



Measurement framework and SDGs

Measurement scope of the circular economy and the role of SEEA

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Outline

1. CE measurement framework in the Netherlands
2. Role of SEEA
3. Relation with the SDGs



Measurement framework Circular Economy

Dutch CE framework consist of two core elements:

- 1) Transition process: Actions and transition dynamics
- 2) Material use and intended impacts



Transition and monitoring Circular Economy

Various activities that pave the way for intended effects.

For example:

- Number of circular firms
- Number of scientific publications
- Financial resources for CE
- Education programs on CE
- Changes government regulations

Elements of a successful transition to a circular economy



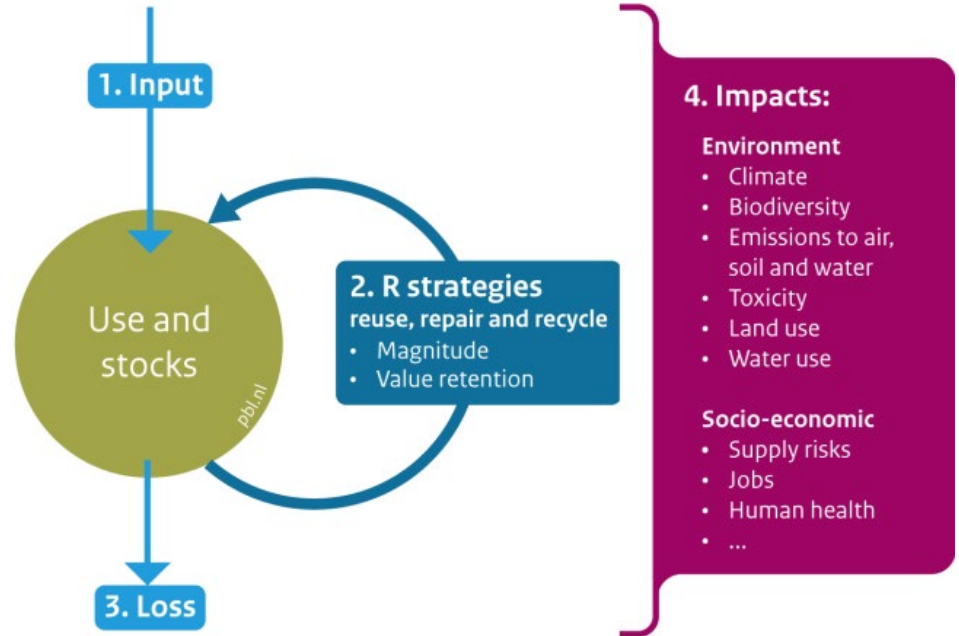
Transition and monitoring Circular Economy

Monitoring progress of the transition towards a circular economy for the Netherlands is derived from a broad set of indicators.

Three phases:

- Input
- Output
- Flows within economy – R strategies

Framework for targets and indicators of circular economy monitoring



Source: PBL

Role of SEEA



Role of SEEA I:

Key indicators in Integral Circular Economy Report (ICER) for the Netherlands

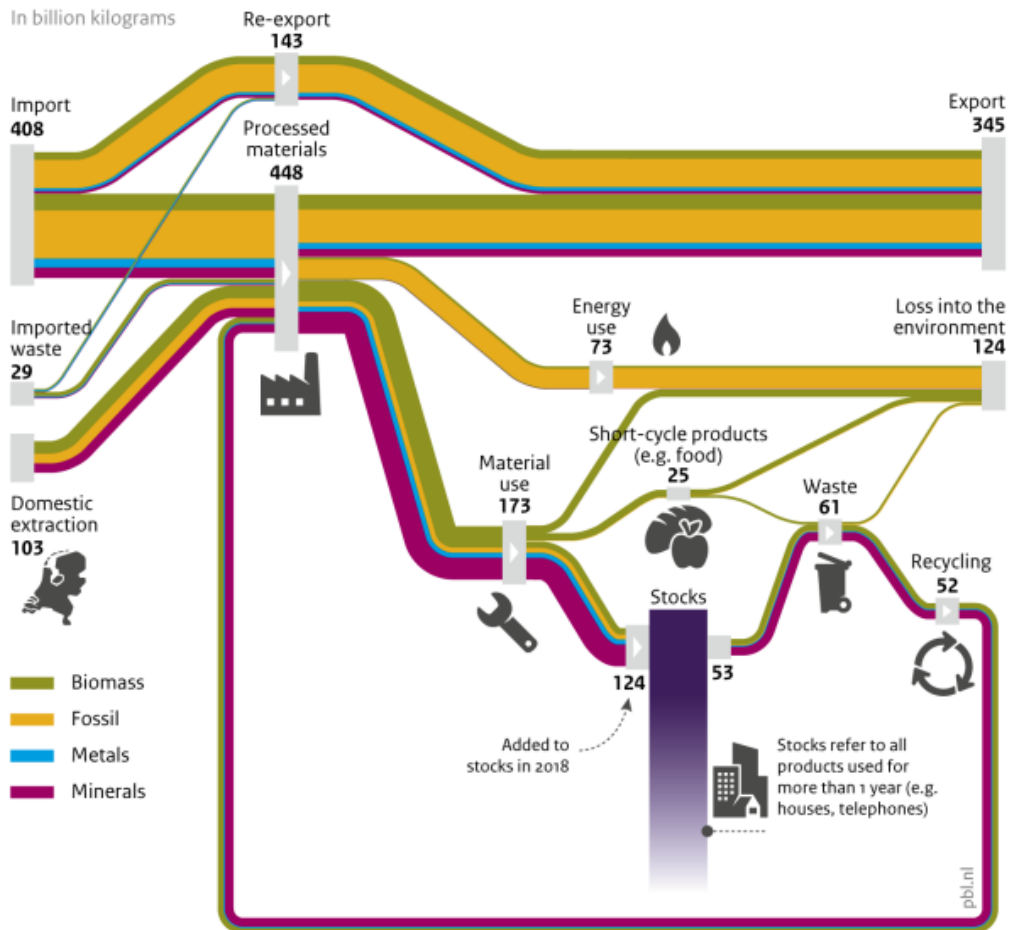
Indicator	Magnitude			Trend		Compared with EU-27
	2010	2016	2018	2010-2018	2016-2018	per capita in 2018
Natural resources required						
Material resources for domestic use, DMC (Mt)	195	193	195	0%	1%	-22%
Material resource footprint domestic use, RMC ² (Mt)**	-	-	-	-	-	-
Resource efficiency (GDP in EUR/kilo DMC)	3	4	4	12%	5%	+125%
Material resources for the economy, DMI ³ (Mt)	401	402	397	-1%	-1%	+95%
Material resource footprint of the economy, RMI ⁴ (Mt)	597	627	647	8%	3%	+89% (2017)
Share bio-based resources (kilo/DMI, in %)	24	25	26	8%	5%	+5%
Total sustainable renewable material resources (kilo/DMI)	-	-	-	-	-	-
Share secondary materials, CMUR (kilo secondary/DMI, in %)	-	13	14	-	6%	+167% (2017)
Use phase						
Lifespan	-	-	-	-	-	-
Value retention	-	-	-	-	-	-
Waste processing and recovering						
Dutch waste (Mt)	60	60	61	2%	2%	+44% (2016)
Share recycled waste in processed waste (recycled waste/waste, in %)	81 (2012)	79 (2012)	80	-1%*	+1%	+31%
Waste recycled in the Netherlands (Mt)	54 (2012)	52	53	-1%*	3%	+111% (2016)
Incinerated waste in the Netherlands (Mt)	10 (2012)	10	11	11%*	6%	+74% (2016)
Landfilled waste in the Netherlands (Mt)	2	3	3	51%	14%	-81% (2016)
Effects						
Environmental impact						
National greenhouse gas emissions (MtCO ₂ e)	214	195	188	-12%	-4%	+33%
Greenhouse gas emission footprint of consumption (MtCO ₂ e)	300	252	282	-6%	12%	+35% (2015)
Greenhouse gas emission footprint of production (MtCO ₂ e)	462	432	-	-7% (2016)	-	+54% (2015)
Emissions to air, water and soil, such as nitrogen and particulate matter	-	-	-	-	-	-
Land-use footprint of consumption (million ha)	10	-	10 (2017)	3% (2017)	-	-15% (2015)
Land-use footprint of production (million ha)	11	12 (2015)	-	9% (2015)	-	-28% (2015)
Water abstraction	-	-	-	-	-	-
Water footprint consumption (km ³)	52 (2008)	-	-	-	-	+21% (2008)
Biodiversity footprint of consumption (million MSA loss ha/year)	19	-	-	-	-	+1% (2010)
Biodiversity footprint of production (million MSA loss ha/year)	20	-	-	-	-	+2% (2010)
Toxicity	-	-	-	-	-	-
Socio-economic impact						
Supply risks (indicator being developed)	-	-	-	-	-	-
Added value of circular activities (EUR billion)	28	31	34	23%	9%	-
Share circular activities (added value circular / GDP in %)	4	4	4	1%	0%	-
Circular employment (no. of circular jobs in FTEs) (*1,000)	311	318	326	5%	2%	-
Share circular employment (no. of jobs/total no. of jobs in %)	4	4	4	-2%	-2%	-

Role of SEEA II:

Integration of Environmental account modules:

- MFA
- Waste
- Air emission
- PEFA
- National accounts (Supply and use tables)

Resource flows Dutch economy, 2018



Source: CBS 2021

Relation to SDG's

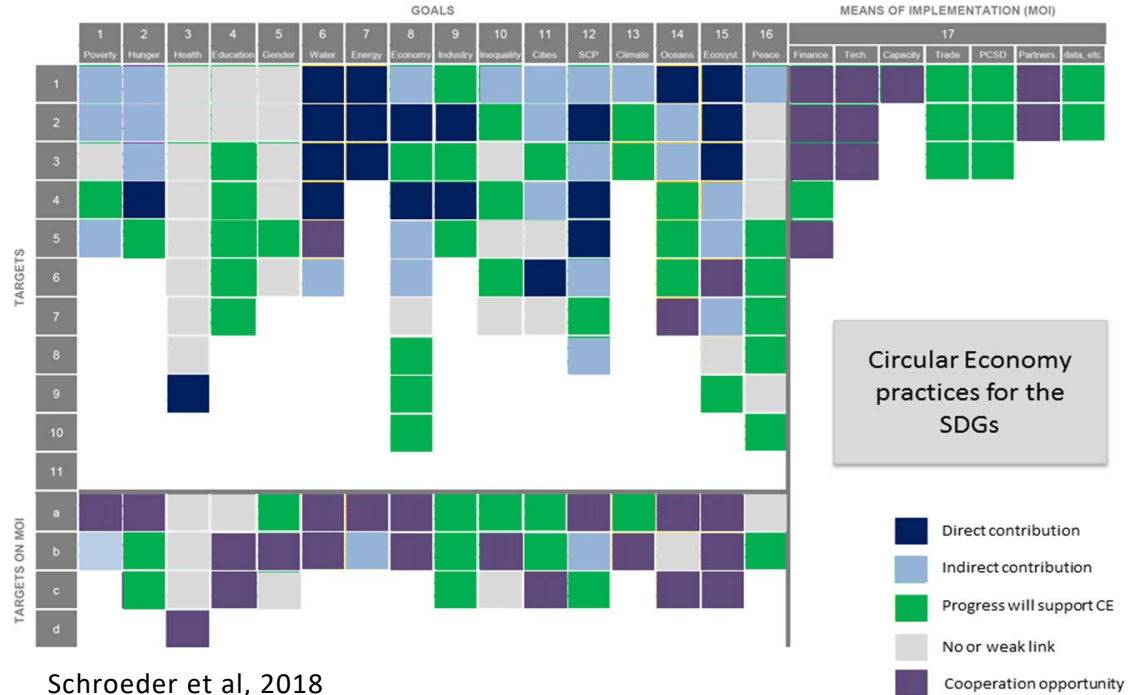


Relation CE with SDG's

Direct contribution of CE to SDG targets.

Questions:

- 1) Which CE strategies contribute to SDG targets?
- 2) Can you monitor CE on the basis of SDGs?



Contribution CE to SDG targets

CE strategies:

1. Recycling
2. Efficiency
3. Substitution
4. Footprints



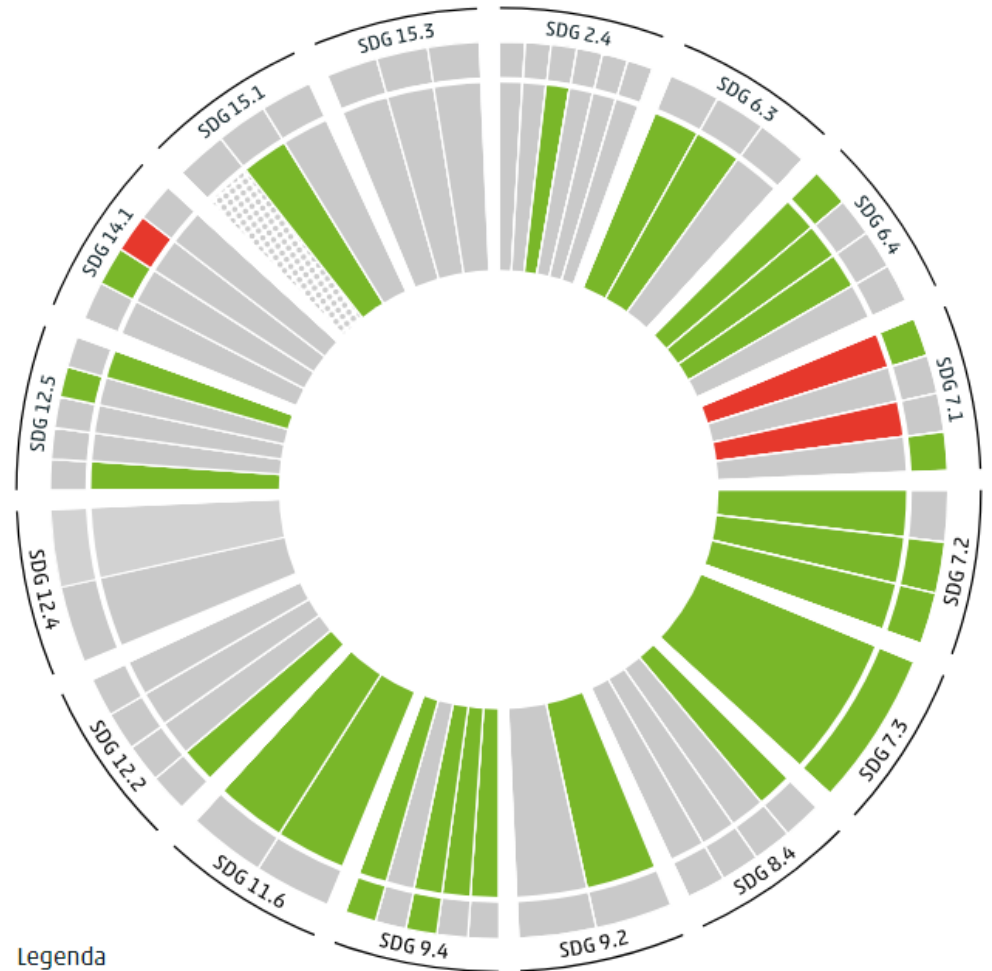
CE according to SDGs

SDG theme's:

1. Resource use
2. Waste
3. Supply security
4. Economic relevance

Derived from SEEA:

SDG indicators related to water, resources, energy, emissions and economy



Legenda



Facts that matter