Forests: Interconnecting Sustainable Development Goals to Action

THE NEED FOR A NEW ECONOMIC MODEL AS BASIS FOR SUSTAINABLE DEVELOPMENT

27th September 2018

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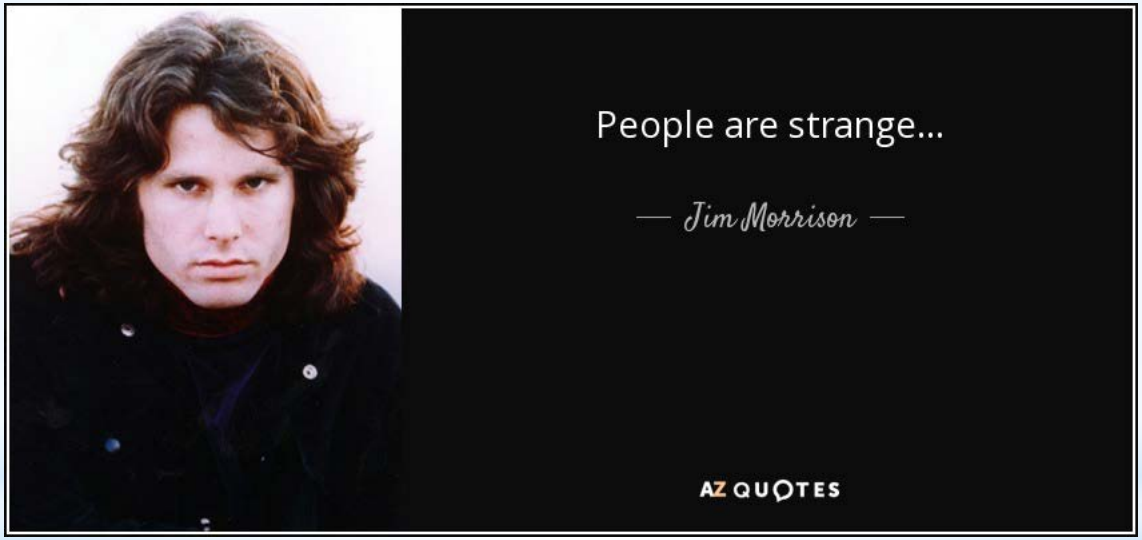
Partner SYSTEMIQ



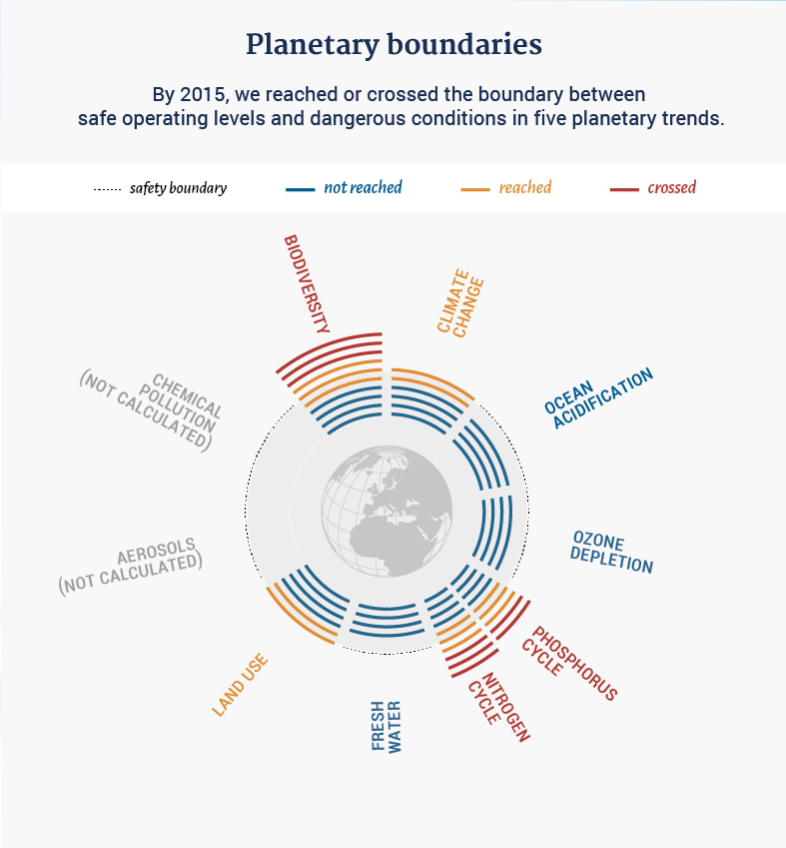
WE WANT CHANGES ...

BUT WE DO NOT WANT TO CHANGE

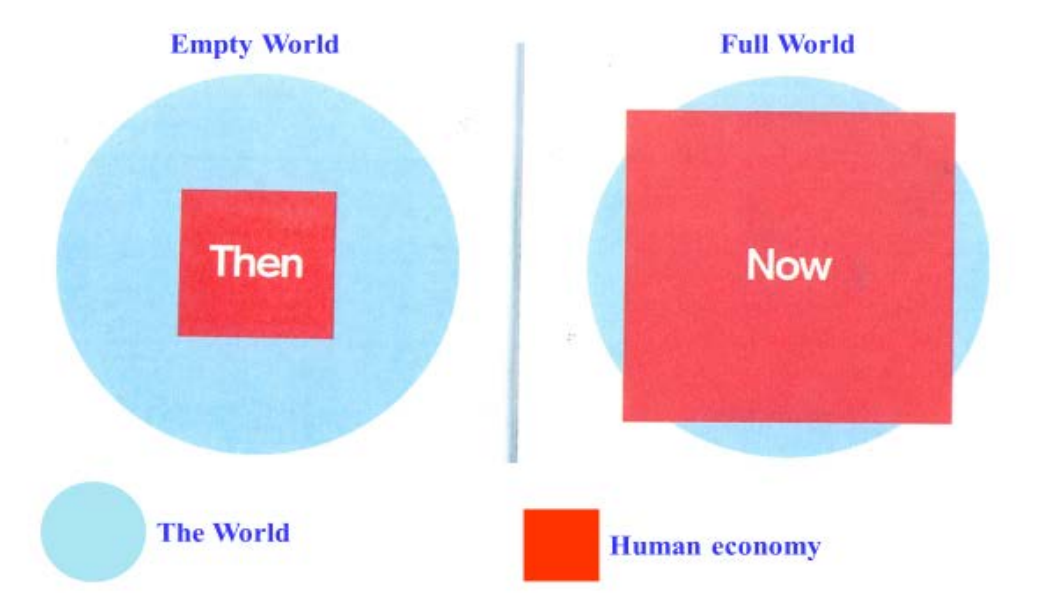
For the first time in a human history we face the emergence of a single, tightly coupled human social-ecological system of planetary scope.

We are more interconnected and interdependent than ever.

Our individual and collective responsibility has enormously increased.



EMPTY WORLD AND THE FULL WORLD

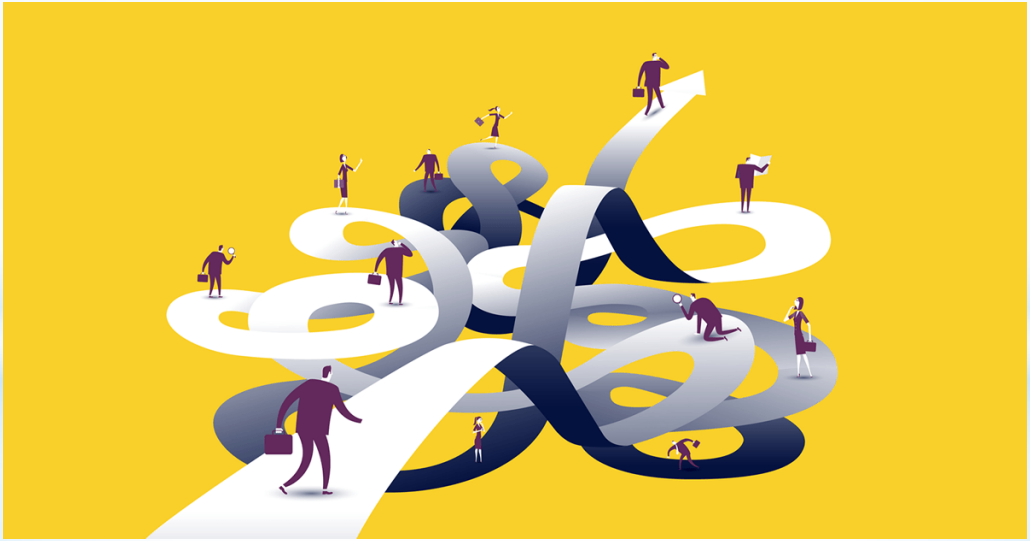


Source: Club of Rome: Simplified after Herman Daly

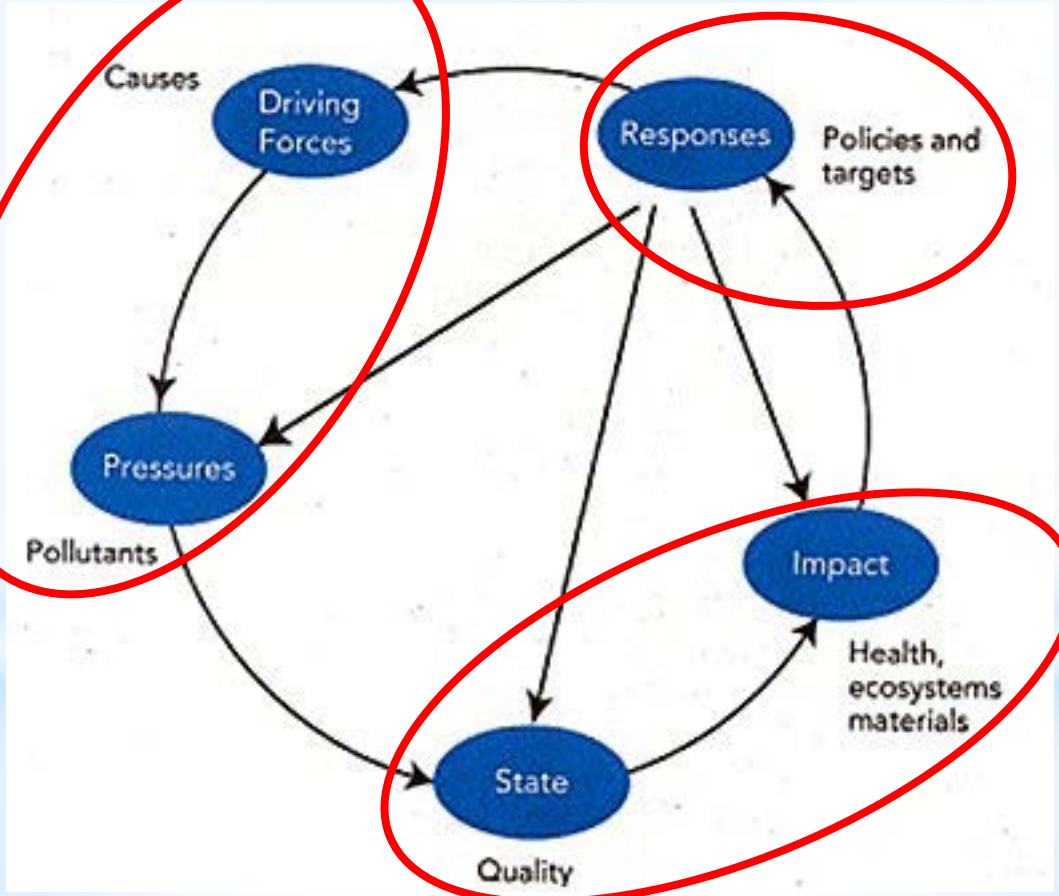
Labour and Infrastructure limiting factors of human wellbeing

Natural resources and Environmental sinks limiting factors of human wellbeing

In the 21st Century we do not have any more the luxury of thinking and acting based on short term logic and interests



DPSIR FRAMEWORK



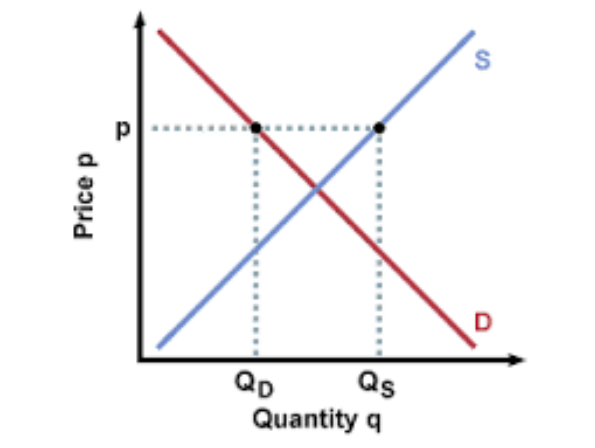
OUR ECONOMY …

Price Signals:

Finacial Capital Overvalued

Human Capital Undervalued

Natural Capital not Valued



Market

Producers/Consumers

Rational Behaviour

Economic model

Inbuilt Economic, Social, Environmental Inbalances

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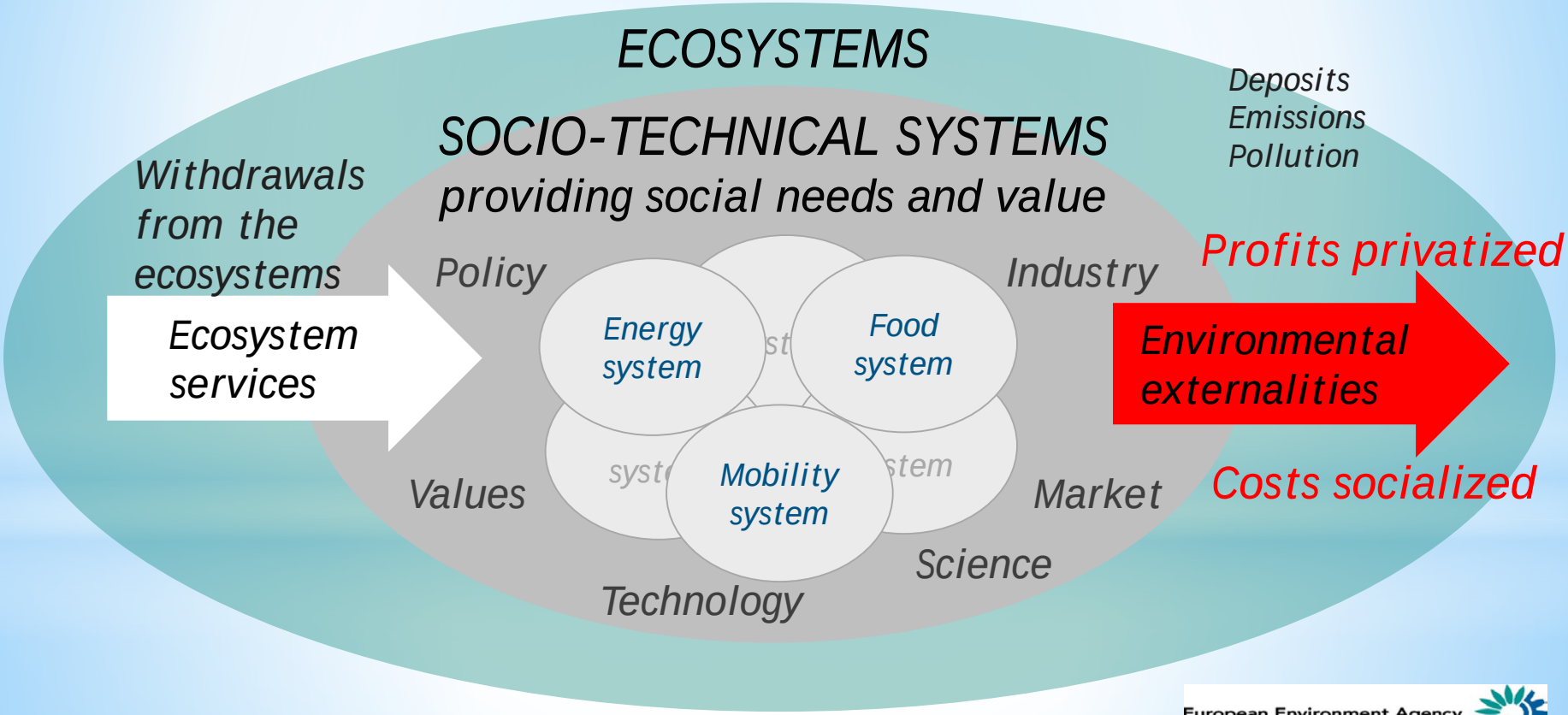
In the mid-term, except in specific cases, resource shortage will not be the core limiting factor of our (economic) development …

… but the environmental and health consequences caused by this excessive and irresponsible use of resources will be!

LIVING WELL WITHIN ECOLOGICAL LIMITS

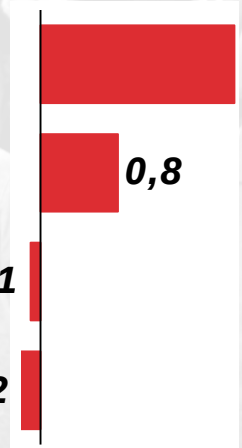
ECONOMIC SYSTEM FUNCTION OF ECOSYSTEM



European Environment Agency

MEASURES OF SOCIETAL DEVELOPMENT THAT INCLUDE NATURAL CAPITAL DEPLETION GROW MUCH SLOWER THAN GDP

Progress per capita[3], globally, 1990-2010, real terms



	Considerations: Capital		
	Economic	Social	Natural
Gross Domestic Product	✓		
Human Development Index	✓	✓	
Genuine Progress Indicator[1]	✓	✓	✓
Inclusive Wealth Index[2]	✓	✓	✓

1 1990-2005, as later data not available globally,
2 IWI exists in two versions, one unadjusted, and one where adjustments are made for environmental damage, oil capital gains, and total factor productivity. The adjusted version is shown here,
3 Global population growth was 1.6 percent per year during the period
SOURCE: UNEP (2014a), Kubiszewski et al. (2013)

SYSTEMIQ

It is not helping if you are walking faster,

if you are walking in the wrong direction!

OUR COMMITMENT AND OUR OBLIGATION

THE GLOBAL GOALS

For Sustainable Development

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Trade-offs among various SDGs are unavoidable. Sustainable Consumption and Production is the most efficient strategy to mitigate trade-offs and create synergies to resolve the development and environmental challenges articulated in the SDGs.

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SDGs DIRECTLY DEPENDENT ON NATURAL RESOURCES

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RESOURCES
THE MISSING LINK

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DECOUPLING IS THE IMPERATIVE OF MODERN ENVIRONMENTAL AND ECONOMIC POLICY

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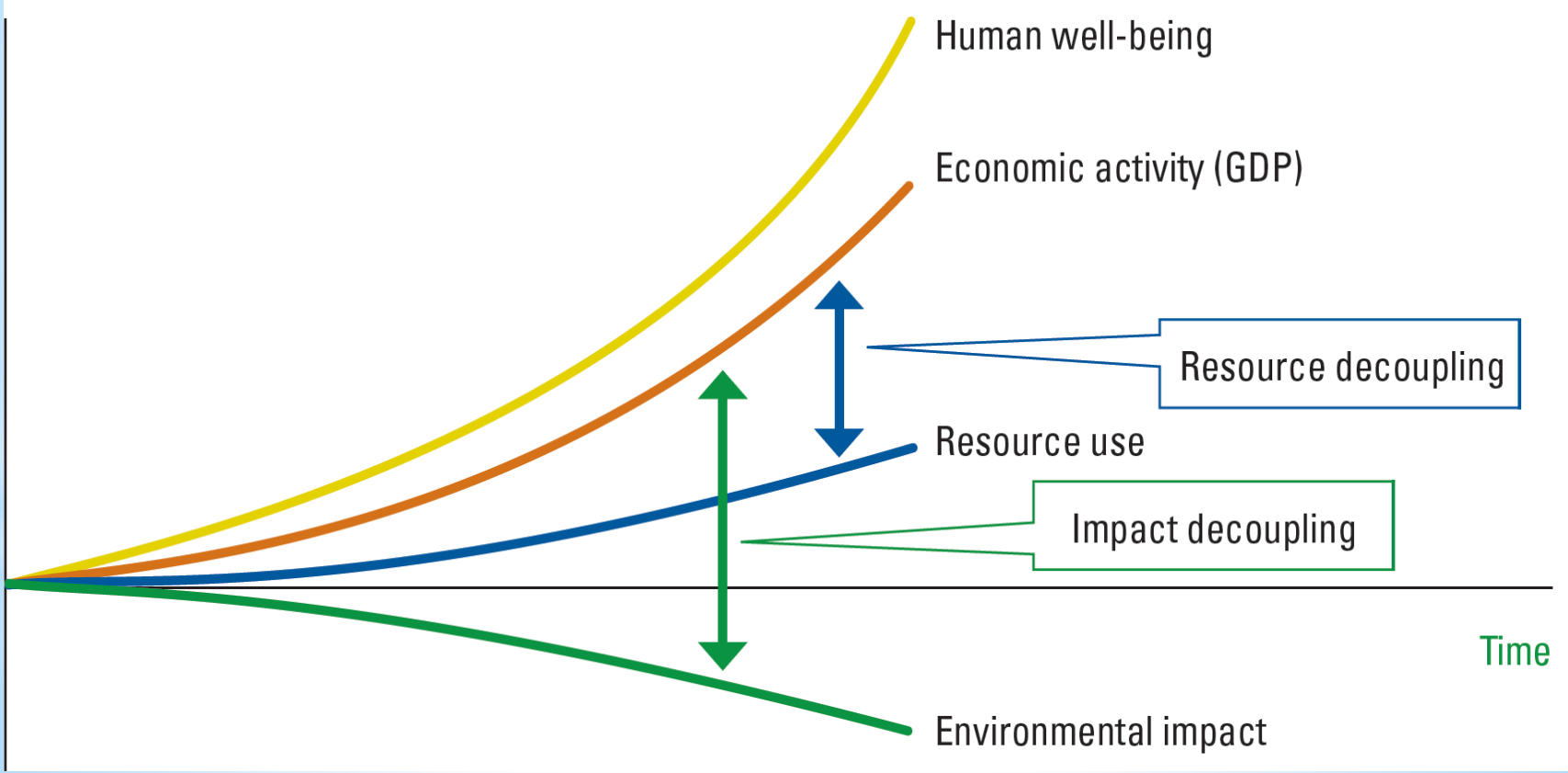


AN IMPLEMENTABLE PARADIGM FOR SUSTAINABILITY TRANSITIONS

Essential development needs
and provisioning systems

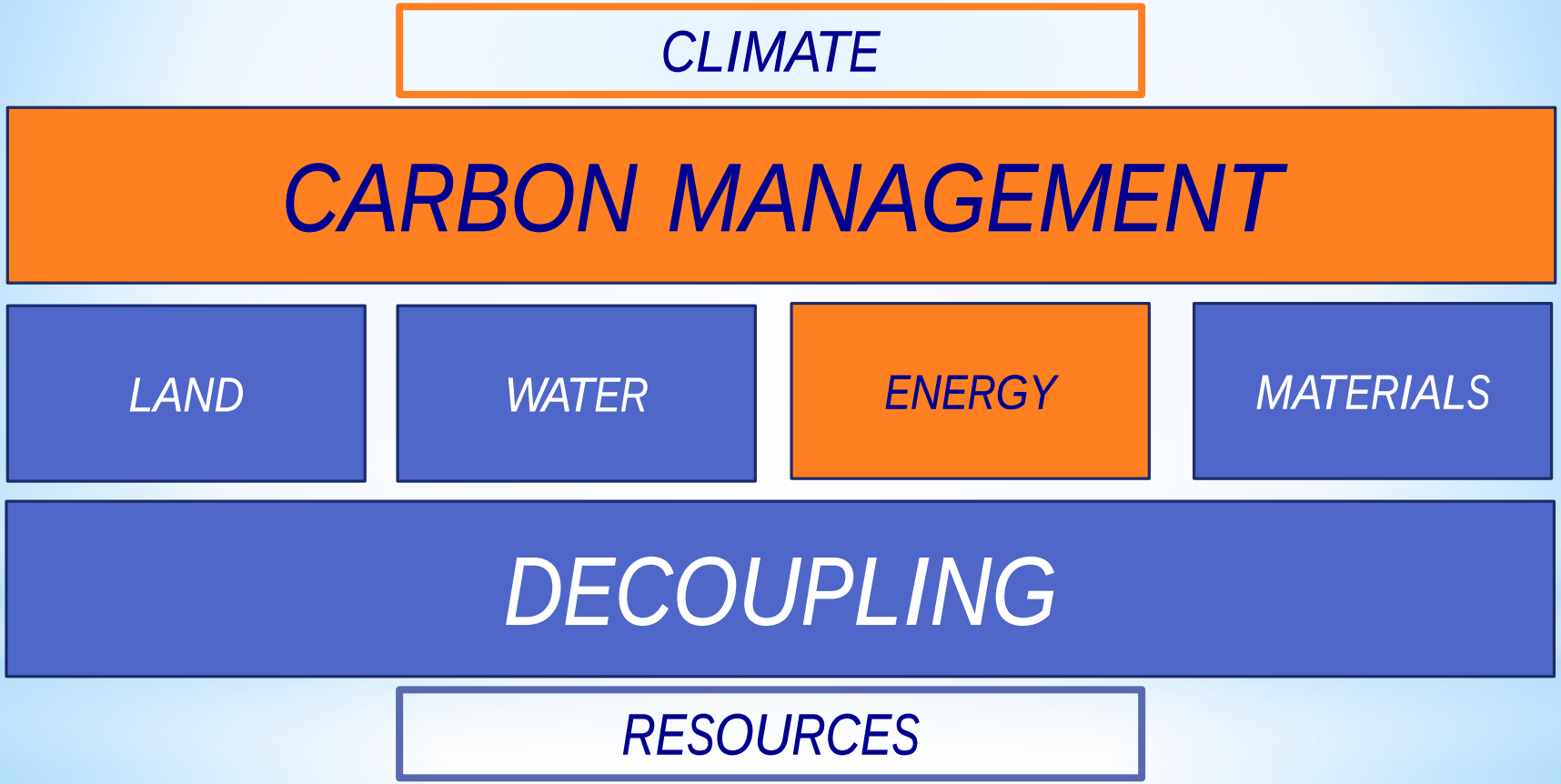
DUAL DECOUPLING

FOR INCLUSIVE AND SUSTAINABLE GROWTH
LINKING DEVELOPMENT AND SUSTAINABILITY:

I. increasing wellbeing per unit of resource us;

II. decreasing environmental pressures per unit of resource use

Natural and social capital
required to underpin sustainable development


CLIMATE
CARBON MANAGEMENT
LAND
WATER
ENERGY
MATERIALS
DECOUPLING
RESOURCES

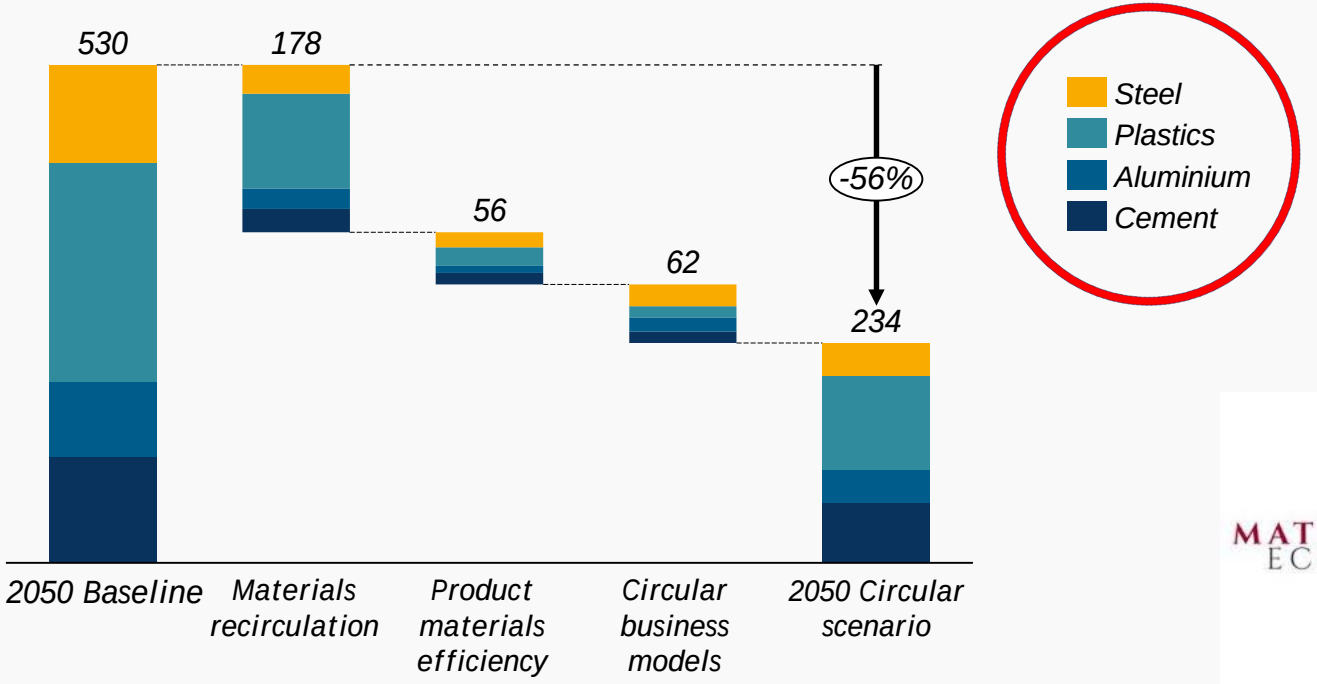
PILLARS FOR EFFICIENT CLIMATE CHANGE POLICY

SUPPLY SIDE SOLUTIONS	DEMAND SIDE SOLUTIONS	NATURE BASED SOLUTIONS
Energy, Carbon management	Circular Economy, Land, Water, Materials Management	Eco-system services Environmental sinks

A MORE CIRCULAR ECONOMY CAN REDUCE EU EMISSIONS FROM MATERIALS BY 56%

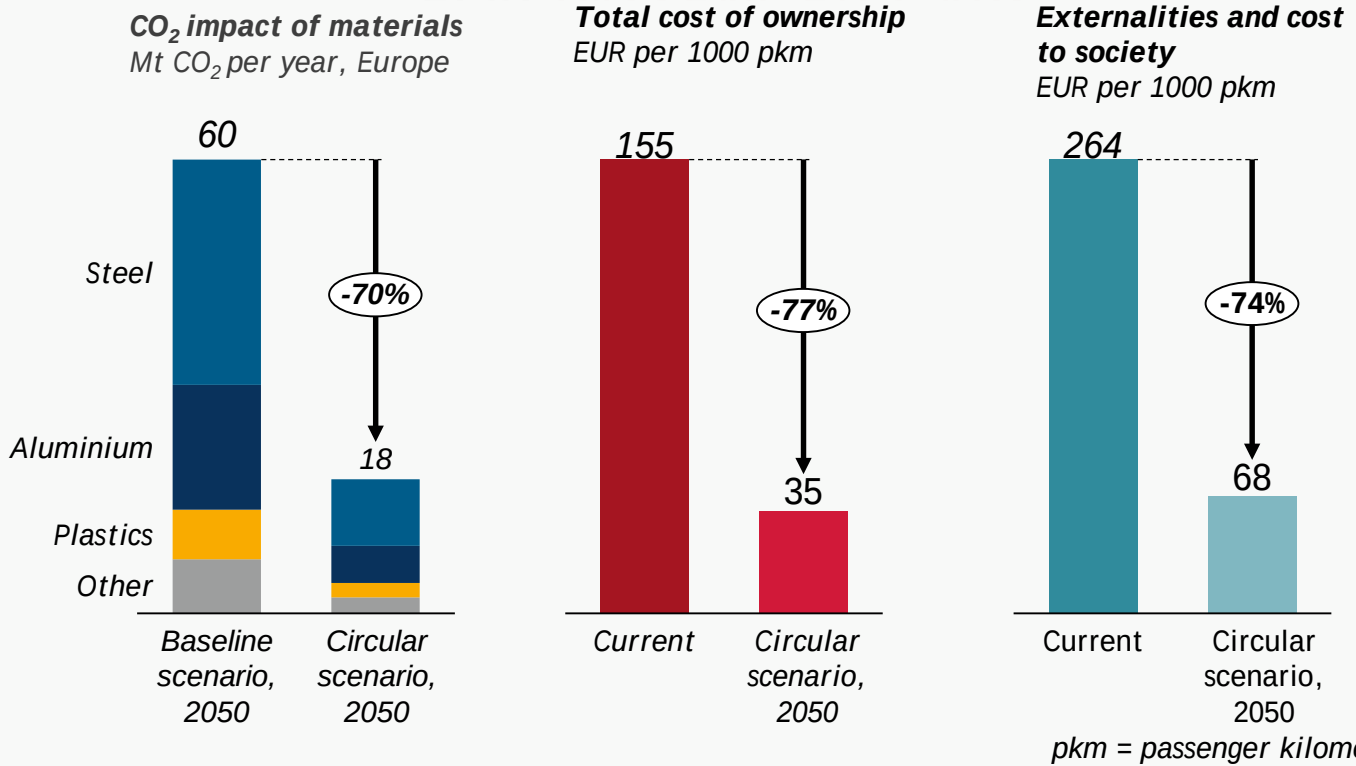
EU emissions reductions potential from a more circular economy, 2050

Mt CO_2 per year



MATERIAL ECONOMICS

A SHARED MOBILITY SCENARIO IS A HIGHLY ATTRACTIVE VISION FOR PASSENGER CARS

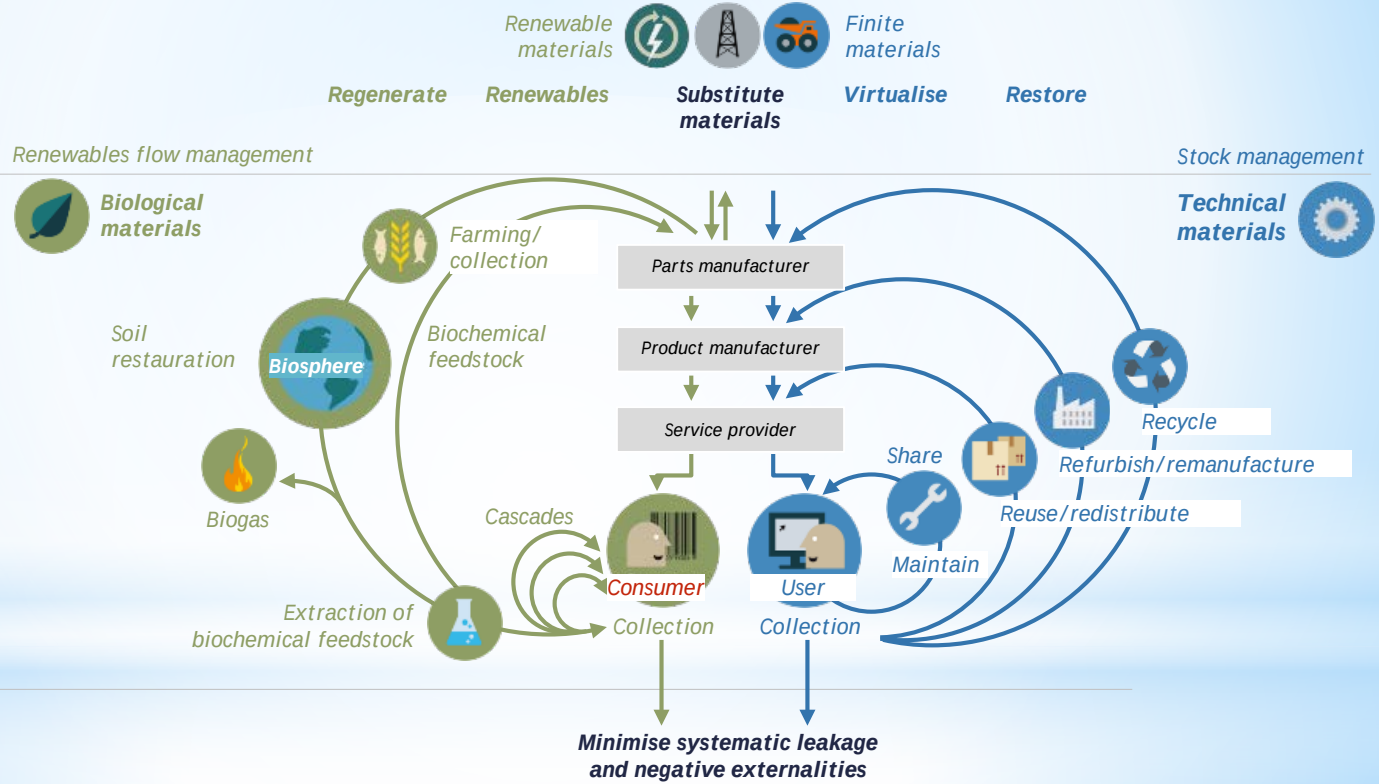


MATERIAL ECONOMICS

OUTLINE OF A CIRCULAR ECONOMY SYSTEM

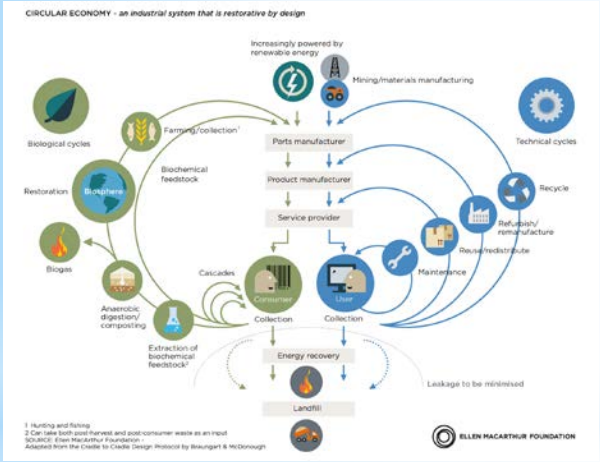
Principles

1. **Preserve and enhance natural capital by controlling finite stocks and balancing renewable resource flows**
2. **Optimise resource yields by circulating products, components and materials in use at the highest utility at all times in both technical and biological cycles**
3. **Foster system effectiveness by revealing and designing out negative externalities**

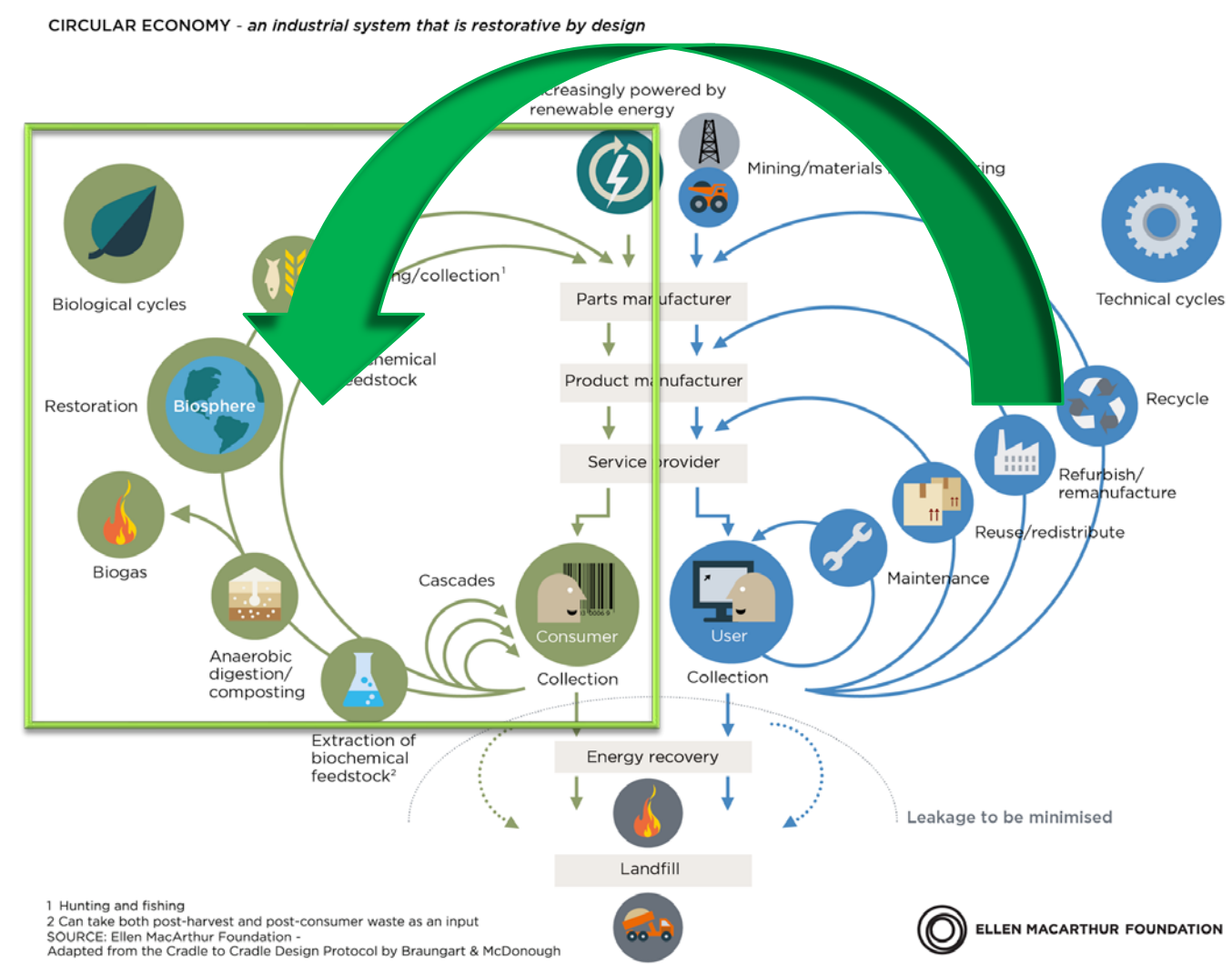


Source: Ellen MacArthur Foundation; McKinsey Center for Business and EnvironmenStiftungsfonds für Umweltökonomie und Nachhaltigkeit;

CIRCULAR ECONOMY

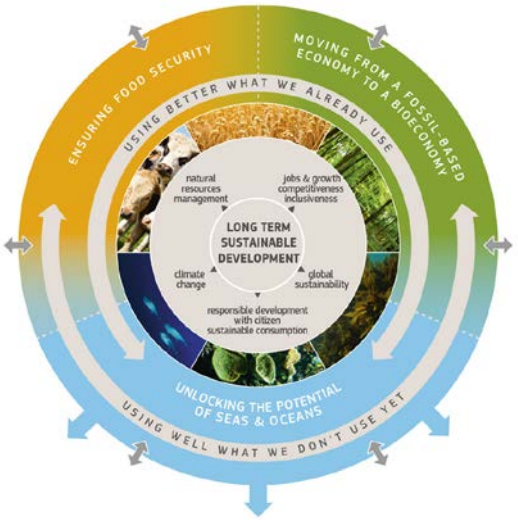


- *Started as an environmental initiative*
- *In two years it was transformed to an economic based initiative with positive environmental and health consequences*
- *In reality is should be seen as a part of the bigger picture of societal and cultural transformation needed to sustain the humanity and its prosperity.*



Plastics
Food systems
Land management

BIOECONOMY AND CIRCULAR ECONOMY



CIRCULAR ECONOMY AND BIOECONOMY

- *Improve nutrient cycles*
- *Circular design of bio-based products*
- *Integrating well informed consumers to better play their role*
- *Waste prevention*
- *Better waste management*
- *…*

SOME OBSTACLES AND CHALLENGES

- *Trade-offs between biomaterials/bio energy/farming (fibre/fuel/food) and with other services provided by ecosystems (oxygen, water and temperature regulation, nutrients, biodiversity)*
- *The definition of cascading is not universal*
- *Supply of sustainably produced biomass and soil balance should be ensured*
- *Mixing bio and technical materials could create difficulties for CE*
- *Substitution of products should be dealt with care after assessing environmental impacts*
- *Focus should not be only on products and materials, but also on systems and business models*

AGRICULTURE
FROM CHEMICAL BASED CROP PROTECTION

- *Pesticides can not be used for targeted crop protection*
- *Current model of pesticides authorisation is one of most conflicting areas in public perception and policy making (Glyphosate, Neonicotinoides, Endocrine Disruptors…)*
- *Nobody is happy (industry, civil society, policy makers)*

AGRICULTURE
TO SERVICE BASED CROP PROTECTION

- *Digitalisation is allowing targeted approach to individual plant protection - precision farming is an already known instrument*
- *But instead of selling pesticides, chemical companies could sell services to protect (hectares of) plants from pests. This would incentivise them to sell less pesticides. By providing service of crop protection combining digital (small robots, drones …) and chemical solutions the use of pesticides could be minimised.*

TO CONCLUDE

WE HAVE TO FIX A BROKEN COMPASS

(PAVAN SUKHDEV)

NEW ECONOMIC MODEL BASED ON SUSTAINABLE CONSUMPTION AND PRODUCTION (SCP) INTEGRATING ALL PILLARS OF SUSTAINABILITY IS

NECESSARY AND UNAVOIDABLE

ASSESSING GLOBAL RESOURCE USE

2017 IRP Report

Recommended policy strategies

1. Set targets and measure progress
2. Act on key leverage points across all levels of governance
3. Take advantage of leapfrogging opportunities
4. Implement a policy mix that builds incentives and corrects market failures
5. Promote innovations toward a circular economy
6. Enable people to develop resource efficient solutions
7. Unlock the resistance to change

RESPONSIBILITIES OF THE BUSINESS SECTOR

Change the risk management to be aligned with the SDGs

From being a pure product or service providers managing the risks of the company through profit maximisation

To socially responsible companies managing also the risks of the society

SYSTEM INITIATIVE ON ENVIRONMENT AND NATURAL RESOURCE SECURITY

World Economic Forum – Annual Meeting 2018

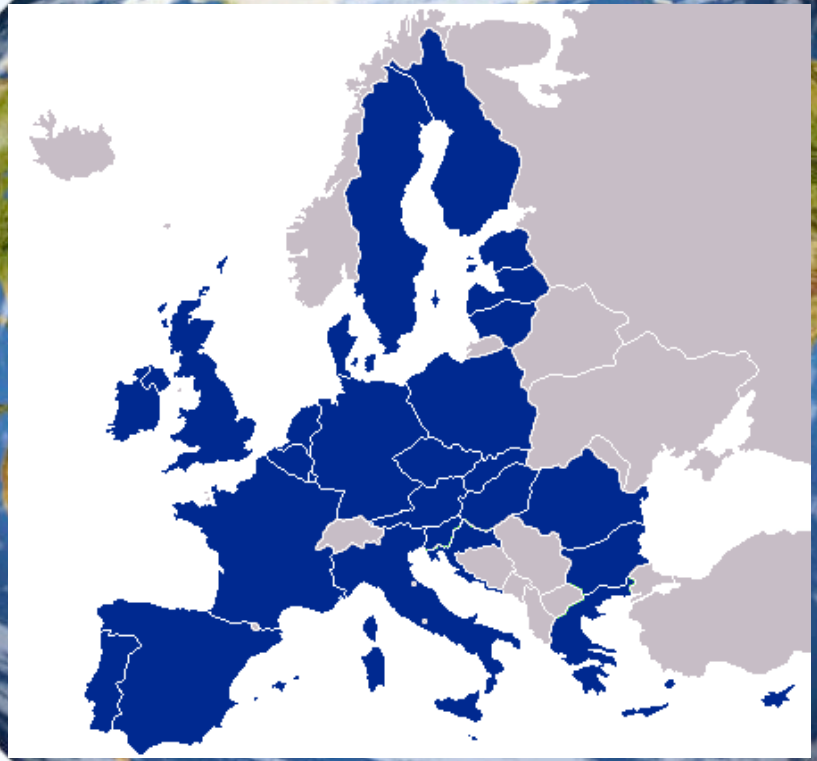
Complexity and scale of these challenges requires a space that allows actors with responsibility for those environmental governance mechanisms to be able to consider and experiment with both new forms of collaboration and more „systemic“ approaches … through promoting multi stakeholder cooperation, more agile governance (including sub-state actors, such as cities, states and provinces), the use of new technologies, and enhanced accountability and transparency.

System Initiative on Environment and Natural Resource Security

World Economic Forum – Annual Meeting 2018

- *The challenge seems to not be one of not inadequate scientific evidence anymore; rather it is one of cooperation and implementation.*
- *There is a deepening perception of a lack of synchronicity between economic and environmental policy responses to global risks.*

GOVERNANCE



REDEFINING SOVEREIGNTY

- *If we are to avoid globally extensive and inter-systemic crisis and frequent conflicts than let's get serious about implementing what we have agreed in SDGs. Changes are unavoidable and humans are supposed to be intelligent. It is high time to prove it.*
- *Change will not appear by waiting for the leadership of others, be the leaders on your level of governance and authority … in politics, in business, academia, civil society, in making your investment decisions …*

Any global transition is a major new opportunity for the innovation, new development opportunities, new jobs

And alternative …
I would rather not think and talk about it!

The CE genie is out of the bottle

(Apple, HP, Siemens, Alstom, BMW, Renault, Michelin, Veolia, Dow Chemicals, Walmart, Arup, BSF, CISCO, Caterpillar, Kingfisher, Ikea, Microsoft, Philips, DSM, Solvay, SUES, Steelcase, Unilever, Tetra Pak, Google, Danone …)

Major economic actors have moved.

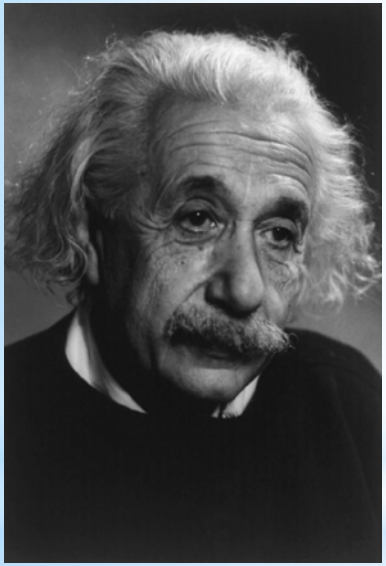
CE connects competitiveness and sustainability.

CE is about transition to the SDG compliant economy.

How to overcome short termism inbuilt in our democratic political systems and institutions (public, financial…) which is in fundamental conflict with the system change needed?

WILL IT BE EASY?

ALBERT EINSTEIN



When asked why it is that mankind has stretched so far as to discover the structure of the atom, but we have not been able to devise the political means to keep the atom from destroying us he replied:

"That is simple, my friend. It is because politics is more difficult than physics"

Guy McPherson:

”If you think the economy is more important than the environment, try holding your breath while counting your money".

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THANK YOU

For more information

Contact IRP Secretariat at resourcepanel@un.org

Visit our website at http://resourcepanel.org/