

Ambitious climate action with circular economy

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COP23 Side Event | Meeting Room 4



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Shifting Paradigms



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Circle Economy



CONTENT

- Shifting Paradigms & Circle Economy
- The circular economy
- Its mitigation potential
- Circular mitigation examples
- Transformational change
- Opportunities for the Paris Agreement



SHIFTING PARADIGMS

supports the transition to a
low-carbon circular economy



CIRCLE ECONOMY

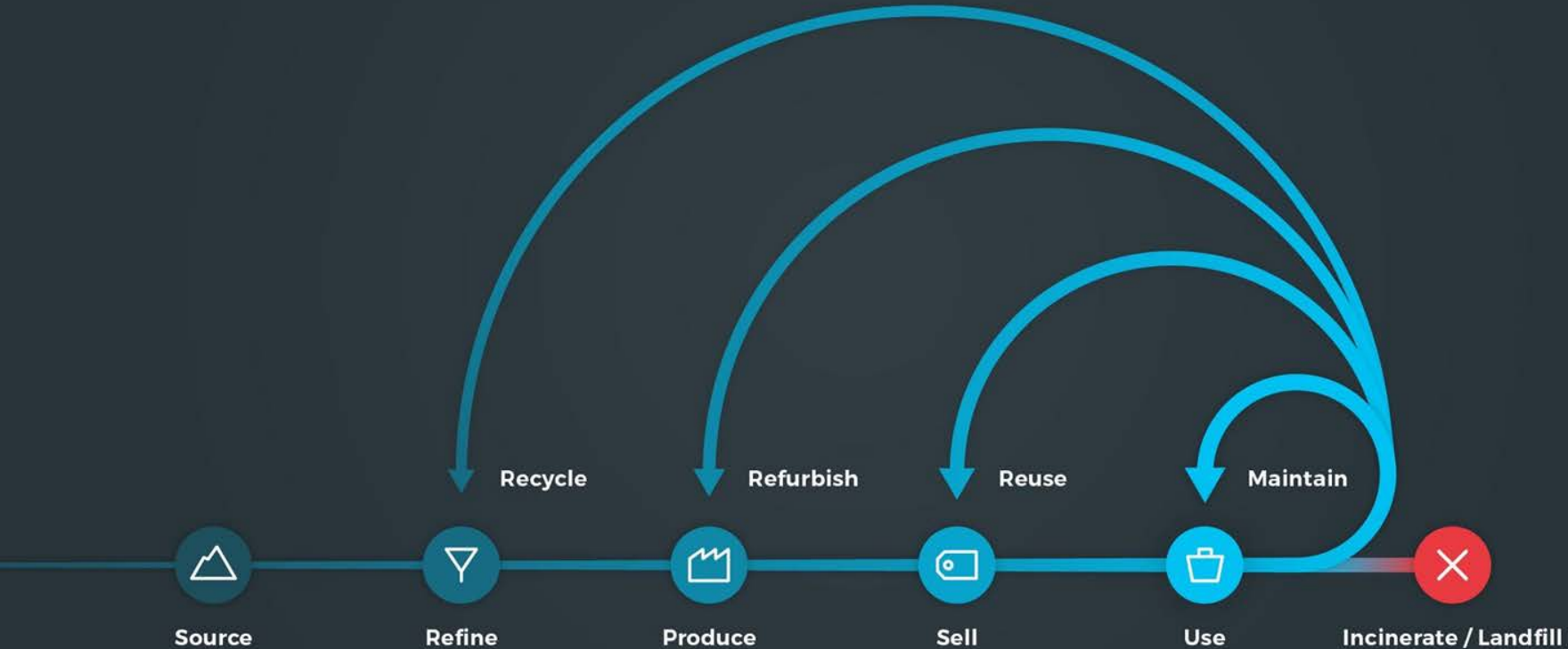
is dedicated to the practical and scalable implementation of the circular economy



Our current economic paradigm follows a **'take-make-waste'** model



In a **circular economy**, materials and resources are effectively used to their **fullest potential**



A circular economy includes both material & systemic elements



Prioritise
regenerative
resources



Design
for the
future



Preserve
& extend what's
already made



Rethink
the business
model



Incorporate
digital
technology



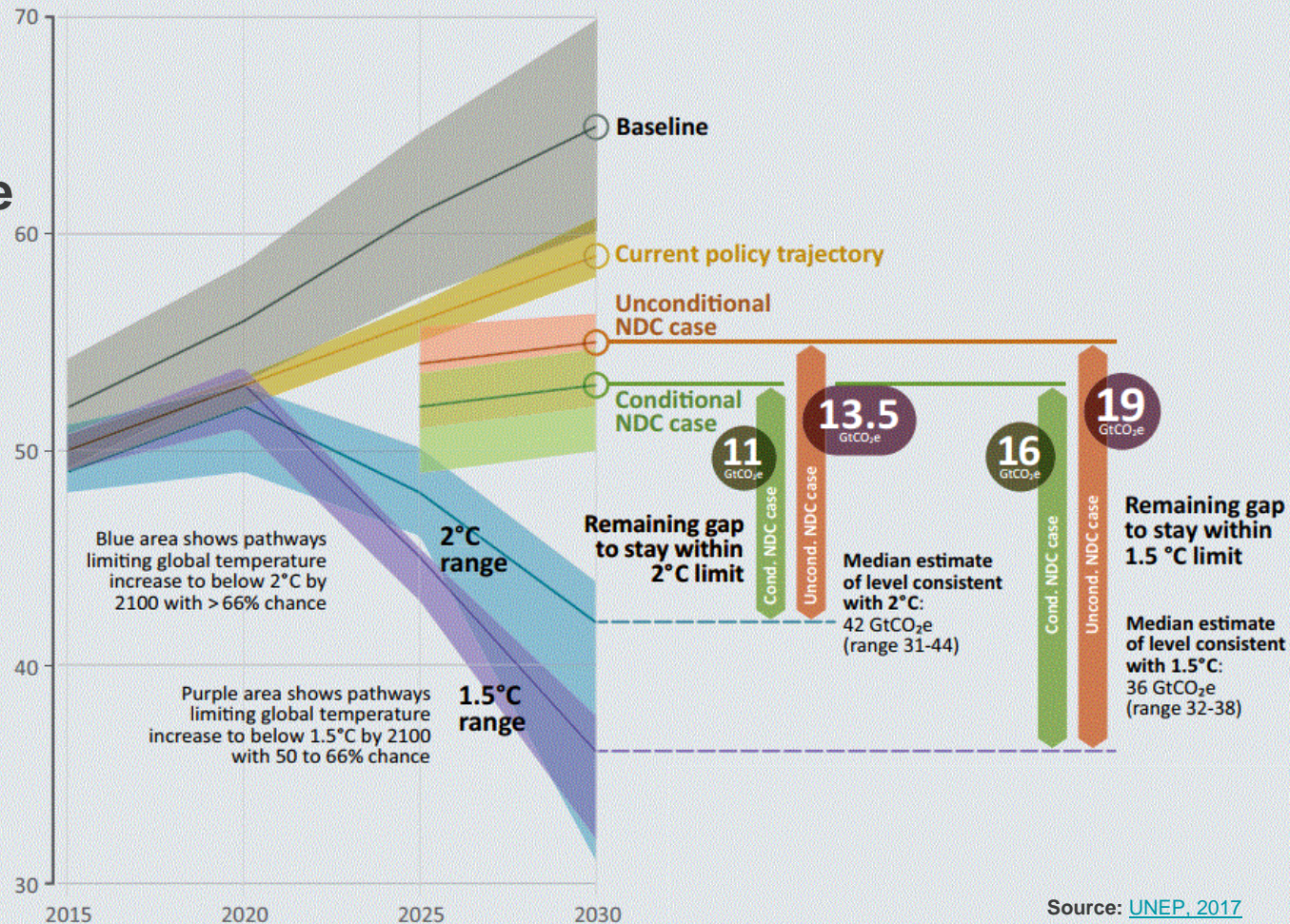
Use
waste as
a resource



Collaborate
to create
joint value

The 2017 UNEP
'emissions gap'
report shows that
**current policies are
insufficient** to meet
climate targets

Annual Global Total Greenhouse Gas Emissions (GtCO₂e)



Source: [UNEP, 2017](#)

The circular economy can make a **major contribution** to mitigating climate change

THE GAP



- **National commitments**

Renewable energy
Energy efficiency
Reduced deforestation

- **Circular Economy**

Recovery and reuse
Lifetime extension
Sharing and service models
Circular design
Digital platforms

- **Other measures**

Further scale up of renewables and energy efficiency
Reforestation
Climate-smart agriculture



Download the report:

<http://www.circle-economy.com/climatechange>

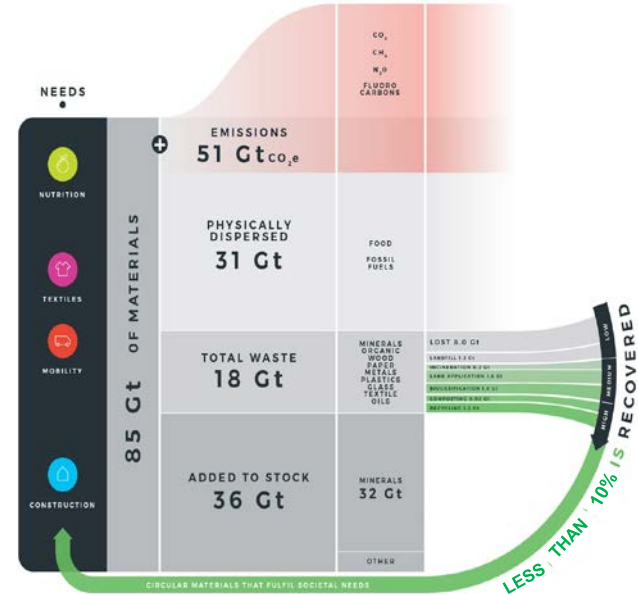
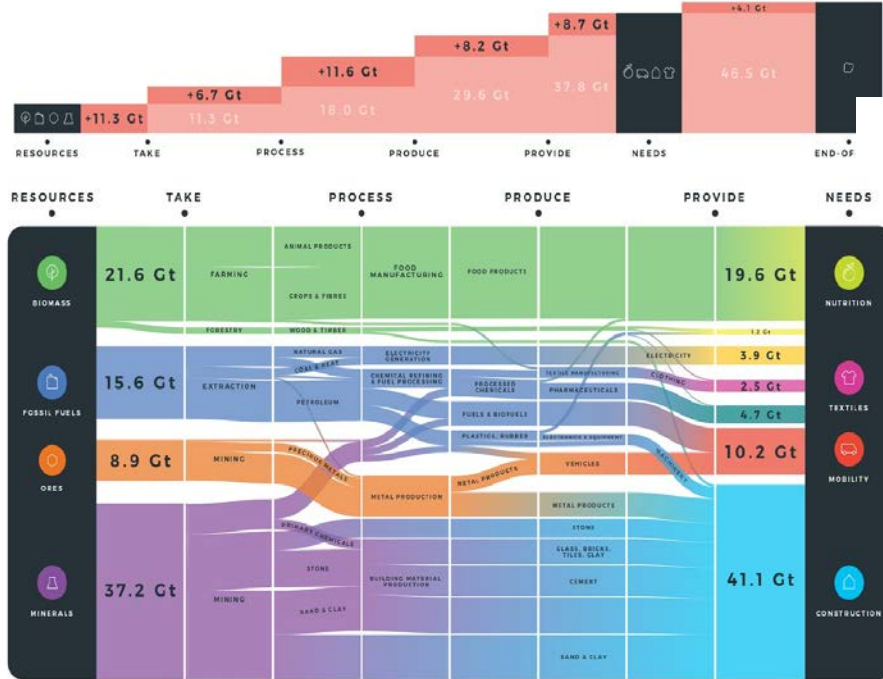


CIRCLE
ECONOMY

ECOFYS

sustainable energy for everyone

Each year we extract over **80 Gt of materials** and emit over **50 Gt of CO2e**, of which **67%** is related to material management



Sources: Circle Economy team analysis based on Exiobase (2011); Tukker et al., EXIOPOL - Development and illustrative analyses of a detailed global MR EE SUT/IOT (2013) Economic Systems Research, 25 (1), pp. 50-70.; Wood et al., Global sustainability accounting-developing EXIOBASE for multi-regional footprint analysis (2015) Sustainability (Switzerland), 7 (1), pp. 138-163.

Climate mitigation and circular economy policies are **mutually reinforcing** and must join forces



Download the report:

<https://www.circle-economy.com/low-carbon-circular-economy>





The body of evidence that circular economy can **mitigate climate change** is growing

67% of global greenhouse gas emissions are related to material management (UNDP/Lao PDR)

While **67%** of climate finance goes to energy efficiency and renewables (UNFCCC)

40% reduction through CE compared to BaU by 2030 in India (EMF)

70% reduction in GHG emissions in 5 EU countries when adding circular economy options (Club of Rome)

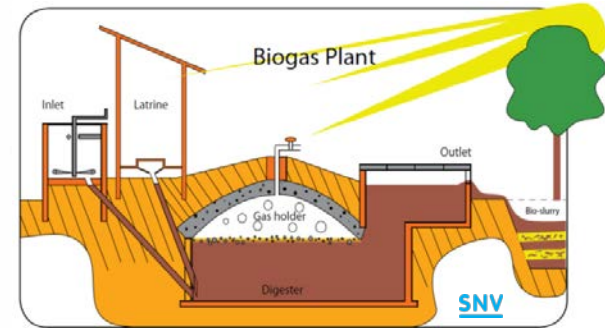
Circular economy is about reducing emissions at the cause, rather than the source

- Turning the construction industry into a net carbon sink with Cross Laminated Timber
- Processing concrete to its heterogeneous composite elements with SmartCrusher
 - * Cement: 5% global CO₂
- Closing nutrient cycles in food supply chains
 - * Fertiliser: 1.2% global GHG
 - * Manure mgnt: 0.5% global GHG

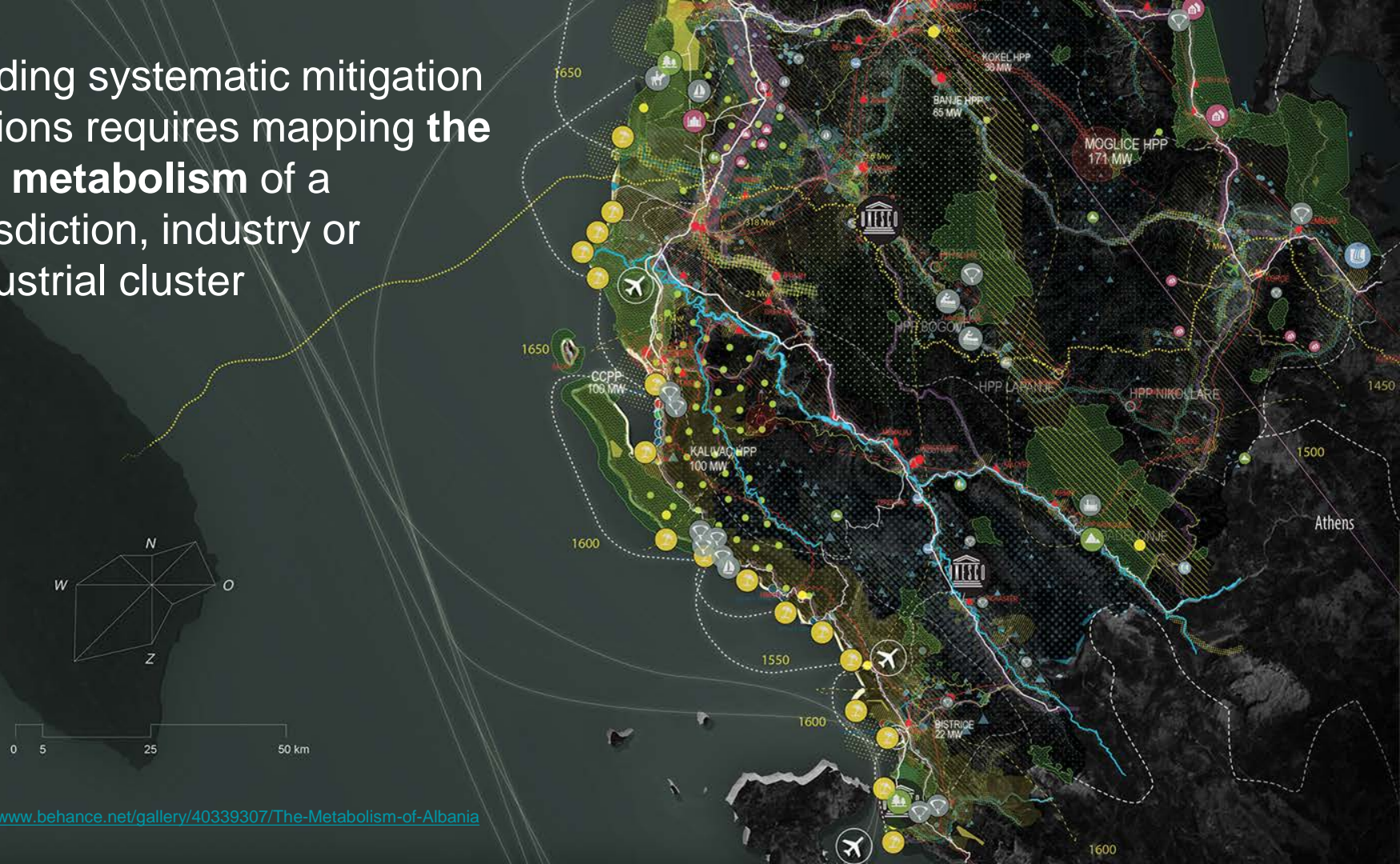


SmartCrusher bv

We close the circle



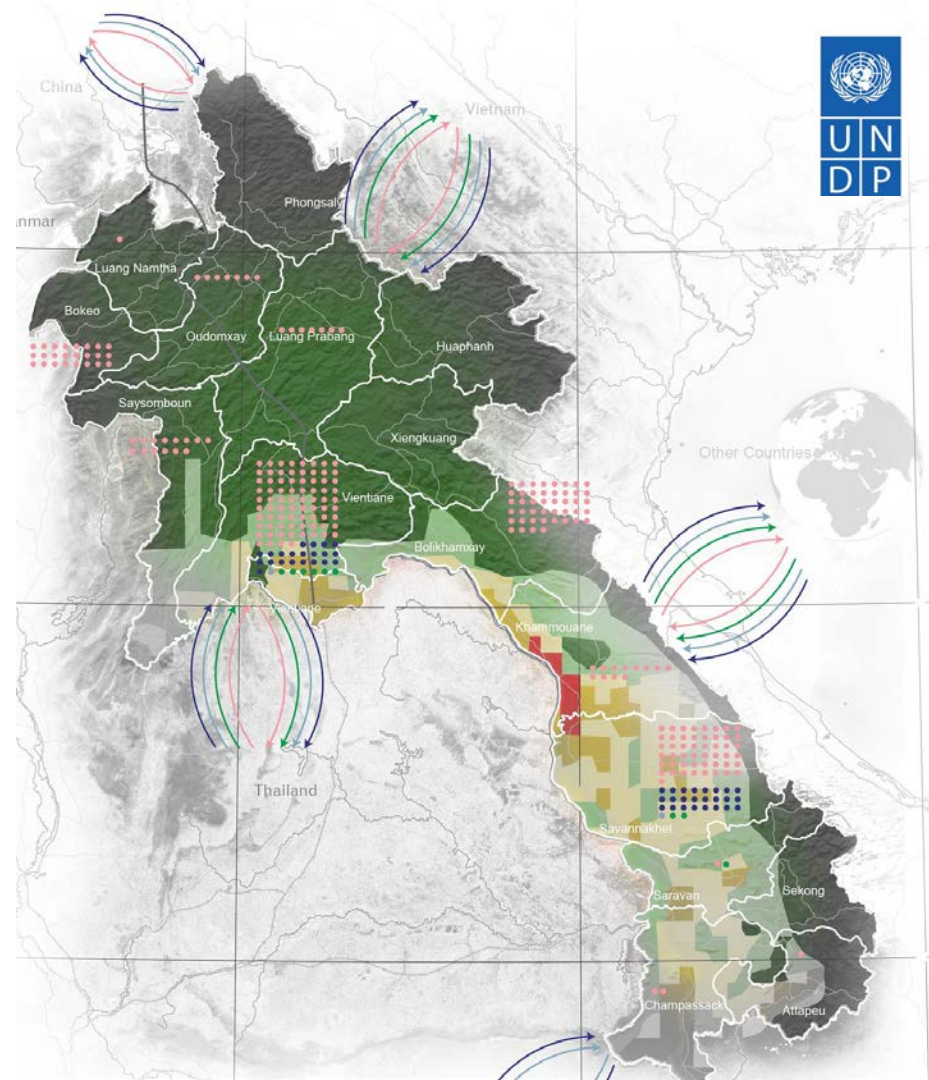
Finding systematic mitigation options requires mapping the **full metabolism** of a jurisdiction, industry or industrial cluster



It offers Lao PDR an **alternative development perspective** which steps away from devastating resource extraction and its short-term rents



Sources: Circular economy strategies for Lao PRD, PDF and print-on-demand version available from: <https://goo.gl/7R4Vtb>



And allows tapping into the international, **scope 3 emissions** upstream in our value chains

Scope 3 emissions should be included in carbon accounting and mitigation effort:

1. 20% to 30% of a nation's carbon footprint lies in emissions embedded in products crossing its borders*
2. EU territorial emissions show 20% reduction, while consumption-based emissions increased 11%



Sources: Climate Works (2017). Europe's Carbon Loophole, *This estimate varies between different sources. According to S. Paulik (2014) "emissions embodied in international trade change the footprint of many countries by 30% or more". According to G.P.Peters (2008) "22% of global CO2 emissions are embodied in international trade"

The circular economy creates new opportunities for the **design of the Paris Agreement**

From

Renewables, energy efficiency and reduced deforestation

Add: Closing material cycles, dematerialisation and optimised asset use

Identifying mitigation options with sectoral inventories of emission sources

Understanding the metabolism and build systems that are low-carbon by design

Efficient production of products

Exploring the least amount of raw material required to respond to the needs of society

Carbon tax

Ex'tax: lower tax on labour, higher tax on extraction and emission (www.ex-tax.com)

Territorial carbon accounting

Add: Consumption-based accounting (incl scope 3)

Article 6 inspired by CDM and offsetting

Article 6 aids international cooperation to develop low-carbon supply chains

To



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