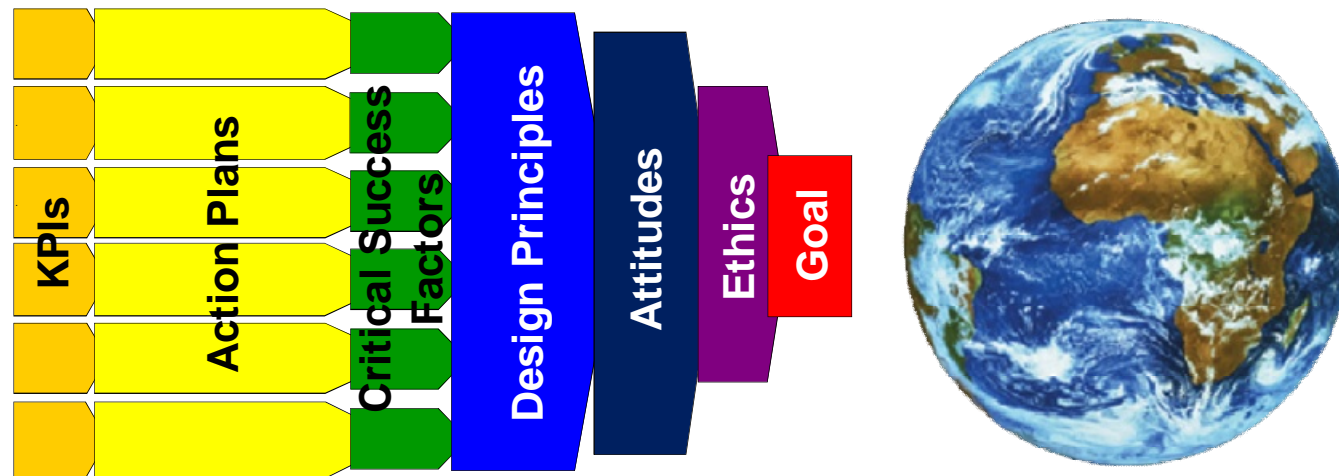


STRATEGIC FRAMEWORK FOR SUSTAINABILITY


Concept Document v3a – 17th November 2010



Presentation by
Ezio Gori

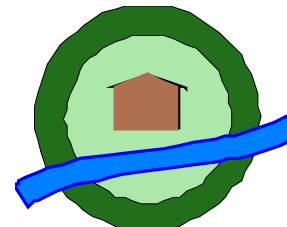
www.Permaculture2012.co.za

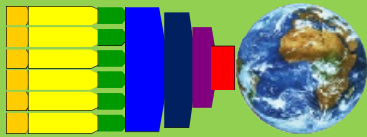
**Project Management &
Sustainable Development Consultants**

Cell :  +27 83 300 23 85,

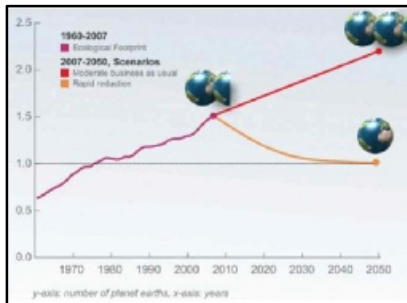
Email : permaculture2012@hotmail.co.za ,

Durban, South Africa



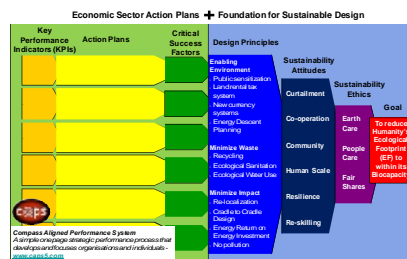


STRATEGIC FRAMEWORK FOR SUSTAINABILITY CONTENTS



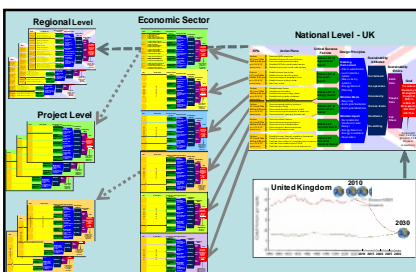
Part A – Sustainability within Biocapacity

1. Sustainability Defined
2. The Need for a Common Strategic Framework for Sustainability
3. Humanity's Two Greatest Challenges
4. Impact Measurement and Tradeoffs
5. Humanity's Future Scenarios
6. Ecological Footprint



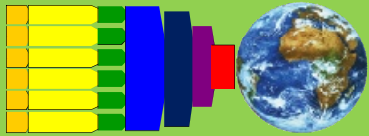
Part B – The Strategic Framework Model

7. Universal Ethics for Sustainability
8. Sustainability Attitudes
9. Design Principles for Sustainability
10. Foundation for Sustainable Design
11. The Strategic Framework Model



Part C – Strategic Framework for Sustainability – A UK Example

12. Economic Sector Action Plans - An example for the UK
13. Strategic Framework for Sustainability – An example for the UK
14. Strategic Framework for various Economic Sector Sustainability
15. A Hierarchy of Strategic Frameworks for Sustainability
16. Further Research



SUSTAINABILITY DEFINED

Progress

It has become unquestioned that all societies are advancing naturally and consistently 'up' or 'forward', on a route from poverty, barbarism, despotism and ignorance to riches, civilization, democracy and rationality, the highest expression of which is science.

Development

The concept of "Progress" interacted powerfully with the Industrial Revolution, urbanization and the spread of colonialism. Inevitably, those societies where the Industrial Revolution was advanced became classified as "developed" and others as "undeveloped", and in need of help, tutelage, and so on.

Sustainable Development

The World Bank definition is: "Sustainable development is development that lasts", whilst the UN definition is: "Development that allows the satisfaction of all the needs of a generation without compromising the ability for successive generations to satisfy their needs".

Reality Check

Progress has brought about greater personal freedoms, removal of cruel practices, liberation of women, eradication of disease, etc. Development has too many dark shadows, such as, environmental degradation, global injustice, poverty, etc. on the one hand, and, disillusioned youth, boredom, consumerism, meaninglessness, drugs, etc. on the other.

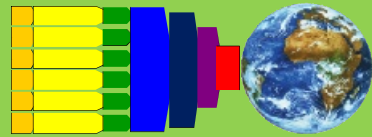
The modernist view of development is still dominant and business/industry have appropriated the term "sustainable development" to mean business as usual with a token addition of environmental reporting, social and environmental responsibility programmes, environmental management systems (e.g. ISO 14000), etc.

Development may satisfy the UN's Millennium Goals, but can this guarantee progress in Humanity, whilst simultaneously achieving sustainability?

Real Sustainability

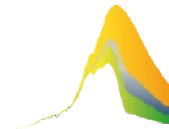
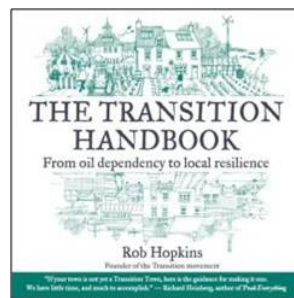
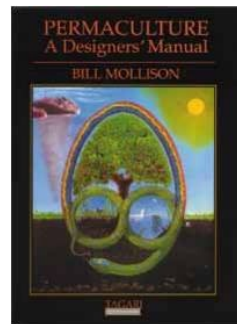
Sustainability is improving the quality of human life while living within the carrying capacity of supporting eco-systems.

Having conquered the Earth, the next chapter for Humanity is to maintain this conquest in a manner that can sustain the whole of Humanity. However, will Humanity conquer itself in order for the fittest to survive, or, will it co-create its existence with the Earth for the whole of Humanity to survive?

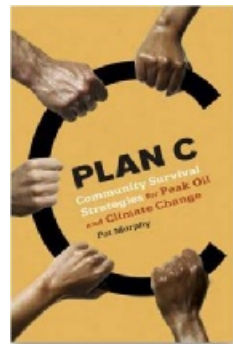


THE NEED FOR A COMMON STRATEGIC FRAMEWORK FOR SUSTAINABILITY

There is a wealth of foresight for Sustainability, but, there is no **common** policy, values, strategy, measurement, action plan, targets, political will and leadership to implement Sustainability, hence the need for a common approach. This presentation contains very few new ideas, but rather, compiles some key foresights for Sustainability into a common Strategic Framework for Sustainability.



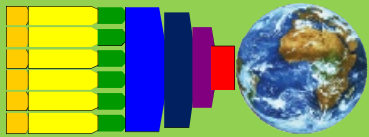
Contraction and Convergence (C&C)
Climate Justice without vengeance



THE CLIMATE GROUP



And, apologies to many other great initiatives that have not been mentioned



HUMANITY'S TWO GREATEST CHALLENGES



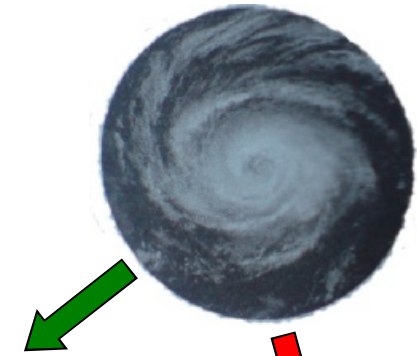
PEAK OIL

- Coal to liquids
- Gas to liquids
- Relaxed drilling regulations
- Massively scaled biofuels
- Tar sands and non-conventional oils
- Resource nationalism and stockpiling

WHEN SEEN AS TWO ASPECTS
OF THE SAME PROBLEM:
BUILDING RESILIENCE PLUS
CUTTING CARBON EMISSIONS

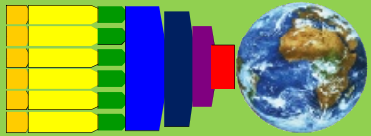
Planned relocalisation (building local resilience)

- Tradable energy quotas
- Decentralised energy infrastructure
- The Great Re-skilling
- Localised food production (food feet)
- Energy descent planning
- Local currencies
- Local medicinal capacity



CLIMATE CHANGE

- Climate engineering
- Carbon capture and storage
- Tree-based carbon offsets
- International emissions trading
- Climate adaptation
- Improved transport logistics
- Nuclear power



IMPACT MEASUREMENT AND TRADEOFFS



OR



Reducing Carbon Emissions

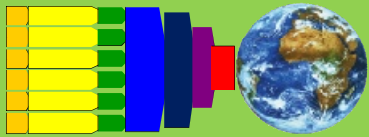
- Does not change bad industrial practices
- Does not reduce consumption patterns
- Shifts emissions to lesser pollutants
- Does not enable equitable development
- May be difficult to measure effectively

***Smoke and mirrors
Fopenhagen***

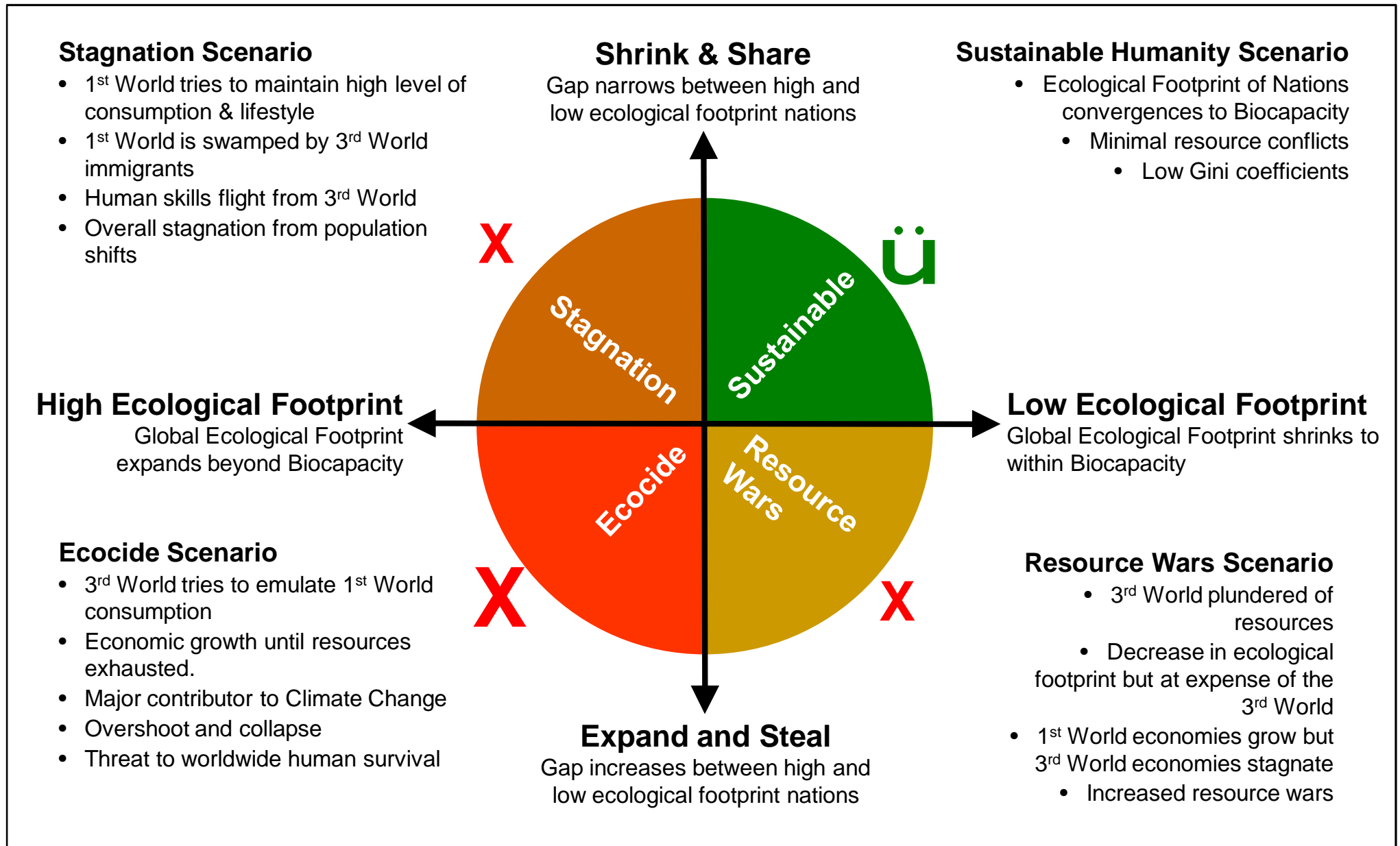
Reducing Ecological Footprint

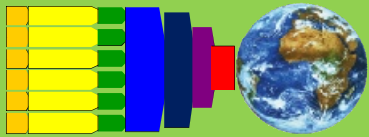
- Promotes industrial efficiencies
- Reduces consumption patterns
- Promotes spread of new efficiencies
- Enables equitable development
- Measures are more tangible

***A vivid measurement of resource
consumption and how many more planets
Humanity requires***

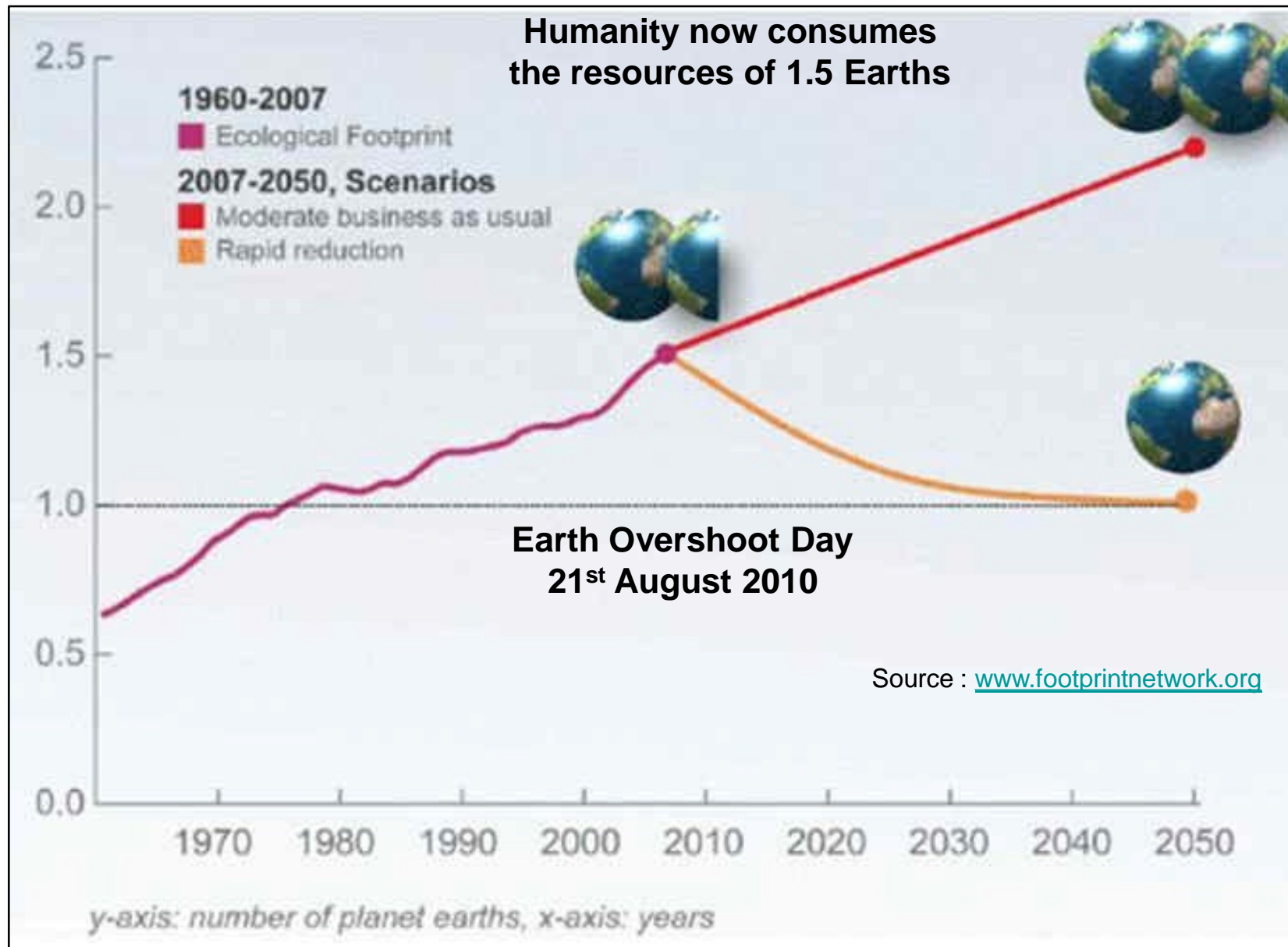


HUMANITY'S FUTURE SCENARIOS



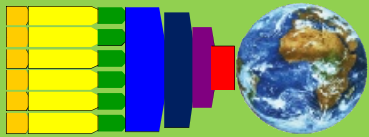


ECOLOGICAL FOOTPRINT



Goal

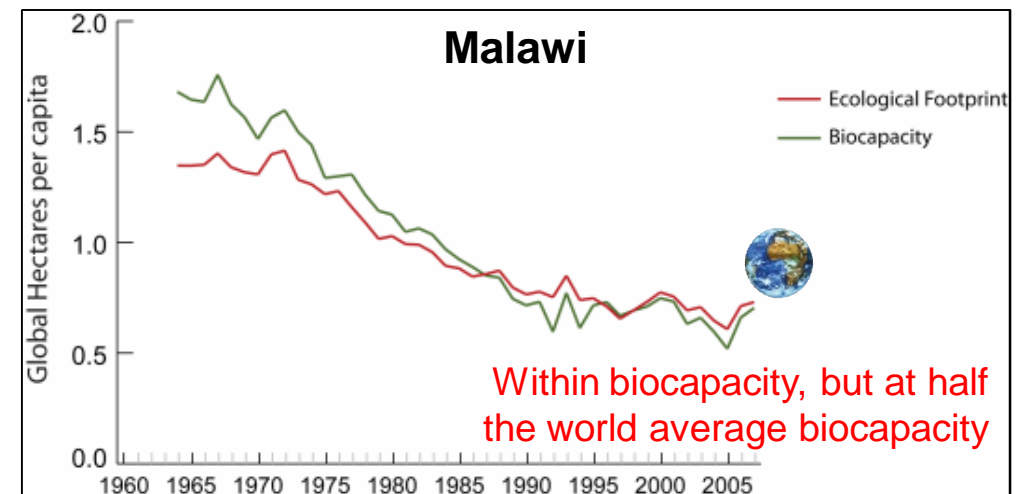
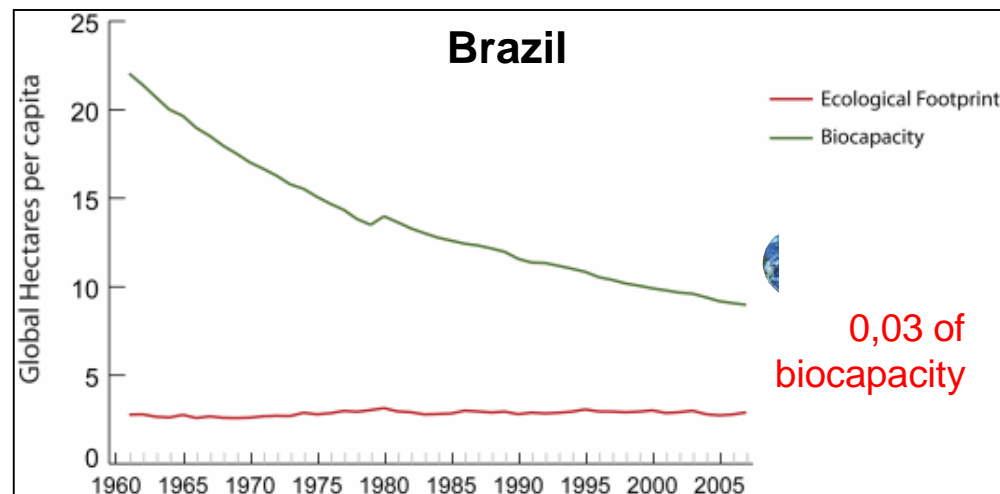
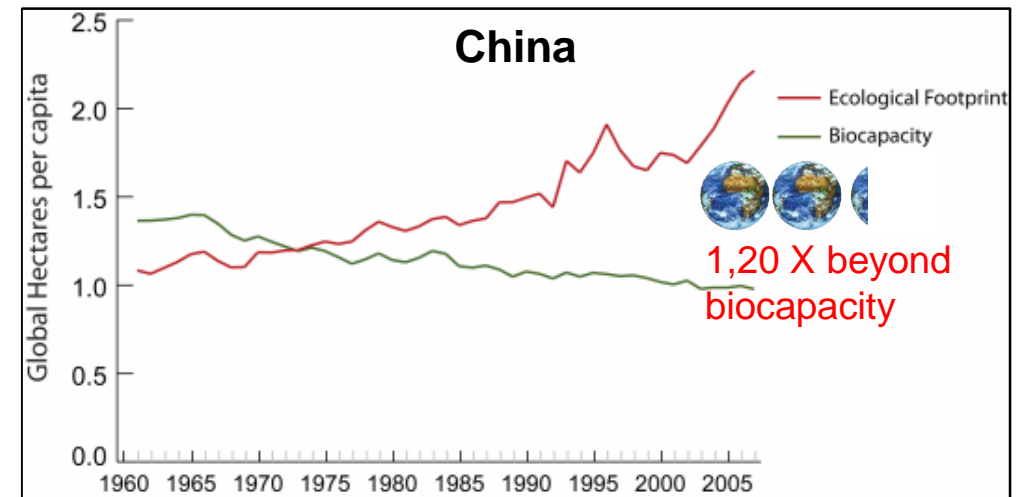
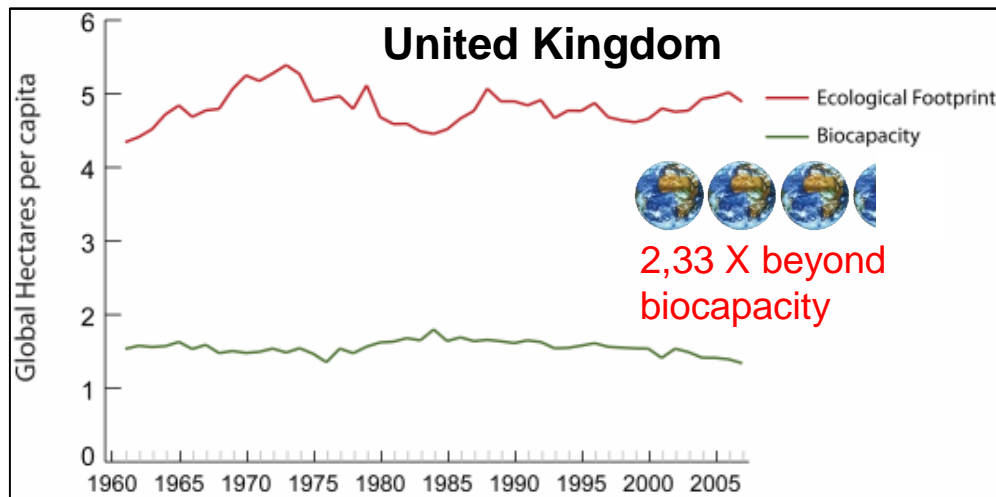
To reduce
Humanity's
Ecological
Footprint to
within its
Biocapacity

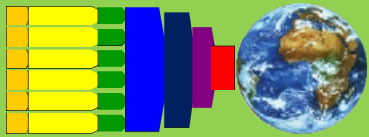


ECOLOGICAL FOOTPRINT

Ecological Footprint and associated Biocapacity for some nations

Source : www.footprintnetwork.org





UNIVERSAL ETHICS FOR SUSTAINABILITY

Permaculture Ethics

Earth Care

Care of all living things, animals, plants, water, land and air.

Earth care is about mimicking the Earth's natural ecosystems. It is about working with nature, not against it – not using natural resources unnecessarily or at a rate at which they cannot be replaced. It also means using outputs from one system as inputs for another and so minimizing wastage.

United Nations & Other Ethics

Biodiversity

The Convention on Biological Diversity gives rise to agreements wherein countries will conserve biodiversity, develop resources for sustainability and share the benefits resulting from their use.

Earth Jurisprudence

Human societies will only be viable and flourish if they regulate themselves as part of the wider Earth community.

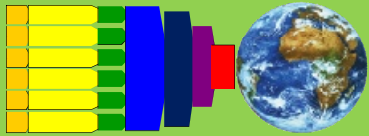
Plan for 7 Generations

Indigenous culture of long-term way of acting and planning in order to consider how ones actions would affect the next seven generations.

Universal Ethics for Sustainability

Earth Care

Care of all living things, animals, plants, water, land and air, whilst embracing biodiversity, earth jurisprudence and planning for 7 generations.



UNIVERSAL ETHICS FOR SUSTAINABILITY

Permaculture Ethics

People Care

Providing for people's basic needs, and, promoting self reliance and responsibility.

People care is about looking after us as people, not just the world we live in. It works on both an individual and a community level. Self-reliance, co-operation and support of each other should be encouraged. It is, however, important to look after ourselves on an individual level too. Our skills are of no use to anyone if we are too tired to do anything useful! People care is also about our legacy to future generations.

United Nations & Other Ethics

Human Rights

This UN declaration has served as the foundation for two binding UN human rights covenants, the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights. Peace and harmony.

Agenda 21

This is UN programme related to sustainable development and to mitigate against climate change. It is a comprehensive blueprint of action to be taken globally, nationally and locally by organizations of the UN, governments, and major groups in every area in which humans directly affect the environment.

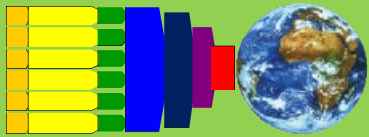
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UNIVERSAL ETHICS FOR SUSTAINABILITY

Permaculture Ethics

Fair Share

Living within ones biocapacity and distribution of surplus resources and skills to achieve Earth care and People care.

Fair share ethic brings earth care and people care together. We only have one Earth, and we have to share it - with each other, with other living things, and with future generations. This means limiting our consumption, especially of natural resources, and working for everyone to have access to the fundamental needs of life - clean water, clean air, food, shelter, meaningful employment, and social contact.

www.permaculture.org.uk

United Nations & Other Ethics

Millennium Development Goals

These are eight international development goals designed by the UN to eradicate extreme poverty, reducing child mortality rates, fighting disease epidemics such as AIDS, and developing a global partnership for development.

Contraction & Convergence

The Global Commons Institute has proposed a global framework strategy designed to reduce overall emissions of greenhouse gases to a safe level (contraction), where the global emissions are reduced because every country brings emissions per capita to a level which is equal for all countries. It is intended to form the basis of an international agreement which will reduce carbon dioxide emissions to avoid climate change.

Wikipedia

Universal Ethics for Sustainability

Earth Care

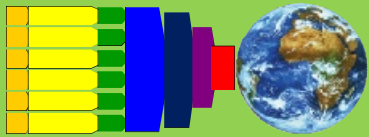
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SUSTAINABILITY ATTITUDES

Curtailment

Entrench wide scale cutbacks of unnecessary consumption and materialism.

Co-operation

Instill the spirit of co-operation instead competition.

Community

Strengthen community involvement and linkages in all initiatives.

Human Scale

Adapt solutions that can be undertaken largely by the effort of human labour.

Resilience

Develop robust local economies that can withstand shocks from externalities and fickle global markets.

Re-skilling

Focus education on sustainability and skills required to meet the challenges of a sustainable future

Curtailment means an immediate moratorium in the exploitation of natural resources in pristine natural areas yet untouched by Humanity; the cut back of extravagant lifestyles and unnecessary materialistic needs; and, the slow down and arresting of population growth.

Co-operation is all about tolerance and invoking an attitude of respect for each other's differences of opinion, and, the sharing of resources and innovations for the good of all Humanity.

Community is about invoking good neighbourliness, caring and mindfulness, and, extending this attitude to ones whole community, district, region, nation, and, amongst nations.

Human Scale solutions maximises the effort of labour to foster small scale initiatives with a relatively lower negative impact on the biocapacity and also mitigates against risk of environmental catastrophe.

Resilience is created by enhancing the diversity within a community, which is achieved by developing local capacity to meet primary needs and by improving the trading linkages within a community, thereby strengthening the local economy.

.Re-skilling needs to create awareness of the state of the planet and associated strategies that will enable Humanity to sustain itself within its biocapacity, and therefore, re-direct education to empower Humanity towards its well being and equip with skills that will enhance the resilience of local economies.

Sustainability Attitudes

Curtailment

Co-operation

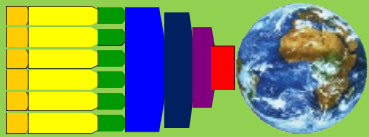
Community

Human Scale

Resilience

Re-skilling

If Humanity manages to survive to 2100 intact, it reflect back to the period around 2012 as the most crucial in its history wherein a paradigm shift was made to sustain itself by adopting the sustainability attitudes of curtailment, co-operation, community, human scale, resilience and re-skilling.



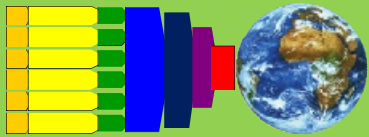
DESIGN PRINCIPLES FOR SUSTAINABILITY

Enabling Environment

Public sensitization Ensure that the public is fully aware and appraised of any initiatives and their consequential impact.	It is crucial that the public participates in and is made well aware of any long term sustainability plans, such as, Energy Descent Action Plans, so that any new project that arises can be well adjudicated and its impact mitigated to ensure its sustainability.
Land value tax system A means to incentivise land use for its highest productive purpose.	There is much land that is locked up in institutional bureaucracy and/or by land speculators which can be released for its best use by applying a tax system based on the rental value of land. This tax system will incentivise investors in land based projects, such as, mixed use residential developments, restoration of abandoned buildings, agriculture, community facilities, and even parks, recreation and conservation.
New currency systems Reduce debt created money and promote complementary currencies for local economies.	Complementary currencies are essential to provide the diversity required to support an international / inter-regional trading currency, and, to provide the human scale trading currency to ensure that a project will be sustainable and add value to the local economy.
Energy Descent Planning All initiatives to make allowance for a future with less energy.	A hierarchy of Energy Descent Action Plans from national, regional, district, community level ought to provide the institutional guiding framework for any project to be planned in accordance with a sustainable future plan.

Enabling Environment

- Public sensitization
- Land value tax system
- New currency systems
- Energy Descent Planning



DESIGN PRINCIPLES FOR SUSTAINABILITY

Minimize Impact

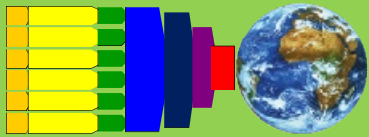
Re-localization Maximize the use of local resources and minimize the import of global resources.	The use of local resources should always be the first option in any project since this will directly benefit the local economy and enhance resilience. External resources should only be used if the ecological footprint thereof is beneficial. The impact and benefit of maximising local resources in any project is clearly visible to the local community, whilst the impact of external goods and resources is relatively immune to the local economy.
Cradle to Cradle Design All man made creations to deconstruct themselves with minimal energy usage and pollution.	The design of goods that will depreciate and become obsolete must take into account within the design process how such goods can be disposed of, and/or, recycled for their next best use with minimal energy usage and pollution. The energy (embedded energy) within a project is an important indicator that should be used to differentiate amongst design options and make for the most optimum selection.
Energy Return On Energy Investment Minimum ratio of EROEI of 3:1 to be considered for projects.	All energy generating projects need to be carefully considered in accordance to EROEI criteria and not only on a financial basis, which usually does not include environmental costs. Only projects with at least a 3:1 EROEI ratio should be considered. Similarly, non-energy projects should also use EROEI criteria by choosing design options with a relatively lower energy.
No pollution Minimum discharge of harmful substances into the atmosphere and into the ground.	Projects must be designed in such a manner that pollution to the atmosphere and ground is nullified, and, that the cost of such pollution must be an important criteria in the evaluation of design options.

Enabling Environment

- Public sensitization
- Land value tax system
- New currency systems
- Energy Descent Planning

Minimize Impact

- Re-localization
- Cradle to Cradle Design
- Energy Return on Energy
- No pollution



DESIGN PRINCIPLES FOR SUSTAINABILITY

Minimize Waste

Recycling Waste to be designed for next best use.	The design process must take into account the upstream and downstream flow of components in the project assembly, operation, closure and dismantling process. The waste of one project should be the resource input of another project.
Ecological Sanitation Treatment of sewage with biological systems.	The opportunity for ecological sanitation systems to replace unsustainable waterborne sewage systems is vast and necessary since water is already a scarce commodity. Ecological sanitation systems are also environmentally friendly and can produce organic fertilizer by products for the agricultural industry.
Ecological Water Use Rainwater harvesting and grey water systems.	Water is a scarce commodity and besides its sustainable use in ecological sanitation systems, it should also be recycled in grey water systems for further downstream use, especially for agriculture. Rainwater harvesting, both for domestic / industrial and in large scale landscape designs for agriculture has much latent potential that must be incorporated within the design process of any project.

Enabling Environment

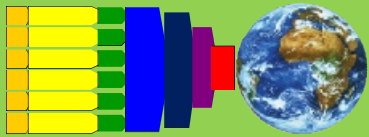
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Minimize Impact

- Re-localization
- Cradle to Cradle Design
- Energy Return on Energy
- No pollution

Minimize Waste

- Recycling
- Ecological Sanitation
- Ecological Water Use



FOUNDATION FOR SUSTAINABLE DESIGN

Design Principles

Enabling Environment

- Public sensitization
- Land value tax system
- New currency systems
- Energy Descent Planning

Minimize Impact

- Re-localization
- Cradle to Cradle Design
- Energy Return on Energy
- No pollution

Minimize Waste

- Recycling
- Ecological Sanitation
- Ecological Water Use

Sustainability Attitudes

Curtailment

Entrench wide scale cutbacks of unnecessary consumption and materialism

Co-operation

Instill the spirit of co-operation instead of competition

Community

Strengthen community involvement and linkages in all initiatives.

Human Scale

Adapt solutions that can be undertaken largely by the effort of human labour.

Resilience

Develop robust local economies that can withstand shocks from externalities and fickle global markets.

Re-skilling

Focus education on sustainability and skills required to meet the challenges of a sustainable future

Sustainability Ethics

Earth Care

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People Care

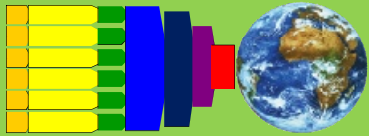
Providing for people's basic needs, and, promoting self reliance and responsibility., whilst embracing the UN Charter for Human Rights and Agenda 21.

Fair Shares

Living within ones biocapacity and distribution of surplus resources and skills to achieve Earth care and People care, whilst implementing the Millennium Development Goals and adopting Contraction and Convergence to mitigate against climate change.

Goal

To reduce Humanity's Ecological Footprint to within its Biocapacity



FOUNDATION FOR SUSTAINABLE DESIGN

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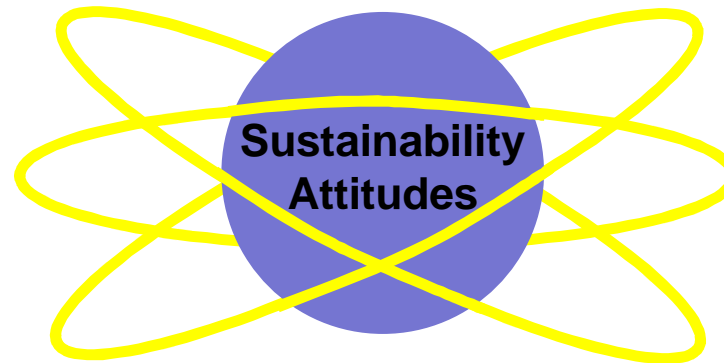
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Sustainability Design Principles

Enabling Environment

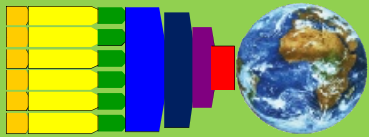
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Minimize Impact

- Re-localization
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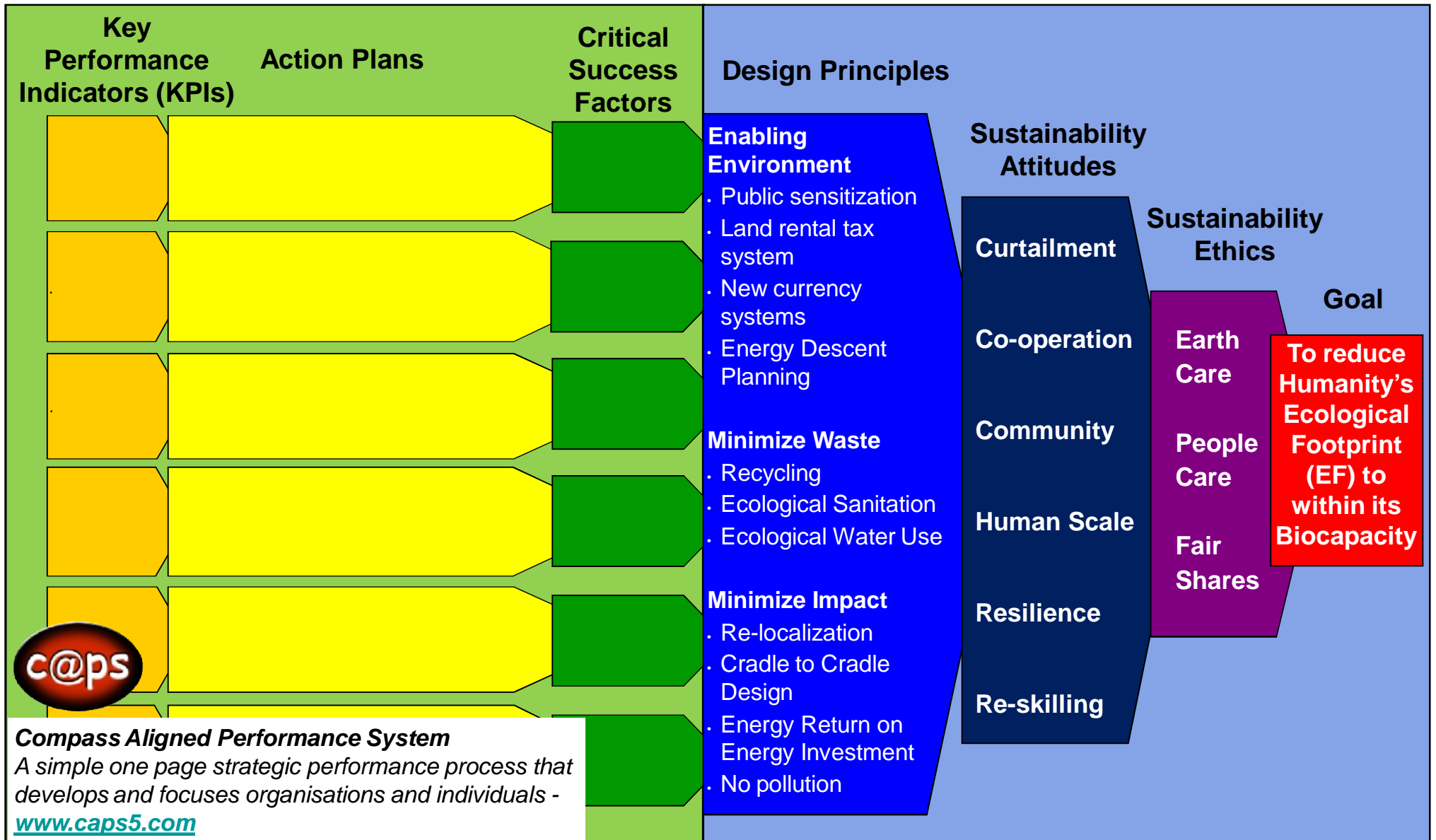
Minimize Waste

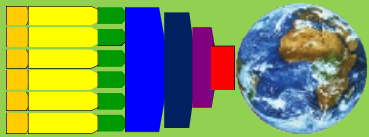
- Recycling
- Ecological Sanitation
- Ecological Water Use



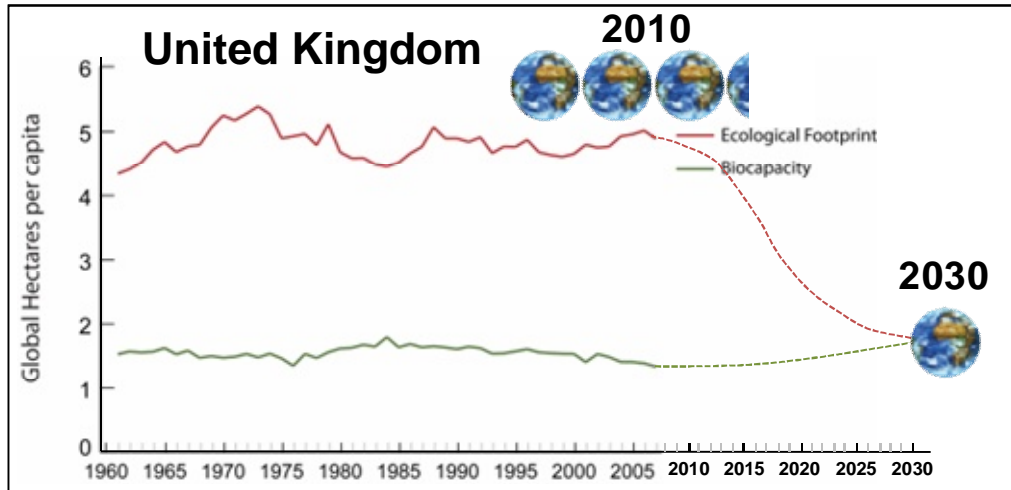
THE STRATEGIC FRAMEWORK MODEL

Economic Sector Action Plans + Foundation for Sustainable Design





ECONOMIC SECTOR ACTION PLANS AN EXAMPLE FOR THE UK



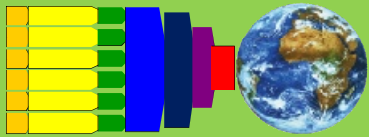
Household Ecological Footprint (gha/capita)

Housing	1.30	24.5%
Transport	0.94	17.7%
Food	1.33	25.1%
Consumer Items	0.71	13.4%
Private Services	0.30	5.6%
Public Services	0.59	11.2%
Capital Investment	0.12	2.3%
Other	0.01	0.1%
Total	5.30	100.0%

Illustrative Target Reduction of Ecological Footprint per Economic Sector

Economic Sector	gha/capita	% gha/capita	Target reduction gha/capita
Agriculture	1.33	25.0%	0.43
Transport	0.95	18.0%	0.31
Energy	1.33	25.0%	0.43
Construction	0.37	7.0%	0.12
Tourism	0.37	5.0%	0.12
Financial Services	0.80	15.0%	0.26
Other	0.16	5.0%	0.05
Total (gha/capita)	5.30	100.0%	1.70

Note :- These figures are only illustrative, save for Food and Transport, but, Energy can be attributed to Housing, whilst Construction and Tourism are a reasonable assumption. Financial Services can be substantially more, but is already included in many of the other sectors.



ECONOMIC SECTOR ACTION PLANS AN EXAMPLE FOR THE UK

**Key
Performance
Indicators**

Action Plans

**Critical Success
Factors**

Agricultural Sector

1. Promote LEISA (Low External Input Sustainable Agriculture) practices
2. Establish Farmers Support Centres
3. Promote small farmers markets
4. Establish DFIs for small scale farmers
5. Redistribute land to small scale farmers

**Reduce EF from 1.33 to 1.00 to 0.43
ha pc in 10 & 20 years, respectively.**

Transport Sector

1. Establish more bus routes
2. Establish more rail rolling stock
3. Promote usage of renewable fuels
4. Establish more cycling routes
5. Build less roads

**Reduce EF from 0.95 to 0.60 to 0.31
ha pc in 10 & 20 years, respectively.**

Energy Sector

1. Establish wind farms
2. Establish solar heating
3. Establish biomass energy plants
4. Establish micro-hydro schemes
5. Establish geothermal plants

**Reduce EF from 1.33 to 1.00 to 0.43
ha pc in 10 & 20 years, respectively.**

Construction Sector

1. Promote natural building systems
2. Promote retro fitting
3. Promote rehab rather than new build
4. Promote ecological sanitation & water use
5. Promote holistic planning & mixed use

**Reduce EF from 0.37 to 0.20 to 0.12
ha pc in 10 & 20 years, respectively.**

Tourism Sector

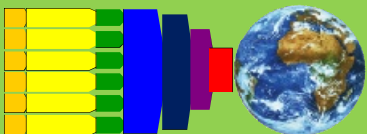
1. Promote cultural tourism
2. Promote home stay experiences
3. Promote local eco-destinations
4. Promote sports adventure tourism
5. Promote pilgrimage routes

**Reduce EF from 0.37 to 0.20 to 0.12
ha pc in 10 & 20 years, respectively.**

Financial Services Sector

1. Establish a new financial regulatory framework.
2. Curtail the creation of debt money.
3. Facilitate the establishment of complementary currencies.
4. Facilitate the establishment of MFIs.
5. Facilitate re-investment mechanisms for local economies.

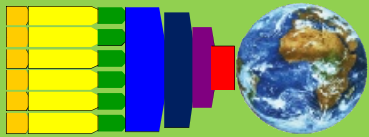
**Reduce EF from 0.16 to 0.10 to 0.05
ha pc in 10 & 20 years, respectively.**



STRATEGIC FRAMEWORK FOR SUSTAINABILITY

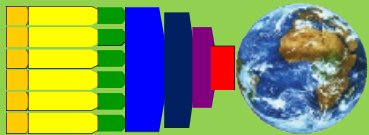
AN EXAMPLE FOR THE UK



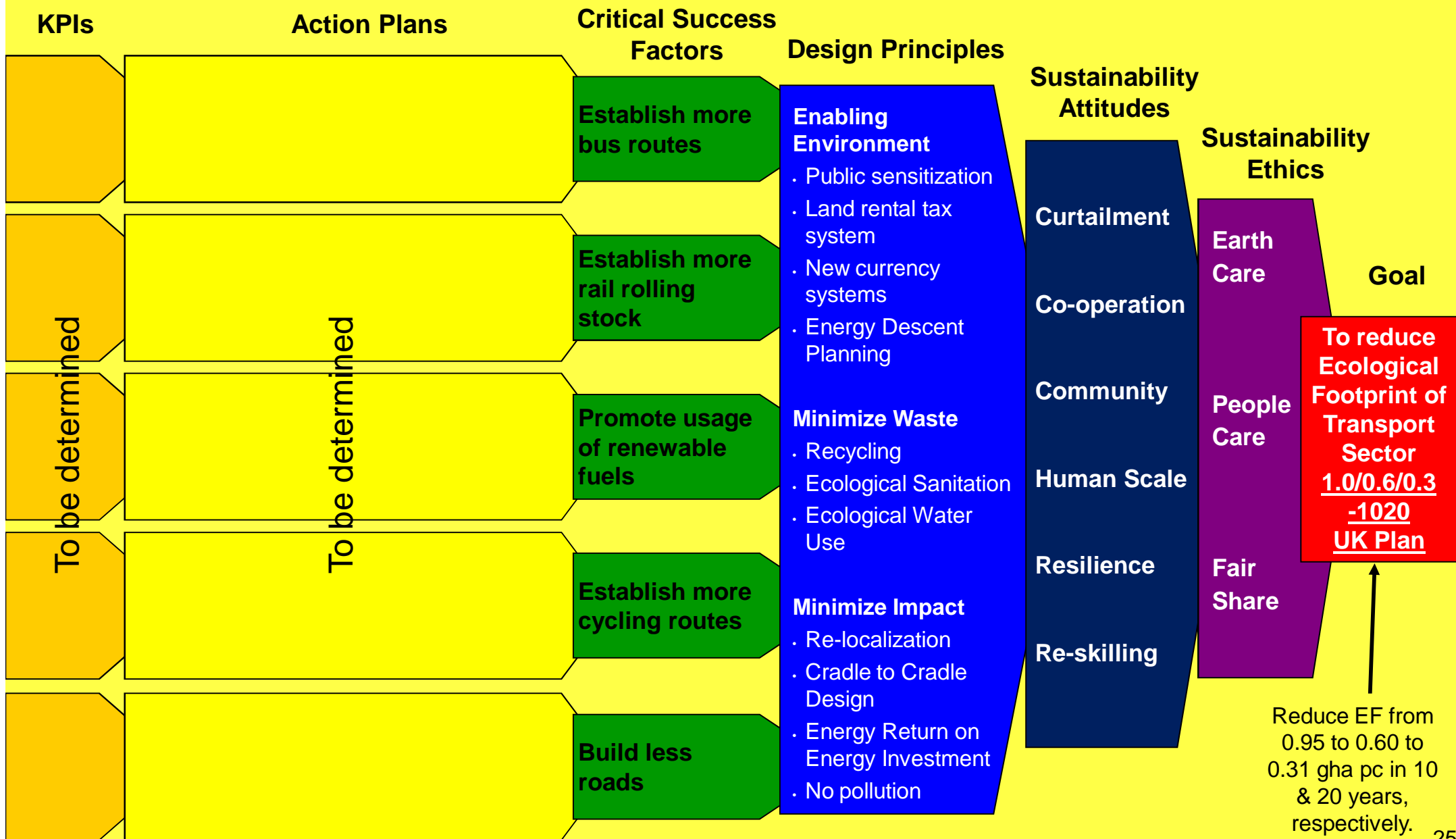


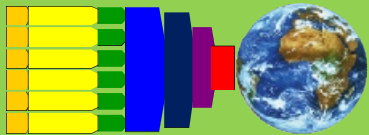
STRATEGIC FRAMEWORK FOR AGRICULTURAL SECTOR SUSTAINABILITY



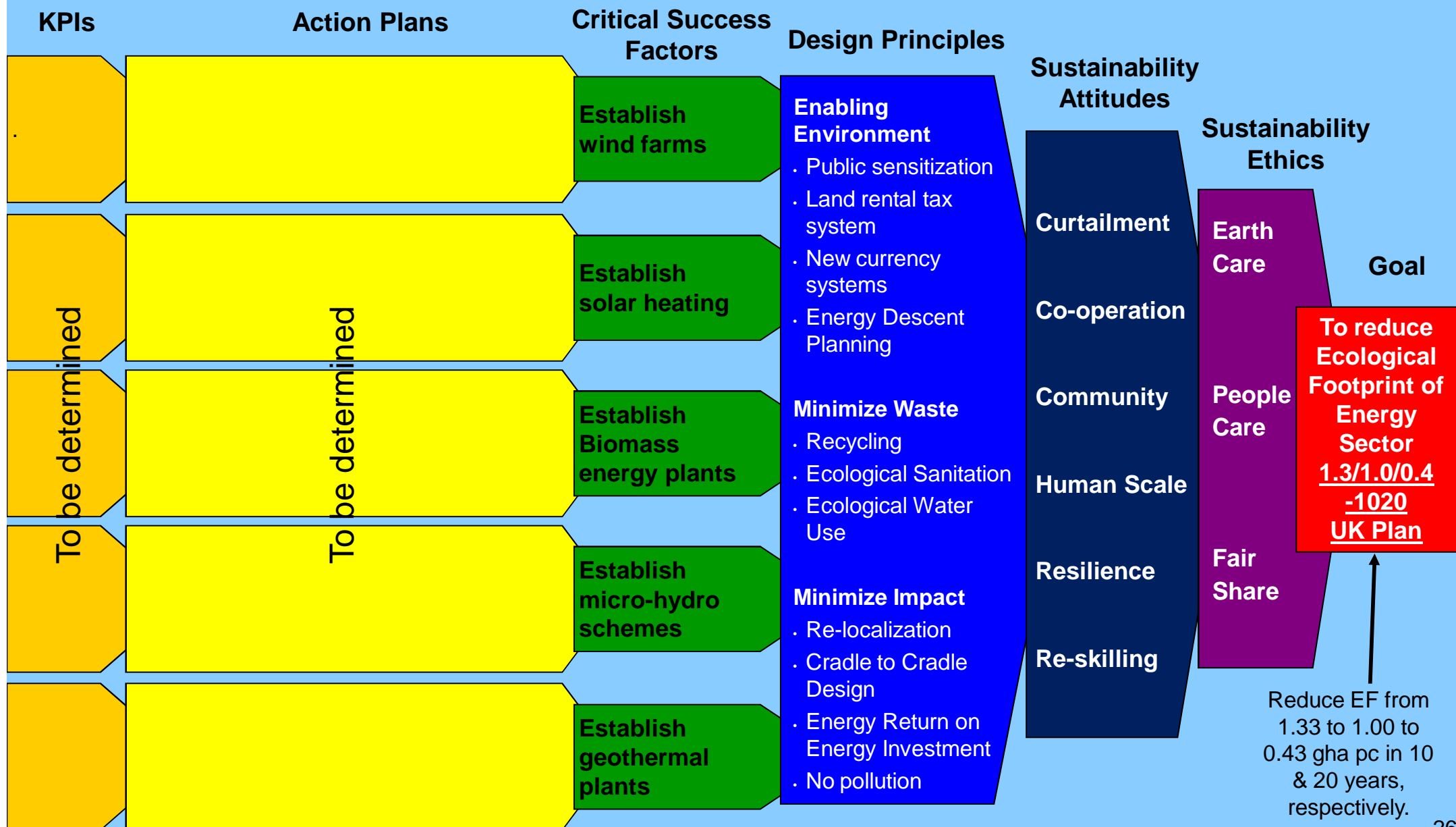


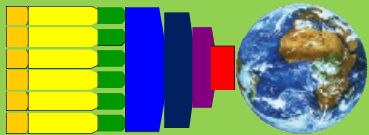
STRATEGIC FRAMEWORK FOR TRANSPORT SECTOR SUSTAINABILITY



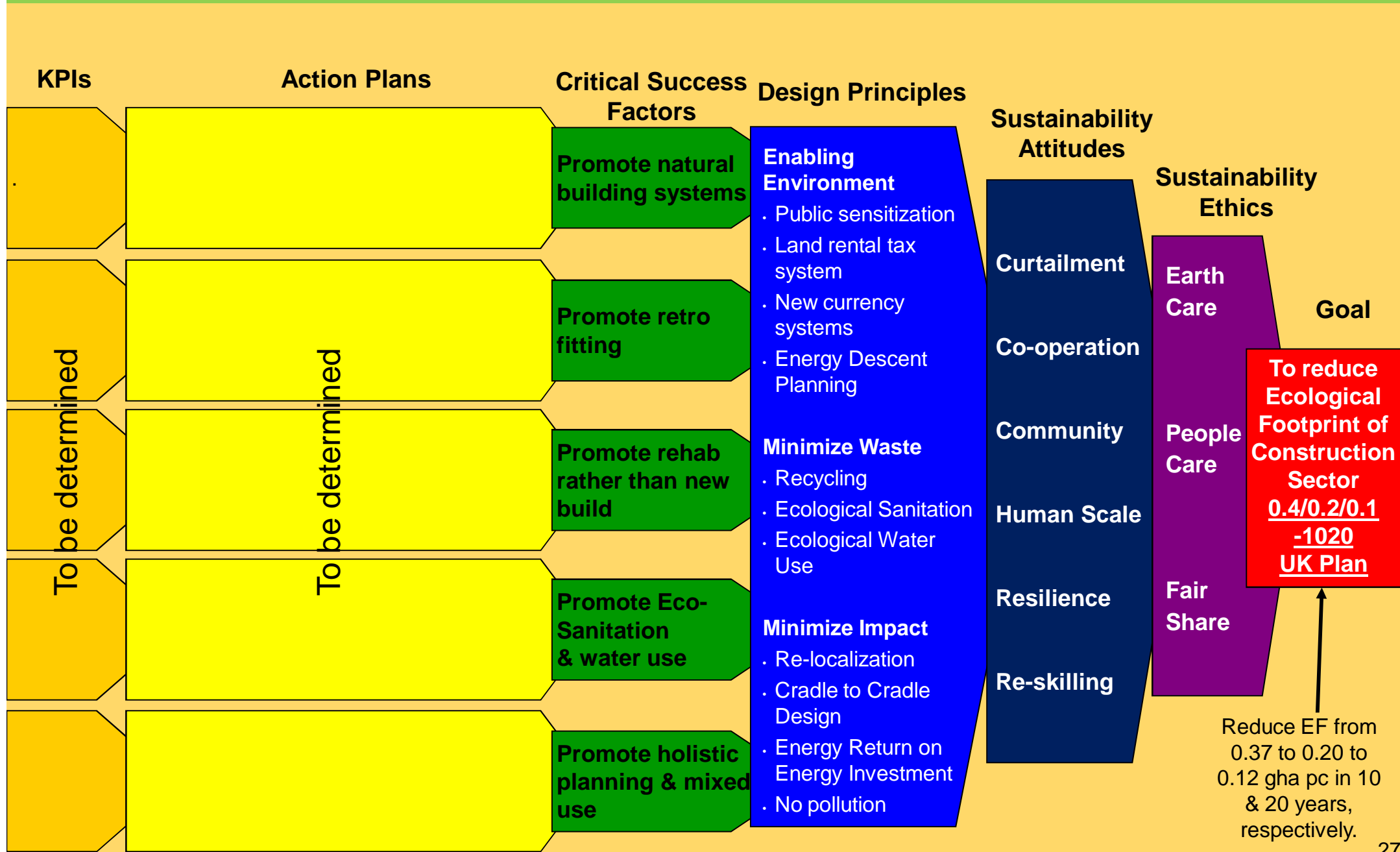


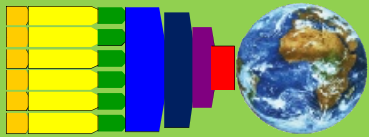
STRATEGIC FRAMEWORK FOR ENERGY SECTOR SUSTAINABILITY



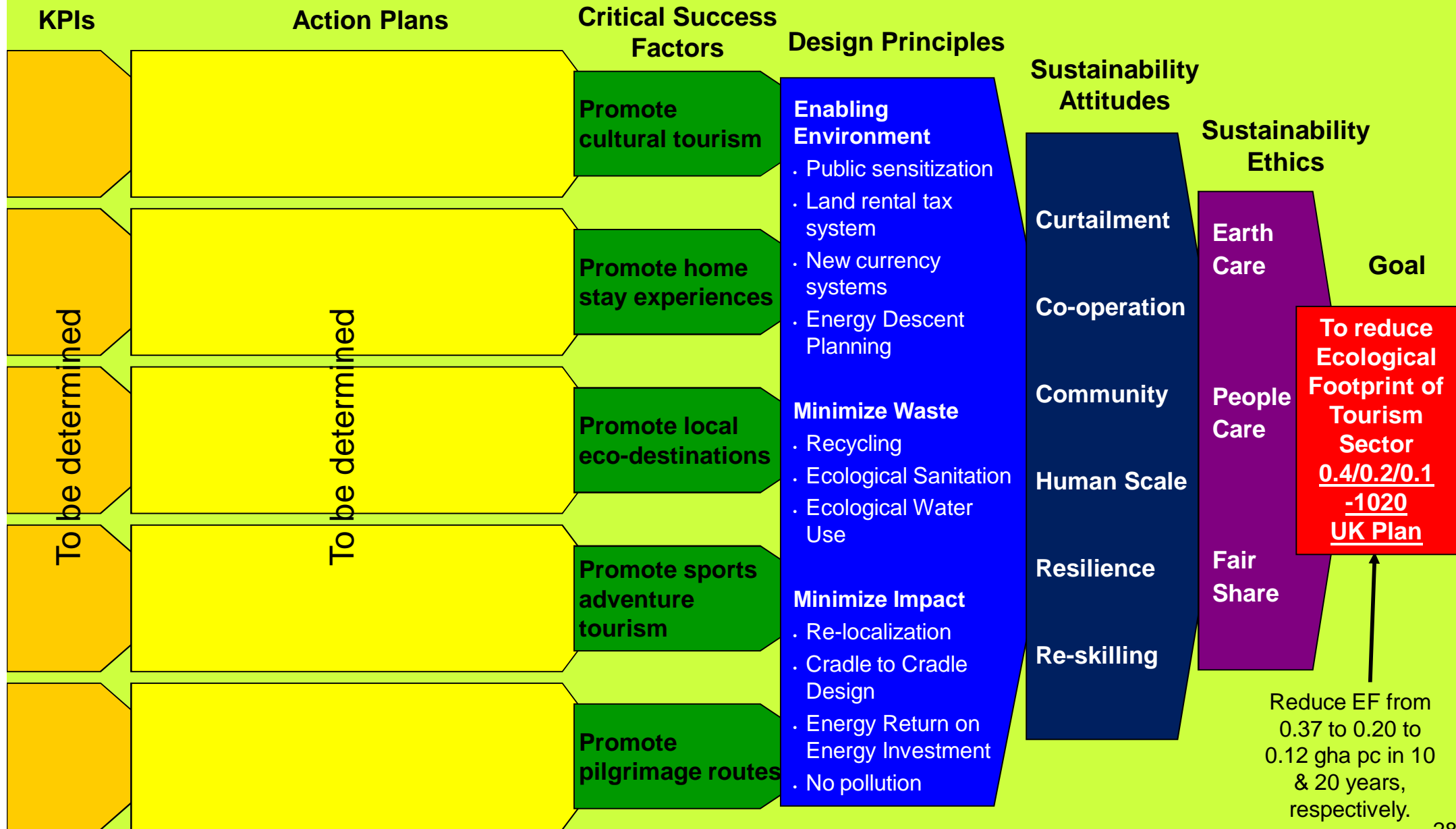


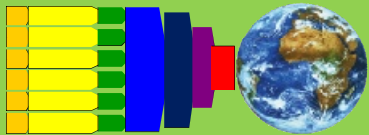
STRATEGIC FRAMEWORK FOR CONSTRUCTION SECTOR SUSTAINABILITY



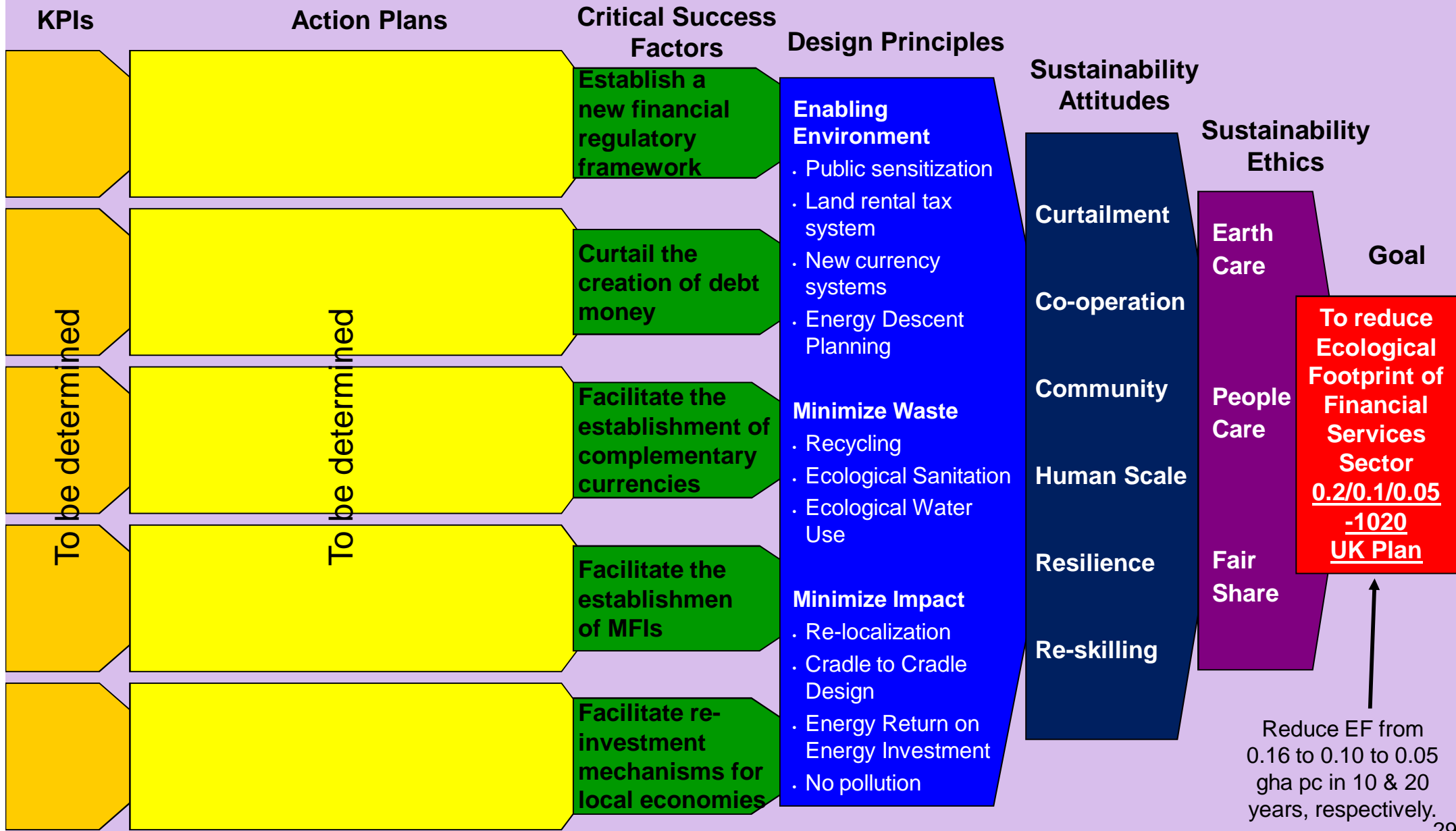


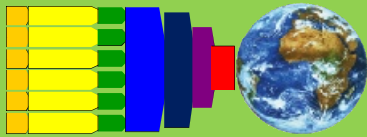
STRATEGIC FRAMEWORK FOR TOURISM SECTOR SUSTAINABILITY





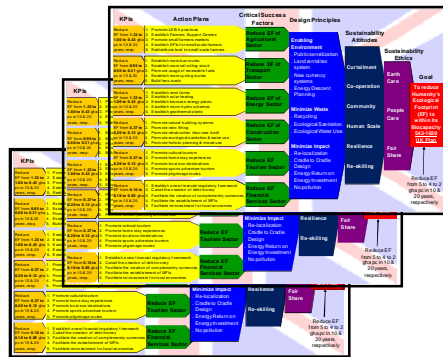
STRATEGIC FRAMEWORK FOR FINANCIAL SERVICES SECTOR SUSTAINABILITY



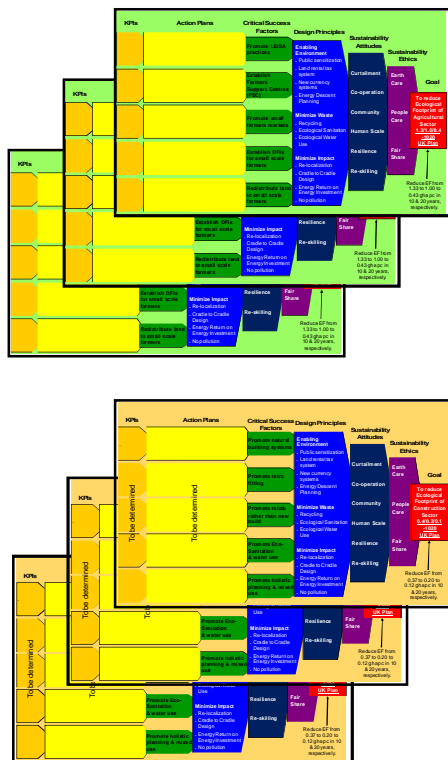


A HIERARCHY OF STRATEGIC FRAMEWORKS FOR SUSTAINABILITY

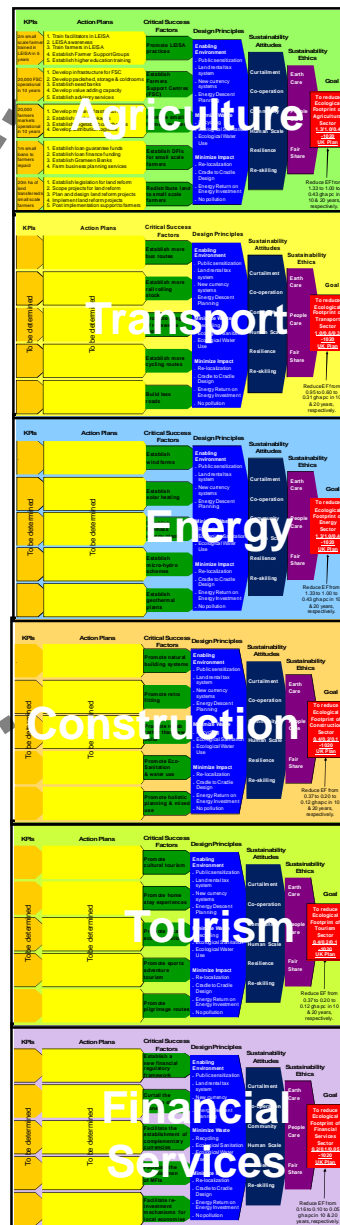
Regional Level



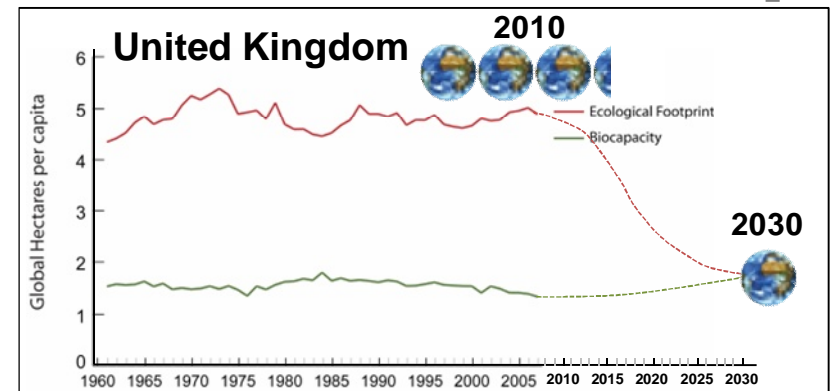
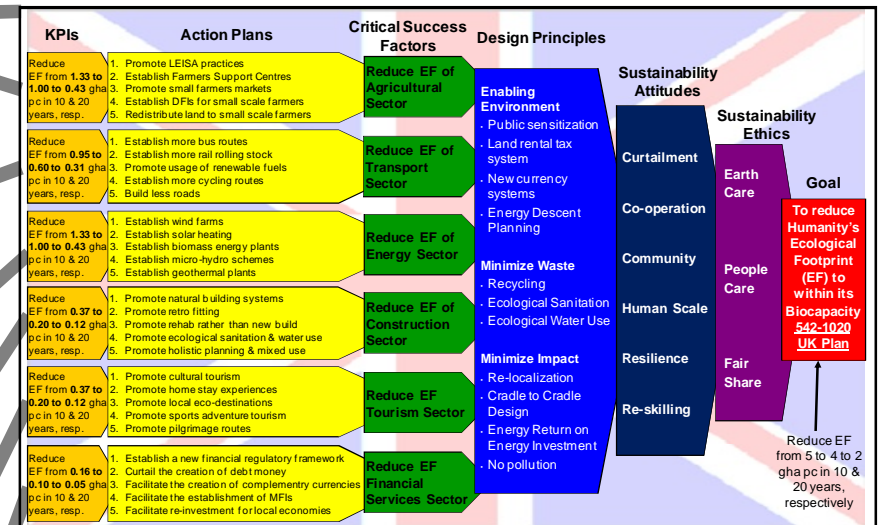
Project Level

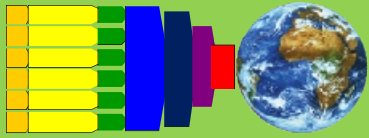


Economic Sector



National Level - UK





FURTHER RESEARCH

This concept document uses the ecological footprint as a basic indicator for Humanity to measure its performance towards living within its biocapacity and thus sustainability. This document provides the Foundation for Sustainable Design and how this may be applied for a hierarchy of strategic plans for a country and cascaded down to economic sectors, regions, districts and projects. However, there is still much research required to implement this type of strategic planning framework, as outlined in the table below.

Topic	Research
Sustainability Ethics	Refine the Sustainability Ethics and unpack with detailed explanations.
Sustainability Attitudes	Refine the Sustainability Attitudes and unpack with detailed explanations.
Design Principles	Refine Design Principles and unpack with detailed explanations and case studies as examples of best practices.
Critical Success Factors	Review Economic Sectors and refine the ecological footprint impact per sector.
Agricultural Sector Action Plan	Review Action Plan for the Agricultural Sector and unpack with detailed explanations/
Other Action Plans	Develop Action Plans for various economic sectors with detailed explanations.
Key Performance Indicators (KPIs) per Economic Sector	Refine the ecological footprint data per economic sector and Action Plans.
Action Plan Budgets and Programmes and KPIs	Prepare basic budget estimates, timeframes and lower level KPIs in order to assess the cost and impact of various Action Plans towards reducing the ecological footprint for the associated biocapacity.