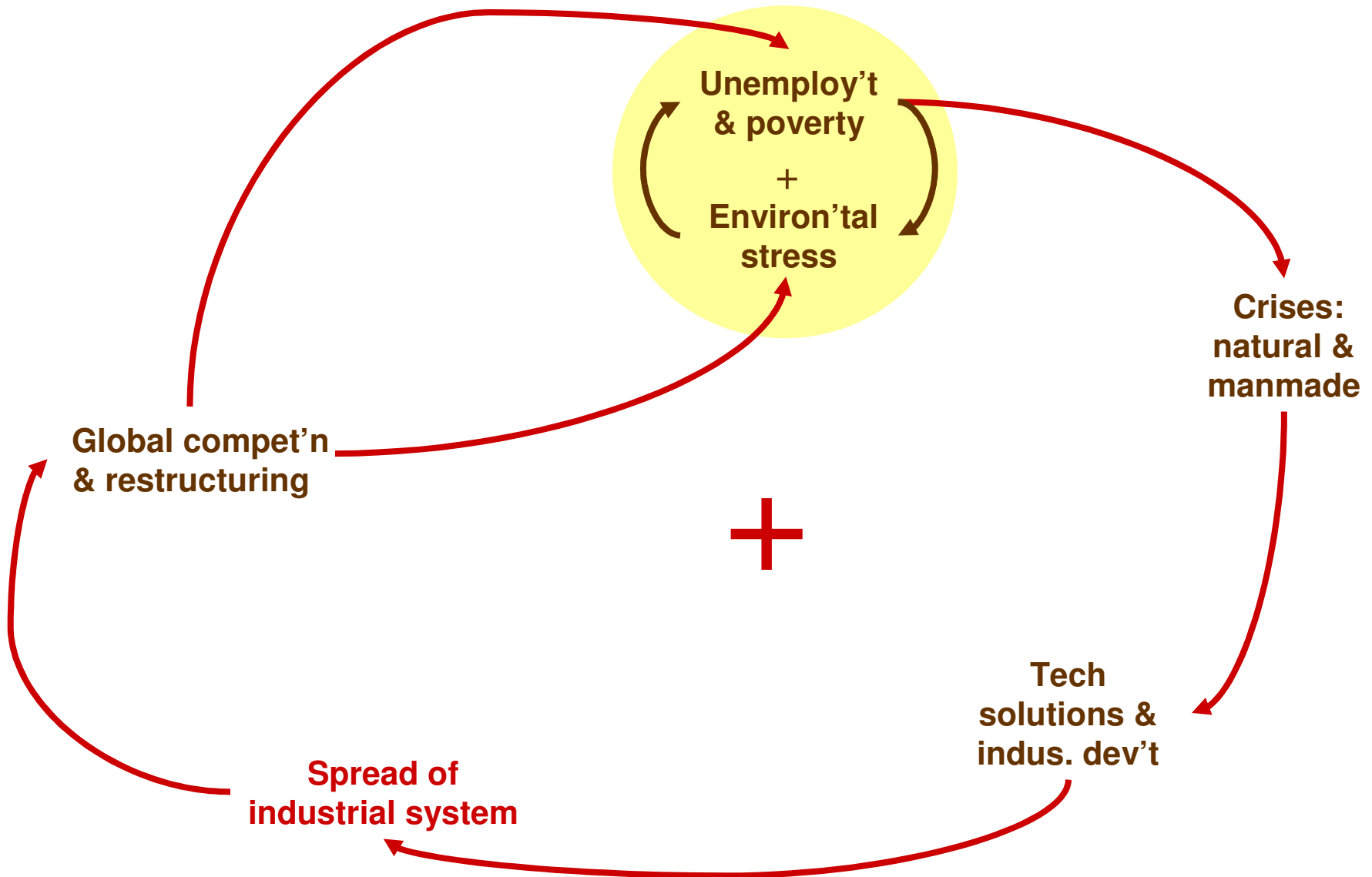
# ... a Systemic Crisis

**Africa's Development ...**

**Environmental Markets**

**Barbets' Duet**

# 2008: Systemic Crisis in Africa







# Choices for African Leaders



Sell resources, buy political time  
*Logging, mining, oil, etc.*

Unemploy't  
& poverty  
+  
Environ'tal  
stress

Crises:  
natural &  
manmade

Global compet'n  
& restructuring

Reorganise  
the human  
system,  
create new  
rules

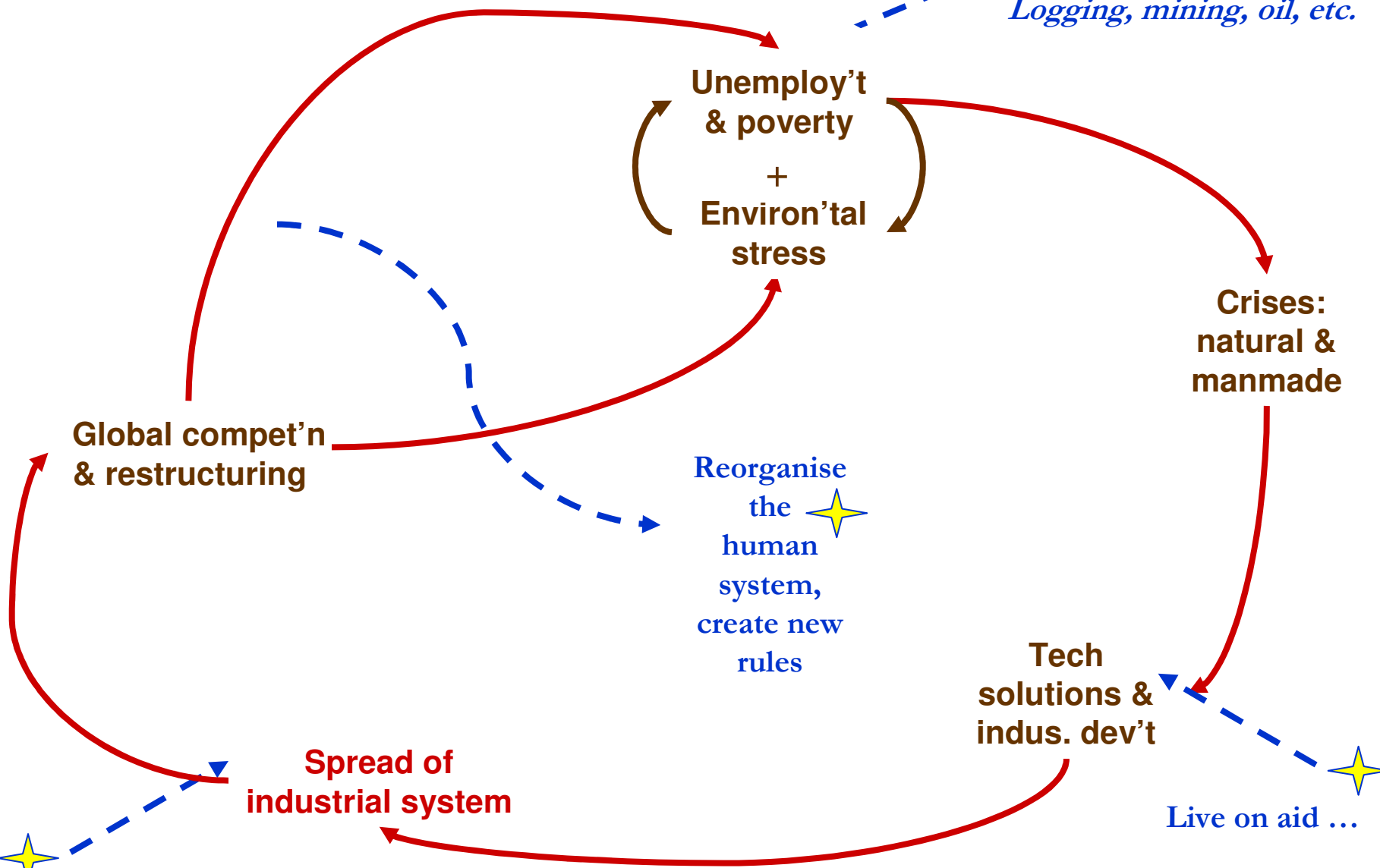
Tech  
solutions &  
indus. dev't

Spread of  
industrial system

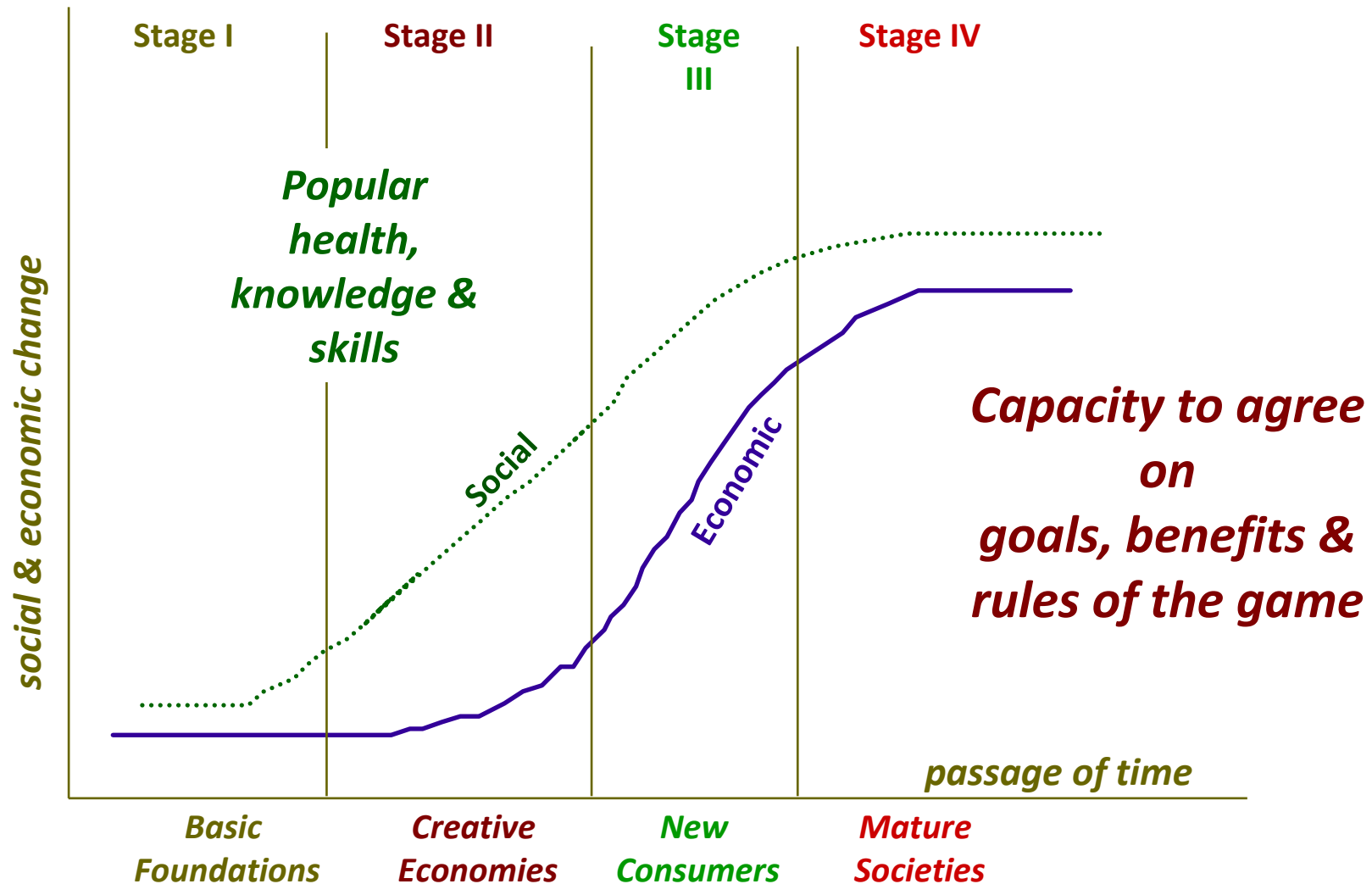
Live on aid ...



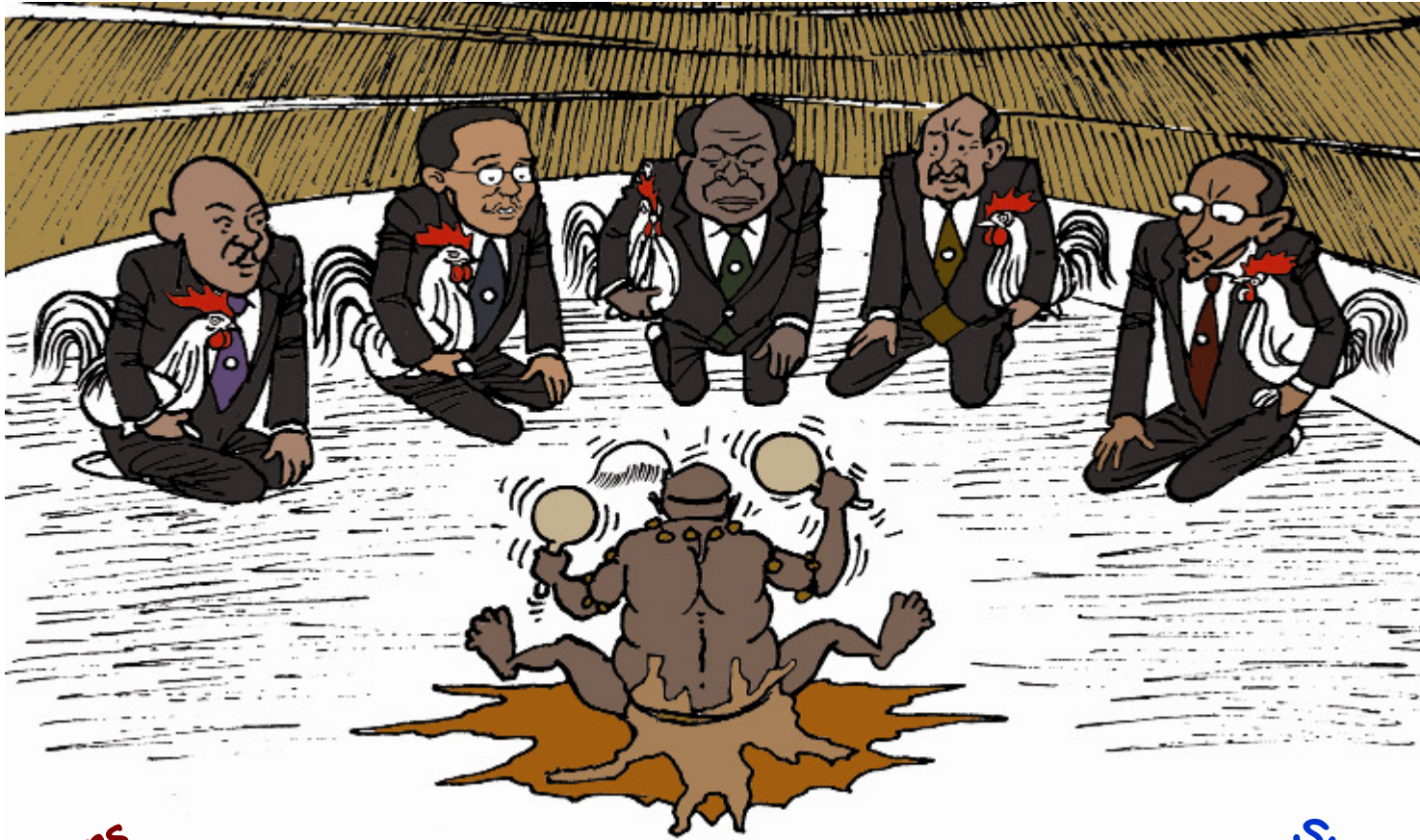
Don't start ...



# Who Decides? “Working through the Flat Space...”



# Duality: the Tension of Two Worlds



*Earth floors*

## **Duet & Duel of Two Strong Legacies**

*Suits & ties*

*Our own deep histories  
Holistic cosmologies  
Integrating cultures  
Unpredictability*

*Newtonian 'mechanics'  
Enlightenment rationality  
Cartesian logic  
Certainty*

**What do we want?**

White Nile

**Inadequate Institutions**

Lingala line

Peoples of E. Africa

Indian Ocean

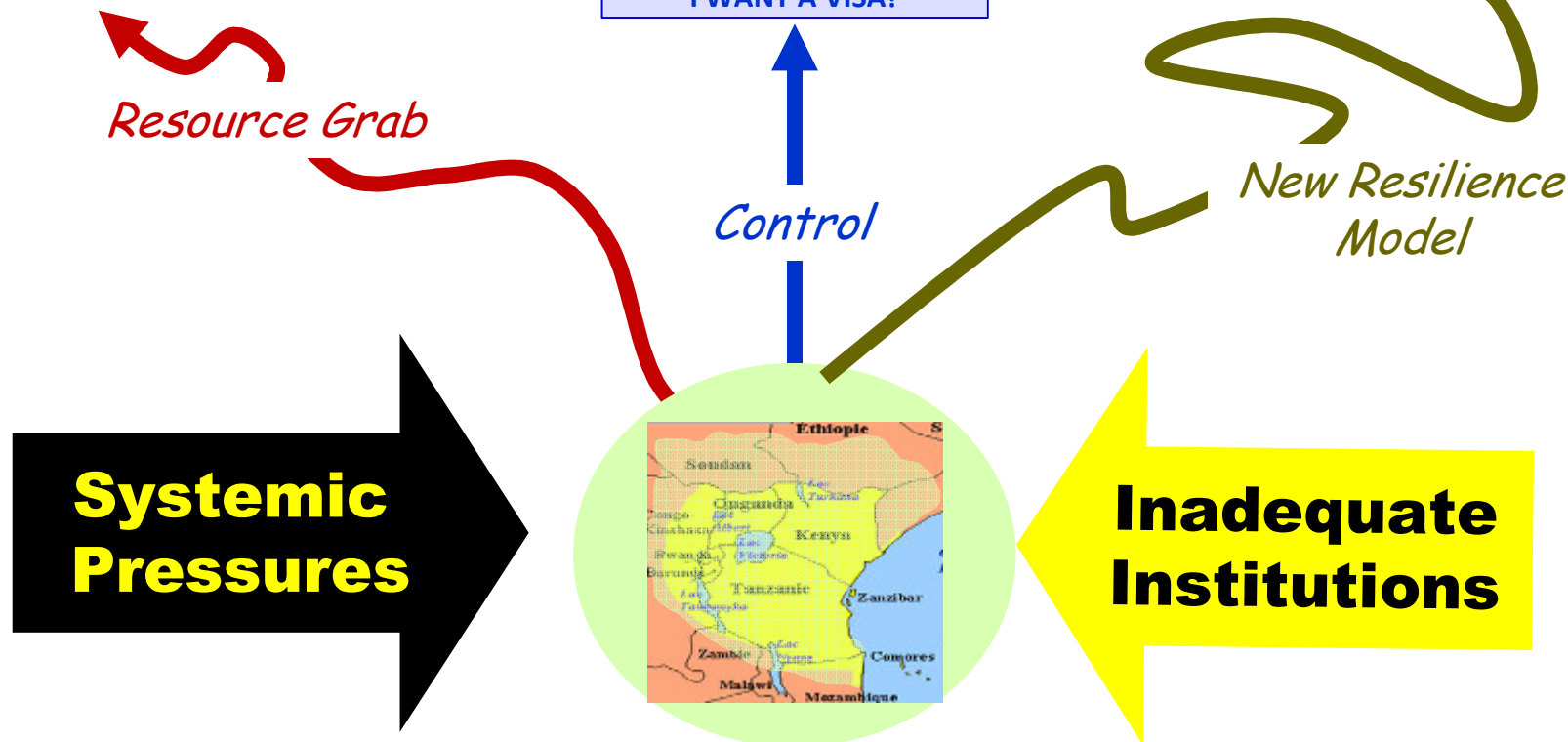
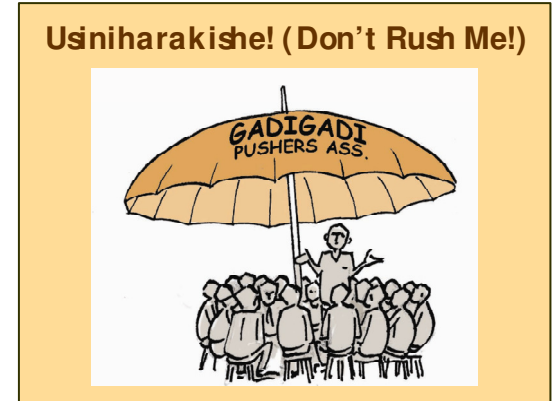
**Systemic Pressures**

**What might we become?**

Swahili line

*Original slide from SID East African Scenarios, April 2008; see [www.sidint.org](http://www.sidint.org)*

# SID: Scenarios for East Africa, Apr08



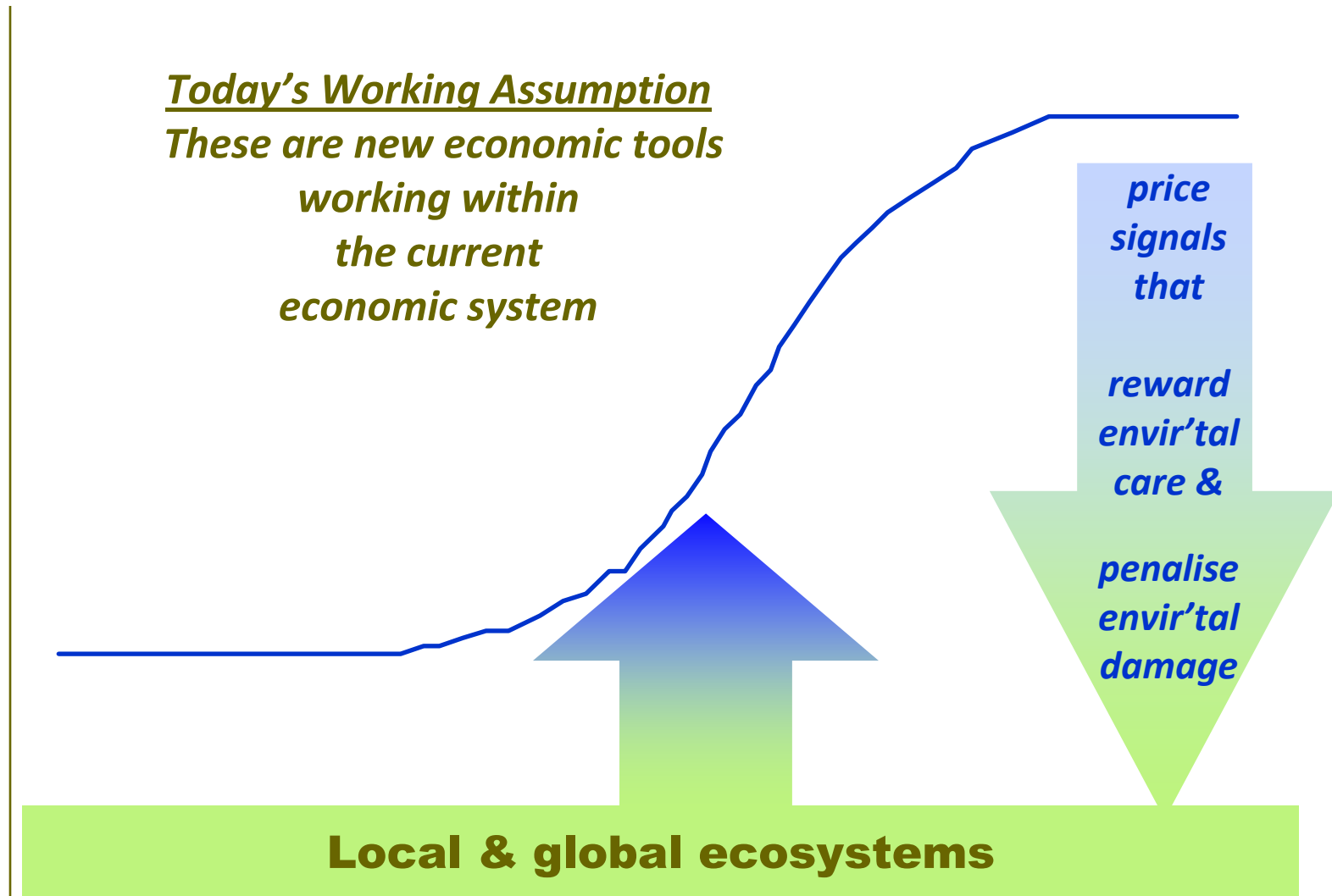
# Environmental Markets

Africa's Development ...

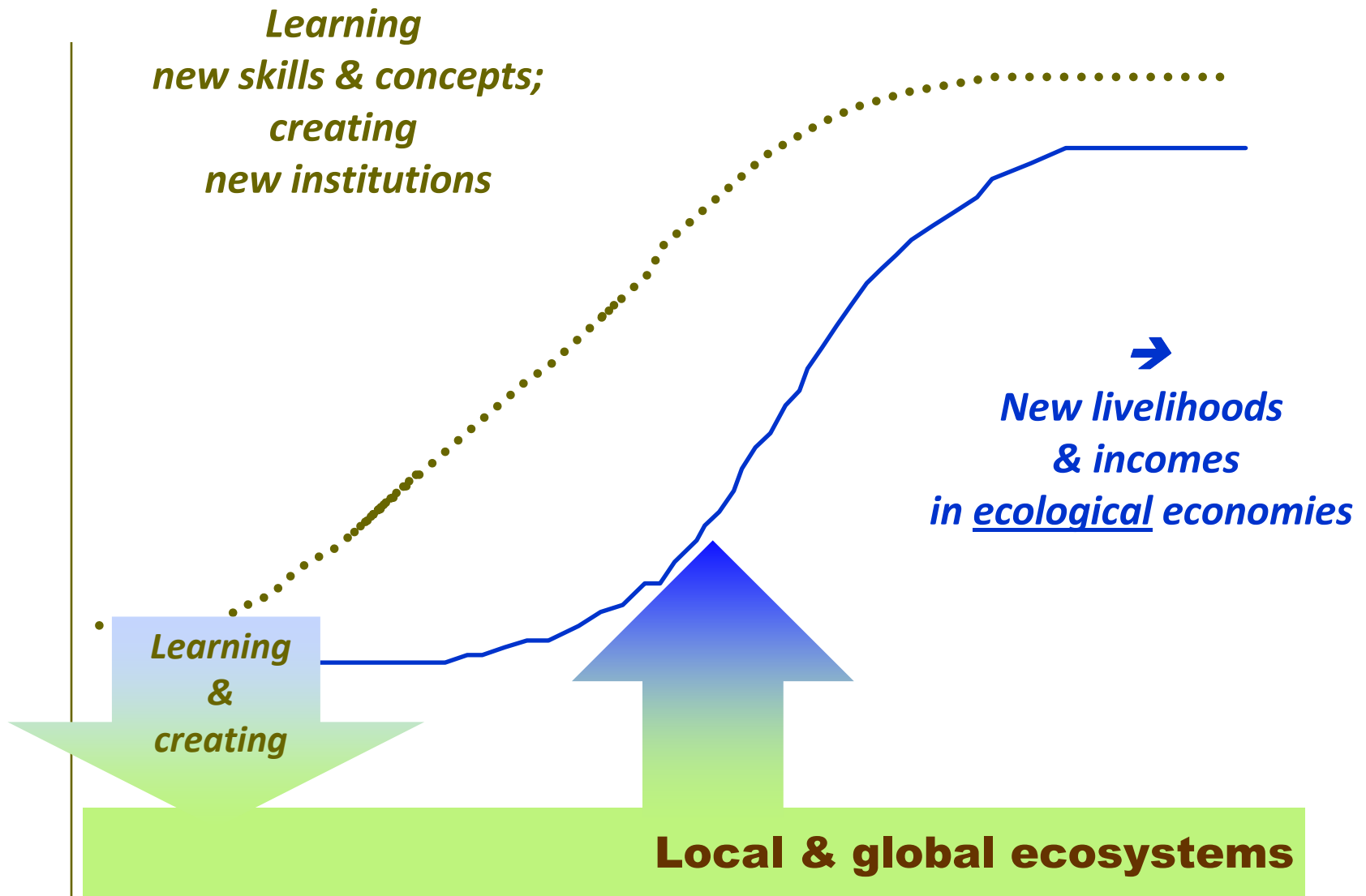
Environmental Markets

Barbets' Duet

# What Are Environmental Markets?

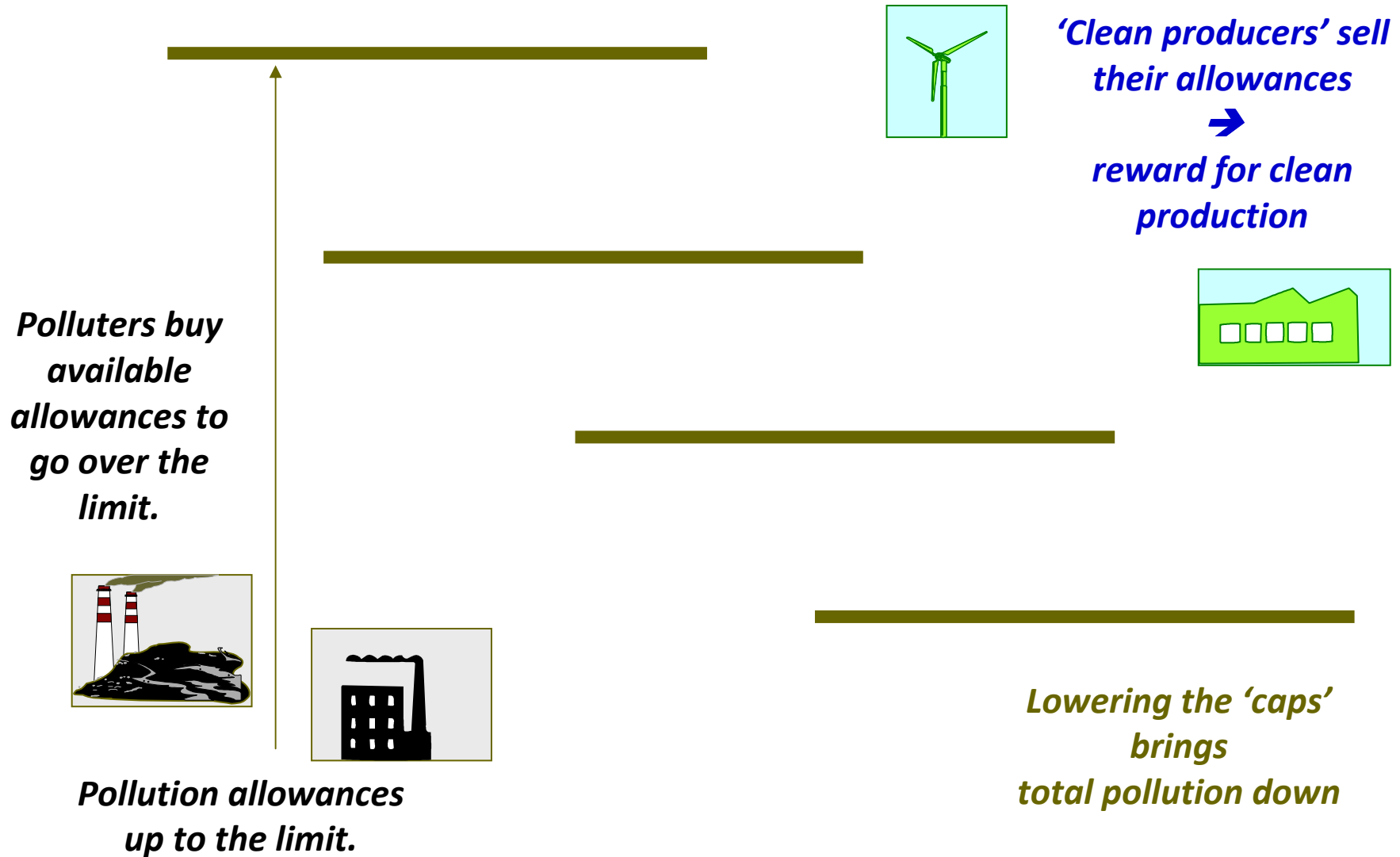


# Can Also Be Seen as a Global “Flat Space”





# Emissions Cap & Trade Markets



# “I Warn You, It Took 20 Years...!”\*

*\*USA – Richard Sandor*



Chicago Climate Exchange (CCX), launched in 2003, is the world's first and North America's only active voluntary, legally binding integrated trading system to reduce emissions of all six major greenhouse gases...

<http://www.chicagoclimatex.com/>

## **VOLUNTARY MARKETS**

**CCX: members voluntarily join the exchange & agree caps on emissions**

*Includes personal markets,  
e.g. offsets for air travel  
Fast, innovative &  
unpredictable*

*UK – James Cameron*

## Climate Change Capital\*



Climate Change Capital is a leading investment banking group specialising in the investment opportunities created by the low carbon economy.

<http://www.climatechangeinvestment.com/index.asp>

## **COMPLIANCE MARKETS**

**ETS: members legally required to join exchange.  
Emission caps set by EU**

*Required to meet standards  
of Kyoto Protocol  
Slow, expensive,  
bankable*

*\*Richard Sandor, founder of Chicago Climate Exchange, to B. Heinzen, 2004*

# Emissions Trading: the First Market to Grow

	2005		2006	
	Volume MtCO <sub>2</sub> e	Value MUS\$	Volume MtCO <sub>2</sub> e	Value MUS\$
<b>EU ETS</b>	<b>321</b>	<b>7,908</b>	<b>1,101</b>	<b>24,357</b> (19bln Euros)
New South Wales	6	59	20	225
Chicago Climate Exchange		3	<b>10</b>	38
UK ETS	0	1	na	na
<b>Allowances - Sub-total</b>	<b>328</b>	<b>7,971</b>	<b>1,131</b>	<b>24,620</b>
Primary CDM	341	2,417	450	4,813
Secondary CDM	10	221	25	444
Joint implementation	11	68	16	141
Other compliance	20	187	17	79
<b>Project-based sub total</b>	<b>382</b>	<b>2,894</b>	<b>508</b>	<b>5,477</b>
<b>TOTAL</b>	<b>710</b>	<b>\$10,864</b>	<b>1,639</b>	<b>\$30,098</b>

**EU ETS 2007**

Value = 28 bln Euros

Volume = 1,600 MtCo<sub>2</sub>e

---

**CCX 2007**

Volume = 22.9 MtCO<sub>2</sub>e

Source: Karan Capoor & Philippe Ambrosi, *State & Trends of the Carbon Market 2007*, p. 3, World Bank

2007 ETS figures from [http://www.eurexchange.com/eex/background/eu\\_ets\\_en.html](http://www.eurexchange.com/eex/background/eu_ets_en.html)

2008 CCX figures from: [http://www.chicagoclimatex.com/docs/publications/CCX\\_carbonmkt\\_V4\\_i12\\_dec2007.pdf](http://www.chicagoclimatex.com/docs/publications/CCX_carbonmkt_V4_i12_dec2007.pdf)



“Currently valued at over \$30 billion,  
the carbon trading market  
is set to skyrocket to over \$1 trillion

....

get a piece of this infant industry  
right now.”

## Everyone Piles In



**Green chip Boom!**



Internet advert, found 28 May 2008

[http://www.greenchipstocks.com/subscribe/2195?gclid=CN\\_d1vuJyZMCFRuD1QodERdbkw](http://www.greenchipstocks.com/subscribe/2195?gclid=CN_d1vuJyZMCFRuD1QodERdbkw)



# Offsets in the Voluntary Market

*Mixture of charity & business models*

## 1. Calculate your carbon footprint

Google The UK Carbon Footprint Project



Calculate my carbon footprint



Choose my carbon-reducing Actions



Put me on the UK Carbon Footprint Map

<http://www.google.co.uk/carbonfootprint/>

## 2. Purchase 'offset' by investing in a reliable project



**Plan Vivo**

carbon management and rural livelihoods



<http://www.planvivo.org/fx.planvivo/scheme/uganda.aspx>

## OFFSET VERIFICATION

Voluntary Carbon Standard

<http://www.v-c-s.org>

Gold Standard

<http://www.cdmgoldstandard.org>

UNFCCC CDM

<http://cdm.unfccc.int>

UNFCCC JI

<http://ji.unfccc.int>

Plan Vivo

<http://www.planvivo.org>

Chicago Climate Exchange

<http://www.chicagoclimatex.com>

Environmental Resources Trust

<http://www.ert.net>

Climate Community and Biodiversity Standard

<http://www.climate-standards.org>

Center for Resource Solutions

<http://www.resource-solutions.org>

# What Is the Next New Environmental Market?

*Water &*

*Watershed Services*

*Eco-tourism & non-traditional products*

Organic agriculture certification

Forest Stewardship Timber Certification

Non-traditional forest products, e.g. Brazil Nut

Visits to rare species: e.g. mountain gorillas, red colobus monkeys

Hunting licences  
e.g. Campfire Elephants, Rhino Zebra, Buffalo, Lions

**Genetic Reserves:**  
DNA of wild & domestic plants & animals

**Medicinal Plants**  
e.g. Prunus Africanus

**Biodiversity banks**  
Dev't Rights

**Biodiversity offsets**

**"Avoided Deforestation" + carbon sequestration in forests, biomass, soils & plankton**

Watershed services in mountains e.g. New York, Costa Rica

Water purification services in wetlands

*Biodiversity builds on all other markets*

*Carbon Trading & Clean Air*

Voluntary carbon market (GHG equivalent) Unregulated standards

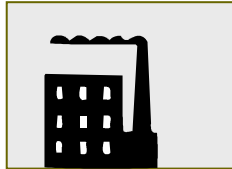
"Clean" Development" tech with lower GHG emissions

Sulphur emissions

Compliance carbon market (GHG equivalent) Meet Kyoto/gov't Standards

# Assumptions Behind New Markets

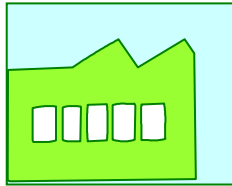
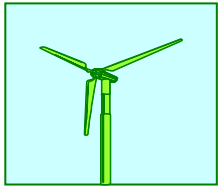
## EMISSIONS



*Polluters Pay*



*Reward for 'Cleaner Air'*



*Rewards are indirect.*

*Relevant property rights belong to those who trade them.*

*The West makes the rules.*

## BIODIVERSITY



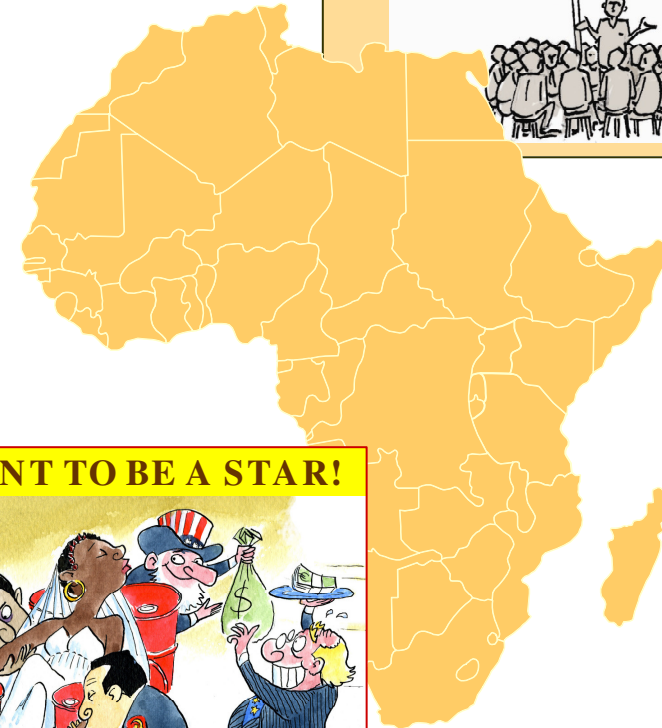
*Set aside & protect*

# Whose Rights? Whose Knowledge? Whose Rules?

Who owns the forest?  
Who owns the CO2 credit?

Face Foundation  
"MORE FOREST, LESS CO2"

Usiniharakishe! (Don't Rush Me!)



I WANT TO BE A STAR!





# **Barbets' Duet**

*Learning in the next 20 years*

Africa's Development ...

Environmental Markets

**Barbets' Duet**

Tanzania, Mar 2002



# Society for International Development East African scenarios work 1997-2008

## Ten years of social capital

E. Africa, May 2007



E. Africa, Nov 2006

## Politics of learning in E Africa

29/30 April 2008

Launch of  
East African Scenarios

Kigali, Rwanda

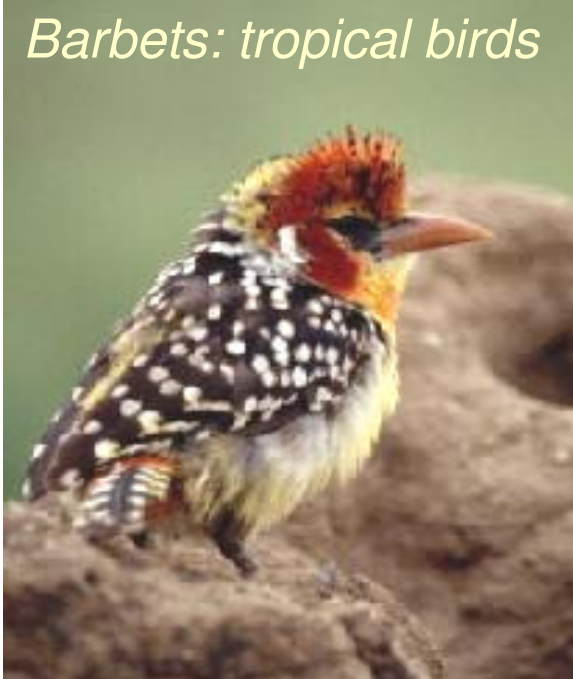


Uganda, 2003

# Barbets' Duet

*A Business Idea, Not a Charity*

*Barbets: tropical birds*



**SUPPORTING**  
people

who support  
the  
natural world

**INVENTING**  
New institutions

e.g. property rights  
& marketing  
structures

*who sing in duet*



**LEARNING**  
from  
2 cultures:  
Africa + West

modern & traditional  
on equal terms

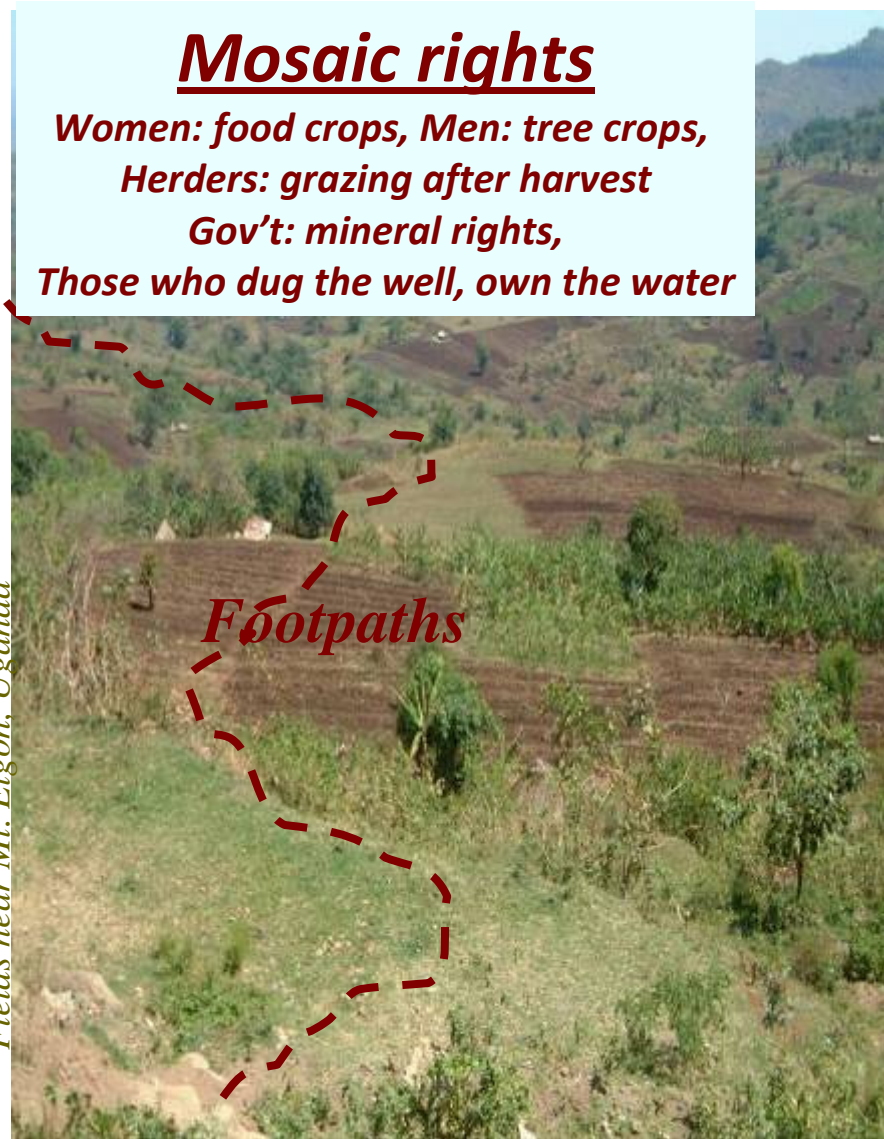
# Duality as Strength: Mosaic Rights & Column Rights

## Mosaic rights

Women: food crops, Men: tree crops,  
Herders: grazing after harvest  
Gov't: mineral rights,  
Those who dug the well, own the water

*Footpaths*

*Fields near Mt. Elgon, Uganda*



## Column rights

Minerals, land, buildings, air rights  
all owned by one



*Downtown NY, from Times Square*

**Fences**

**Mosaic rights → high social equity, high biodiversity;  
Column rights → successful markets**

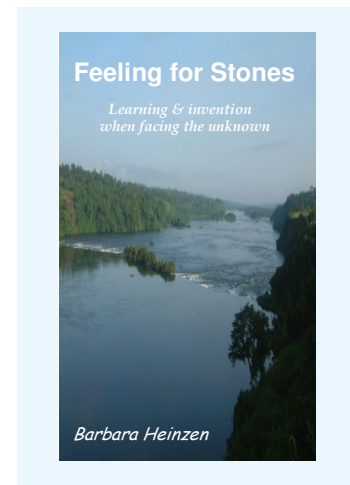
# Early English Lessons in Systemic Invention

Engagement  
& aEsthetics

Experiment  
& Education

Extremity  
& NEcessity

E



# Small Sites, Big Ideas, Key Individuals



**Oby Obyerodhyambo**  
*land in Seme, W. Kenya*

*February,  
2008  
"Just Begin"*



**Mwajuma Masaigana  
& Msi Choke Coop've**  
*Coastal Tanzania*



**LEARNING  
CENTRES  
Knowledge  
Institutions  
Management  
Markets**



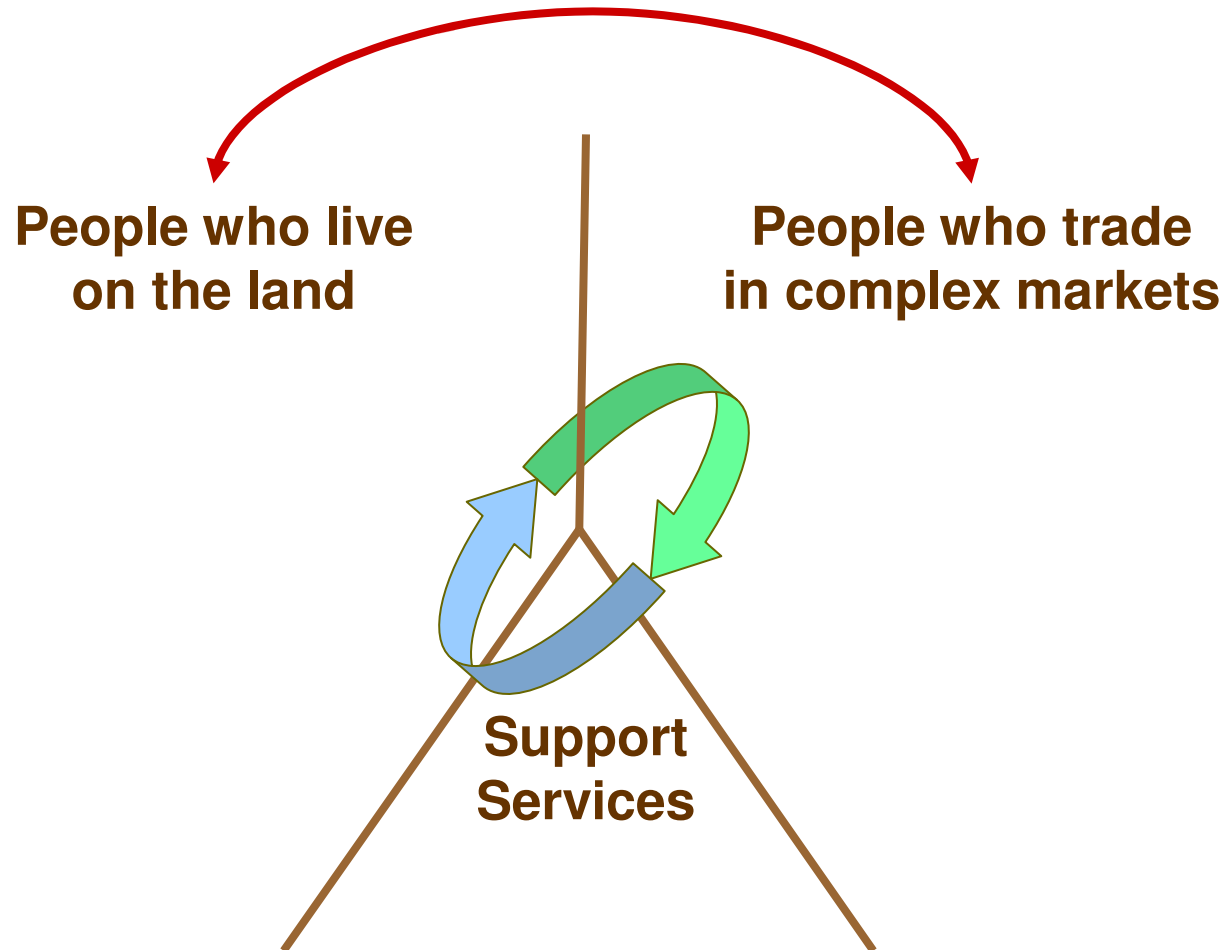
**Sammy Muvelah**  
*land in Lukenya,  
outside Nairobi*



**Magode Ikuya**  
*Karamoja, Uganda*

# Principal Relationship: People & Markets

From October 2006 Conceptual Framework



# Potential “Biodiversity” Markets

<p><b><u>Four Types of Market</u></b></p>	<p><b><u>Products of “Thing” Culture:</u></b></p> <p>Moveable products <i>Tangible, portable, Species-specific</i></p>	<p><b><u>Products of “Earth” Culture</u></b></p> <p>Environmental products <i>Intangible, immovable, Site-specific habitats</i></p>
<p><b>Utility:</b> <b>creating things we need</b> e.g. clean water, air, food, medicine, cosmetics, building materials</p>	<ul style="list-style-type: none"> <li>• <b>Timber &amp; grasses</b> <i>(wild &amp; domestic)</i></li> <li>• <b>Medicinal plants</b></li> <li>• <b>Domestic biodiversity</b> <i>(e.g. seed &amp; semen banks)</i></li> <li>• <b>Edible wild:</b> <i>(e.g. roots, bush meat)</i></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Ground water recharge</b></li> <li>• <b>Water purification</b></li> <li>• <b>Carbon sinks</b> <i>(e.g. swamps, grasslands, uncut forests)</i></li> <li>• <b>Waste management</b> <i>Decomposition services</i></li> </ul>
<p><b>Insurance:</b> <b>reducing risks of</b> climate change, flooding, loss of ground cover due to climate extremities; loss of food species to disease</p>	<ul style="list-style-type: none"> <li>• <b>Woodlots &amp; grasses</b></li> <li>• <b>Medicinal plants</b></li> <li>• <b>Domestic biodiversity</b> <i>(e.g. seed &amp; semen banks)</i></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Flood control</b></li> <li>• <b>Micro-climate change</b></li> <li>• <b>Wild biodiversity</b></li> <li>• <b>Carbon sinks</b></li> </ul>
<p><b>Aesthetics</b> Fashion, bragging rights, tourism, meditation</p>	<ul style="list-style-type: none"> <li>• <b>Edible wild:</b> <i>(e.g. teas, roots, bush meat)</i></li> <li>• <b>Wild biodiversity</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Species habitats</b></li> </ul>
<p><b>Intellectual property</b> Genetic reserves</p>	<ul style="list-style-type: none"> <li>• <b>Medicinal plants</b></li> <li>• <b>Domestic biodiversity</b> <i>(e.g. seed &amp; semen banks)</i></li> <li>• <b>Wild biodiversity</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Species habitats to support genetic reserves</b></li> </ul>



# Necessary Knowledge & Experience

## **RULES**

*Rights, rules & laws,  
both traditional & modern*

## **MANAGEMENT**

*Accounts, training,  
agreements & patience*



## **MARKETS**

*Marketing, sales,  
distribution & trading*

## **POWER**

*Gov't relations,  
powerful interests*

## **FINANCE**

*Capital markets  
& micro-finance*

## **ECOLOGY**

*Biology, geography & ecology  
of natural world*

**Oral skills**  
*Local languages  
Observation  
Listening  
Asking*

**Literate skills**  
*Writing  
Visualisation  
Mapping  
Measurement*

# Fundamental Issues

Can price signals reward abundance, not scarcity?

What exactly can be owned & traded?

This may be necessary,  
but is it possible?

*“If it is necessary,  
it must be possible.”*

Julius Kipng’etich  
Director, Kenya Wildlife Service  
17 October 2007