

Norway

Closing the Circularity Cap in Norway







Circularity Gap Report Norway (CGRN)



2,4%



Global



8,6%



24,5%

9,7%

2,4 %



We look at the material footprint satisfying our social needs







The Norwegian economy

GROSS IMPORTS 151 Mt GROSS EXPORTS 255 Mt



Material footprint of 44,3 mill. tonnes pp ORWAY

Consumption footprint of 44,3 millions tonnes per person à year

• 3,5 times higher than regular European

1. Matrial footprint

- Oil, gas
- Metals, cement, plastic, glass
- Mobiles, computers, cars, furniture, health care products
- Construction of houses and roads

2. Biomass footprint

• Food, cropes, cotton, wood etc.

Waste footprint of 2,76 tonnes

- Far lower than most other countries





Our needs drives the consumption of raw materials









Objectives for circular economy



- 1) Mimimalize and regenarate extraction of metals, minerals and fossils
- 2) Use more regenerative biomass
 - \Rightarrow Less climate gas emission to air
 - \Rightarrow Less energy
 - \Rightarrow Less water stress
 - \Rightarrow Less loss of biological diversity





Dynamics to acheive the objectives

- Slow use use material longer
- Narrow use use less material
- Regenerate flows make clean products
- Cycle flows reuse material
 - \Rightarrow Designing out waste.
 - \Rightarrow Use fewer materials to provide for our needs.
 - => Measuring circularity by the share of cycled materials each year.







Developing strategies for circularity



1 Linking resources and societal needs



2 Estimate circularity



3 Develop strategies based on the key elements for circularity





Design for the future



Incorporate digital technology



Sustain and preserve what's already there



Rethink the business model



Use waste as a resource



Prioritise regenerative resources



Team up to create joint value

Key strategies of the circular economy



Potensial for circularity in Norway

Norway can bridge the circularity gap and go from 2,4 % to 45,8 % circular by adopting six strategies (GCRN):

- 1. A circular construction sector
- 2. Transition to clean energy
- 3. Circular food systems
- 4. Green transport
- 5. Stronger repair, reuse, recycling economy
- 6. Circular forestry and wood products

BRIDGING THE GAP

STRATEGIES

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CIRCULAR CONSTRUCTION	CLEAN ENERGY	CIRCULAR FOOD
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POTENTIAL





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Circular Construction



Today	Potensial
Circularity Metric 2,4 %	7 %
18,3% of material footprint	Reduction of 15 %
15 % of carbon emission	

- Cycle more and better
- Advanced sorting of waste for reuse
- Reuse building components
- Maintain buildings, renovate and upgrade
- Modular construction
- Digital technology
- Material passport
- Building stock analysis material bank



Clean energy



Today	Potensial
Circularity Metric 2,4 %	2,7 %
18,3 % of material footprint	Reduction of 14,9 %
8 % of carbon emission	

- Stop importing fossil fuels for domestic energy
- Pruduce more hydropower
- Reneweable produced electricity
- Carbon capture and utilization (CCU)
- Carbon capture and storeage (CCS)
- Expanded carbon pricing

Circular food system





Today	Potensial
Circularity Metric 2,4 %	12,6 %
16,% of material footprint	Reduction of 5,7 %
of carbon emission	

- More local food, particularly meet, dairies, cereals
- Responsible aquaculture
- Sertification scheme for sustainable auqaculture
- Develop microalgae- aquaculture for export
- Reducing food waste by:
 - Digitalization
 - Using waste as resource and animal food
 - Farm-to-fork-strategy



Green transport system



Today	Potensial
Circularity Metric 2,4 %	2,4 %
22,3 % of material footprint	Reduction of 6,3 %
40 % of carbon emission	

- Non-fossil fules
- Car-sharing and rental of cars
- More public transport
- Reuse of vechicle components and equipment
- Extended lifetime of motor vechicles
- Electrification of cars, busses, train and ferries
- Better charging infrastructure
- Second life for batteries



A strong repair, reuse and recycling economy



Today	Potensial
Circularity Metric 2,4 %	5,4 %
18,3% of material footprint	Reduction of 7,6 %
Carbon emission	

- Repair, reuse and refurbishment
- Circular and disassembly design
- Extended Producer Responsibility
- Rental and sharing
- Tax reduction for repair and recycle
- Recycle packageing
- Expand deposit to return scheme to more waste flows (than just bottles – 97% recycled)



Circular forestry & Wood product



Today	Potensial
Circularity Metric 2,4 %	7,5 %
2,7 % of material footprint	Reduction of 3 %
0,4 Carbon emission 0,4 %	

- Ensure sustainable and responsible sourcing
- Flow must return to biosphere
- Reliable certification schemes
- Digital technology
- Circular design
- Reuse and redesign of wood
- Using entire log

Combined actions => 45,8% circularity







Circular strategies used by Norwegian companies







Prioritize clean energy

CELSA

Reuse steel.

- 700 000 reused steel
- Renewable energy
- Reuse of water







Sustain and preserve what is already there

BERGANS

Sustain the lifetime of outdoor clothing.

- Repair
- Redesign
- Recycle
- Rental







Use waste as a resource

NEW MOVEMENT New shoes of old resources.

- Secondary resources
- Use of waste in new products



NEW MOVEMENTS

New Movements



Design for circularity

LOOPING

Sustainable covers.

- Longer life
- Reusable materials
- Repairable covers
- Reduction of waste
- Longer life







Incorporate digital technology

TISE

Resale of clothing.

- Optimalize resources
- Data for insight
- Thechology for sharing
- Digital plattform connecting actors in value chain



Nyhet! Handle på Tise og få det levert med Helthjem





Innovation in business models

JERNIA

New business models as return scheme.

- Increase value for costumer
- Produkter live longer when change of small parts
- Services instead of products







Team up for joint value

TORVBRÅTHEN - SCHOOL OF YEAR 2021

Sustainable construction and pedagogic environment.

- Increase value in value chain
- Cooperation between arcitecth, industry and local government
- Reusable materials





Find inspiring examples of the circular economy in Norway!

Search for case studies, organisations, strategies, policies





Knowledge Hub med 3500 sirkulære eksempler: https://knowledge-hub.circle-lab.com/CircularNorway

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