

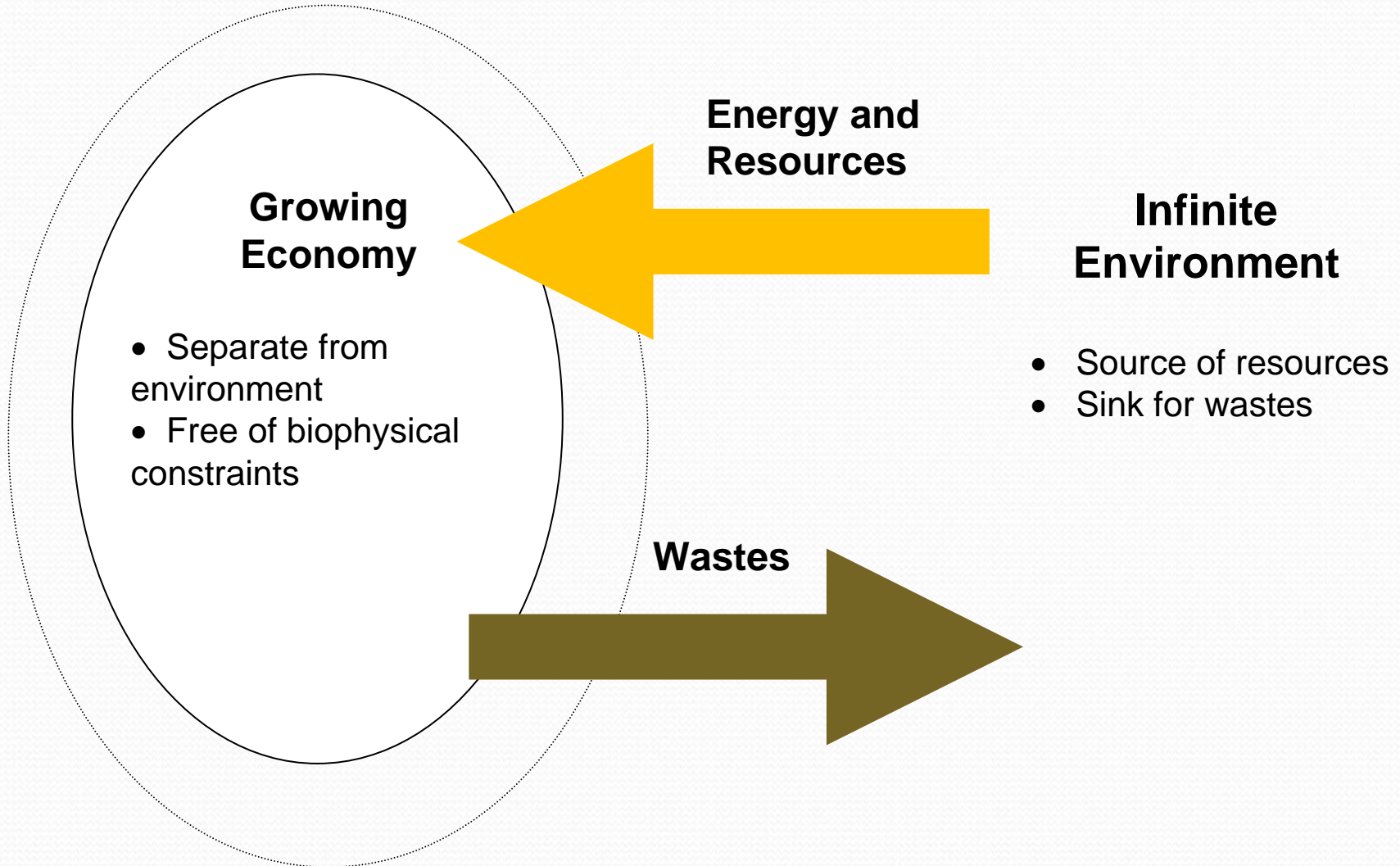
Sustaining the N3 Corridor Economy

Myles Mander



Business as usual - weak sustainability:

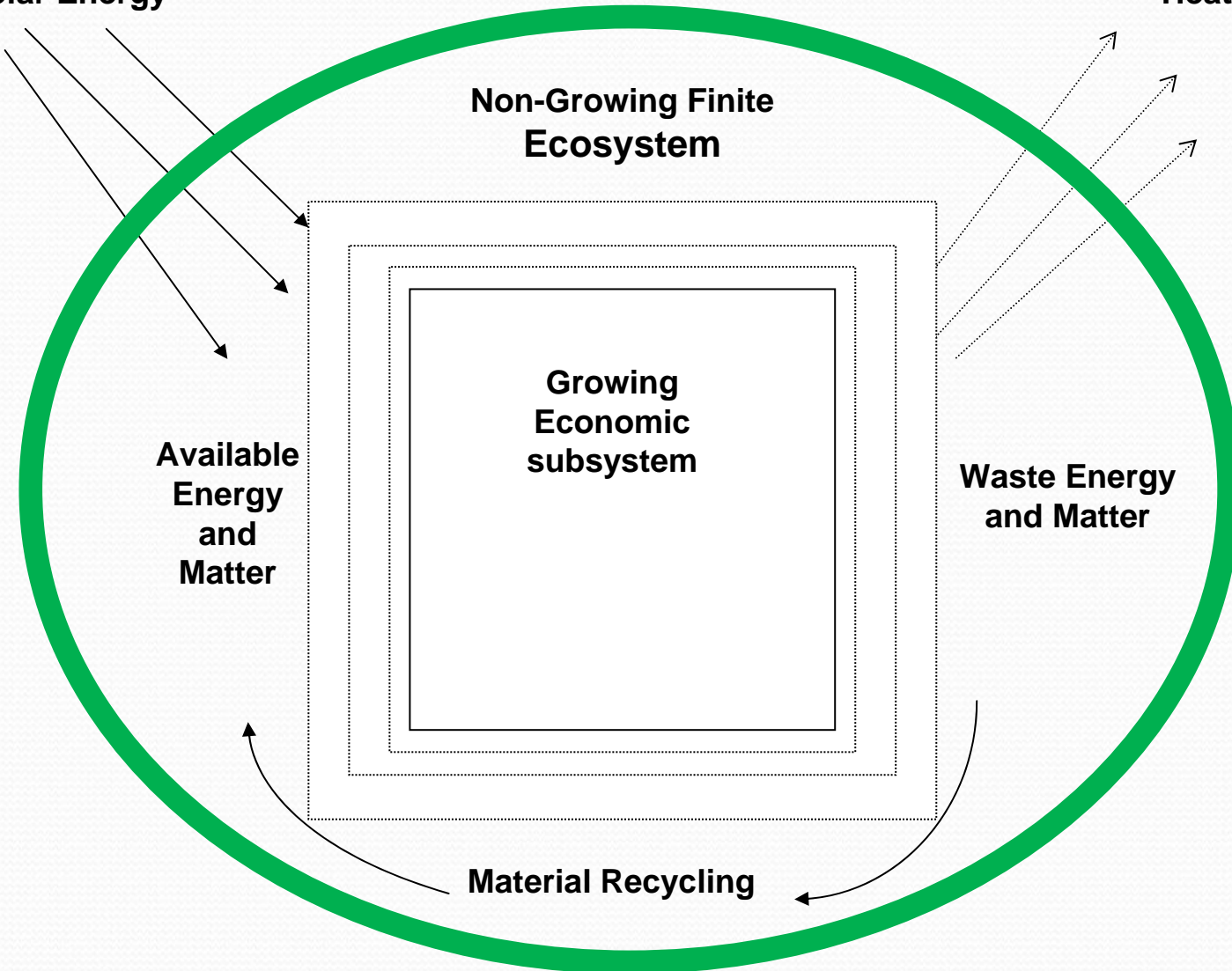
Environment is infinite



Green economy: *Environment recognized as finite*

Solar Energy

Heat Loss




Non-Growing Finite Ecosystem

Available Energy and Matter

Growing Economic subsystem

Waste Energy and Matter

Material Recycling



Business as usual is generating
large scale costs to society

A safe operating space for humanity.

Nature 461:472-475

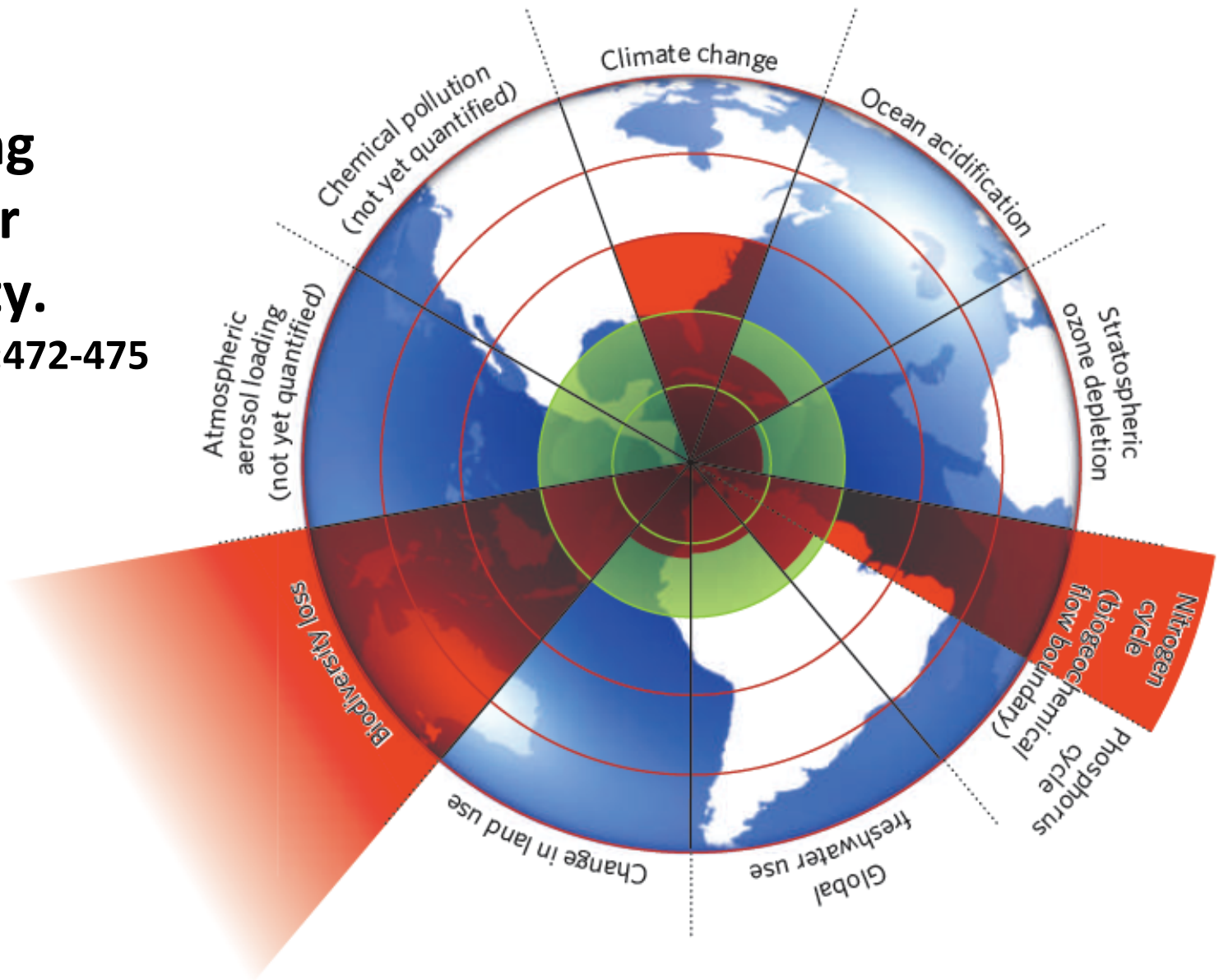


Figure 1 | Beyond the boundary. The inner green shading represents the proposed safe operating space for nine planetary systems. The red wedges represent an estimate of the current position for each variable. The boundaries in three systems (rate of biodiversity loss, climate change and human interference with the nitrogen cycle), have already been exceeded.

Operating outside the safe space at the local scale

- Water quality trends in Albert Falls Dam (1999-2009) – **132% increase** in TP; **215% increase** in chlorophyll ‘a’
- Water quality trends in Nagle Dam (1999-2009) – **668% increase** in TP; **738% increase** in chlorophyll ‘a’
- The limitations of built infrastructure
 - 28 out of 800 waste water works operating with acceptable standards means huge reliance on ecological infrastructure to supply services
- Msunduzi river flooding disasters
- Durban - South Industrial basin air pollution – asthma is double the global average - closed to development

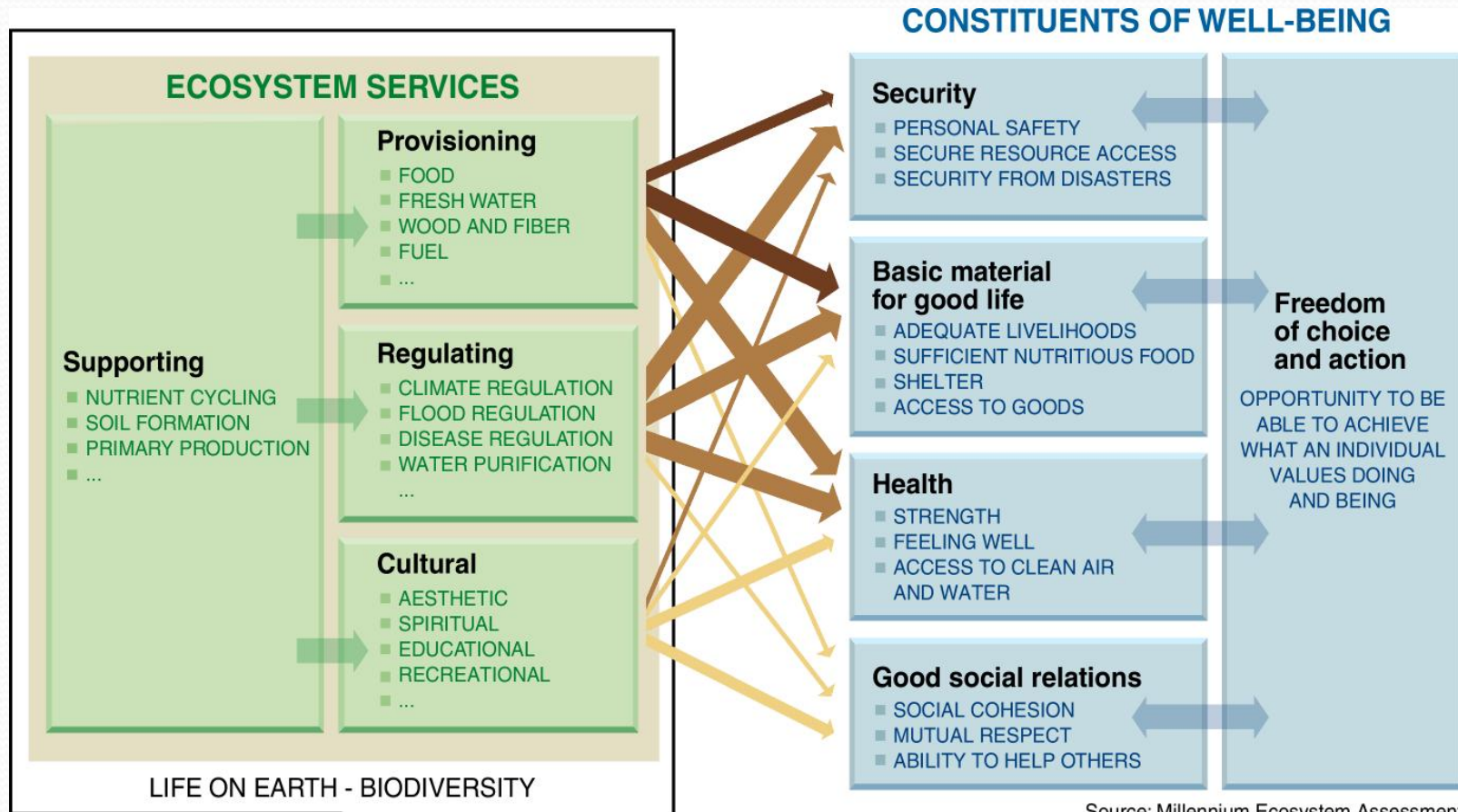
Operating outside the safe space at the local scale

- Projected alien plant water consumption increasing to 21⁰% in 20 years
 - Mvoti-Mzimkhulu water management area – current loss 126 million m³ - projected to be 420 million m³
 - Replacement infrastructure - Spring Grove Dam 142 million m³ - at a cost of R2.1 billion
- ASGISA needed 7⁰% of RSA water but only 1⁰% still available

NEED A SHIFT TO A GREENER ECONOMY

- Concept of 'green' or 'smart' business started to emerge in 1980s in response to the growing environmental consciousness (e.g. environmental degradation) and increase in resource scarcity
- Concept of 'green economy' gains prominence during the global recession – 'collapse' of traditional economic paradigm opened up space for considering new development paths (870,000 jobs lost in RSA during recession)
- Need to create new employment opportunities outside existing sectors (RSA has one of highest unemployment rates in world)
- Opportunity for developing countries to access developed markets (e.g. China replaces Germany as largest producer of Solar Water Heaters)
- Shift in economic policy from emphasis on growth to resilience – respond to rising food prices, deteriorating environment, climate change etc.

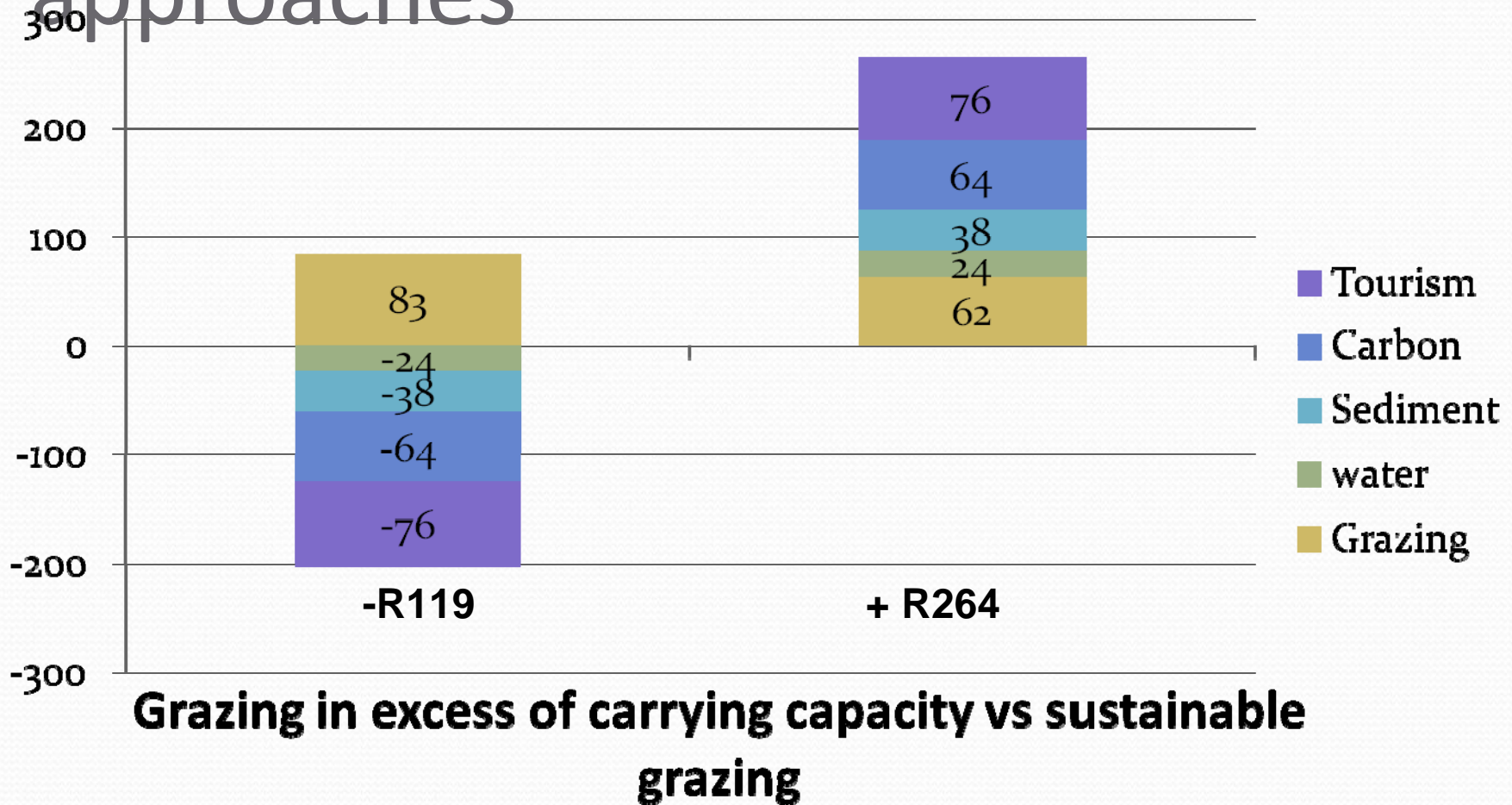
Green Infrastructure and Ecosystem Services: the benefits humans derive from ecosystems



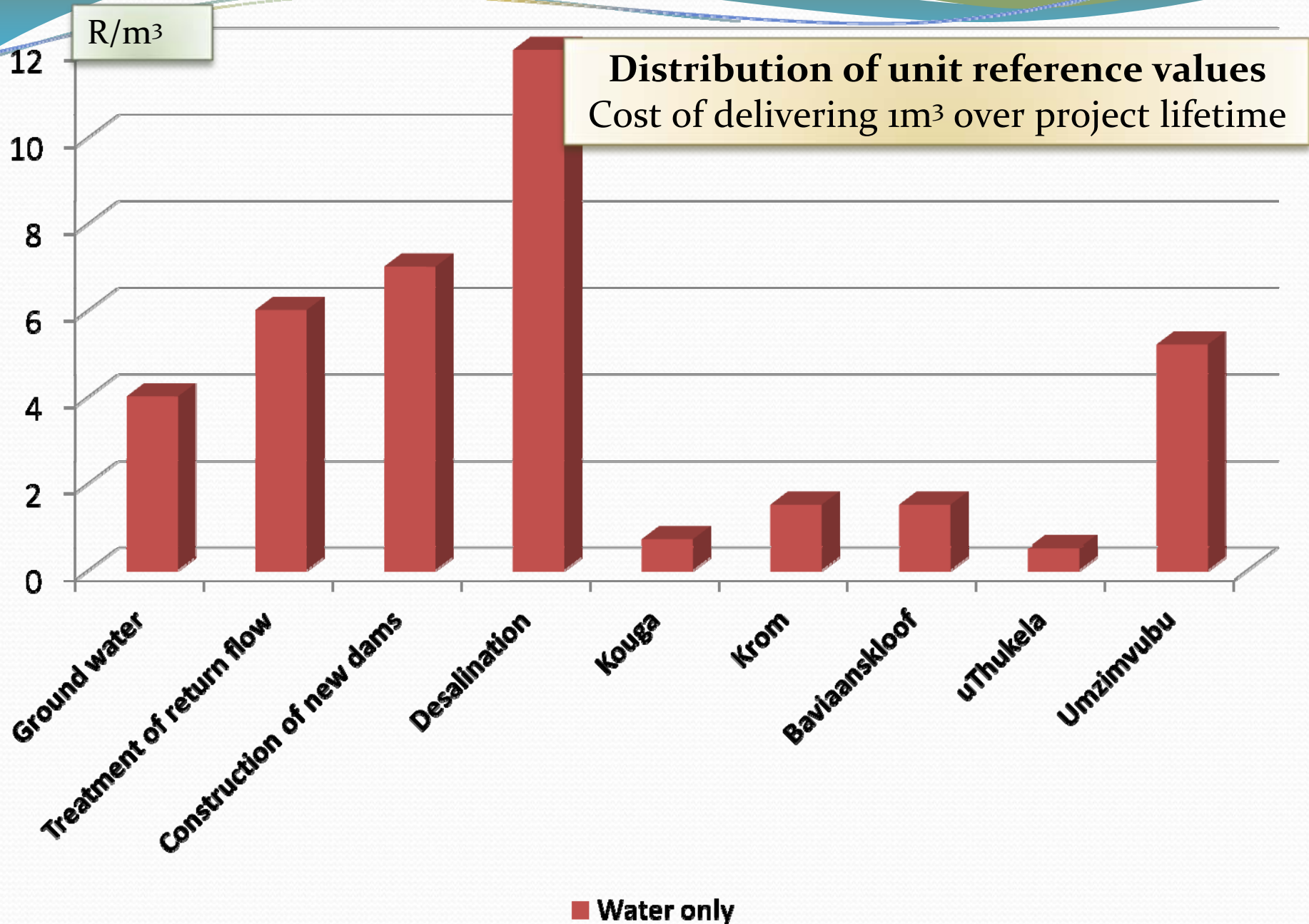
Source: Millennium Ecosystem Assessment

ARROW'S COLOR	Potential for mediation by socioeconomic factors	ARROW'S WIDTH	Intensity of linkages between ecosystem services and human well-being
	Low		Weak
	Medium		Medium
	High		Strong

The need for new economic approaches



Costs of water supply options



Green growth opportunities

- Natural resource management
- Low carbon foods
- Green tourism accreditation
- Rural-based / niche tourism
- Renewable energy production - wind & biomass
- Green building design and construction
- Retrofitting existing buildings
- Efficient transport systems + increased public transport
- Efficient planning of towns and cities
- Developing niche markets in retail / manufacturing sector
- Support to informal traders and co-operatives
- Sustainable waste management i.e. reduce, reuse & recycle
- Expansion of environmental consulting, policy and research
- Green procurement
- Green social responsibility opportunities



CLIMATE SUMMIT

WHAT IF IT'S
A BIG HOAX AND
WE CREATE A BETTER
WORLD FOR NOTHING?

- ENERGY INDEPENDENCE
- PRESERVE RAINFORESTS
- SUSTAINABILITY
- GREEN JOBS
- LIVABLE CITIES
- RENEWABLES
- CLEAN WATER, AIR
- HEALTHY CHILDREN
- ETC. ETC.



