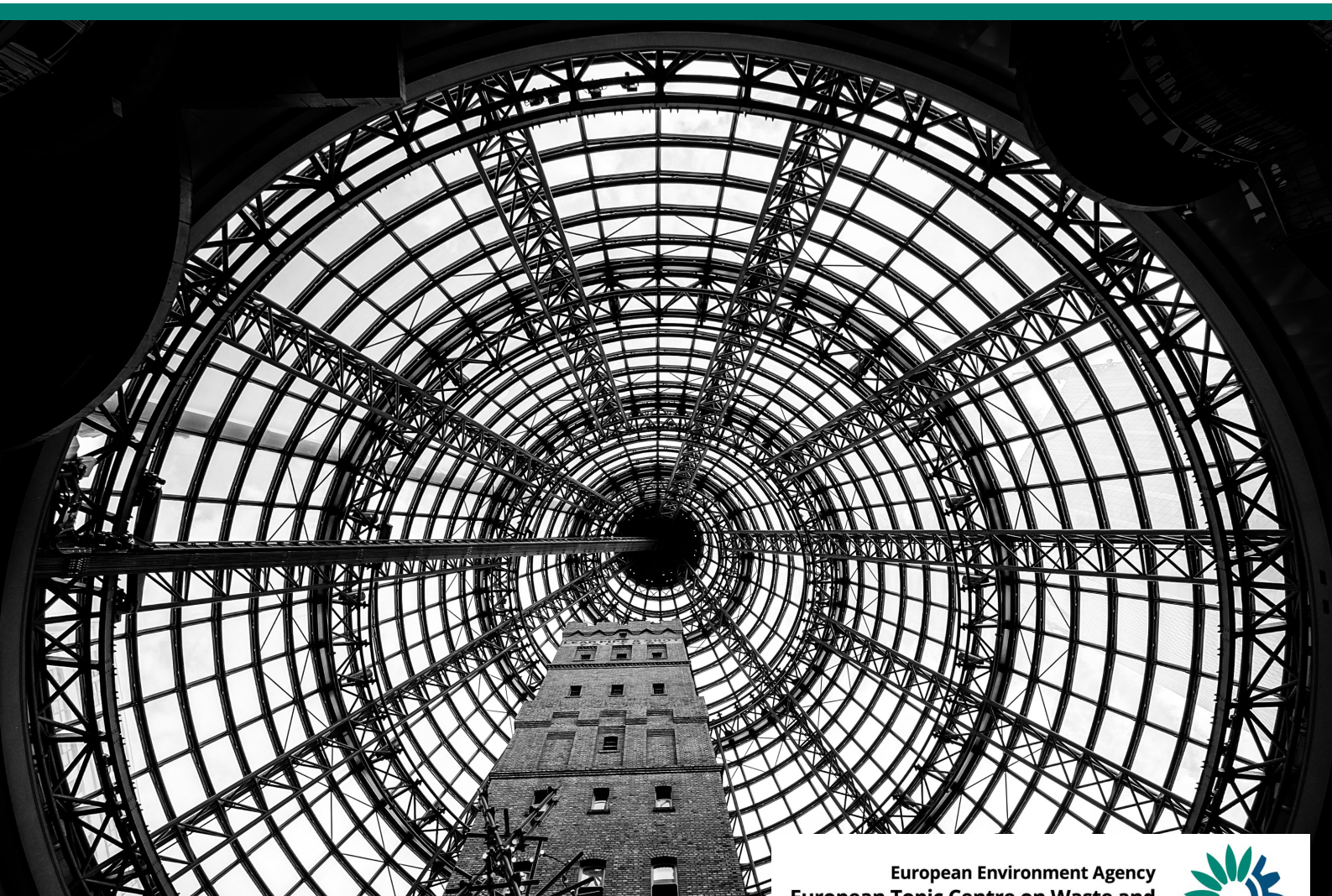


Resource efficiency and circular economy in Europe – even more from less

An overview of policies, approaches and targets of Norway in 2018



European Environment Agency
European Topic Centre on Waste and
Materials in a Green Economy



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Contents

Acknowledgements	1
Norway, facts and figures.....	2
Policy framework.....	6
Driving forces for material resource efficiency and circular economy	6
Dedicated national strategies or roadmaps for material resource efficiency and a circular economy	6
Overview of dedicated national or sectoral strategies for raw materials.....	6
Policies which include elements of material resource efficiency	6
Institutional setup and stakeholder engagement	7
Approaches to resource efficiency and circular economy policy evaluation.....	7
Monitoring and targets	7
Targets for resource efficiency and circular economy	7
Indicators to monitor progress towards a resource-efficient circular economy	8
Resource efficiency, circular economy and the 2030 Sustainable Development Goals	8
Examples of innovative approaches and good practice.....	8
Examples of good practice and innovative approaches.....	8
Seeking synergies with other policy areas	9
Resource efficiency and circular economy policy initiatives from subnational to local level.....	10

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This country profile was prepared as part of the 2019 EEA review of material resource efficiency, circular economy and raw material supply policies, which aimed to collect, analyse, and disseminate information about experience with the development and implementation of these policies in EEA member and cooperating countries.

At the time of writing, a summary report is being finalised. The report reflects on trends, similarities and differences in policy responses, showcases selected policy initiatives from member countries and identifies possible considerations for the development of future policies.

These country profiles were compiled and finalised by members from the European Topic Centre on Waste and Materials in a Green Economy, namely Bart Ullstein, Bettina-Bahn Walkowiak, Jeroen Gillabel, Margareta Wahlström, Jutta-Laine Ylijoki, Dirk Nelen, Theo Geerken, Veronique Van Hoof and Evelien Dils. The responsible EEA project managers for the work were Pawel Kazmierczyk and Daniel Montalvo.

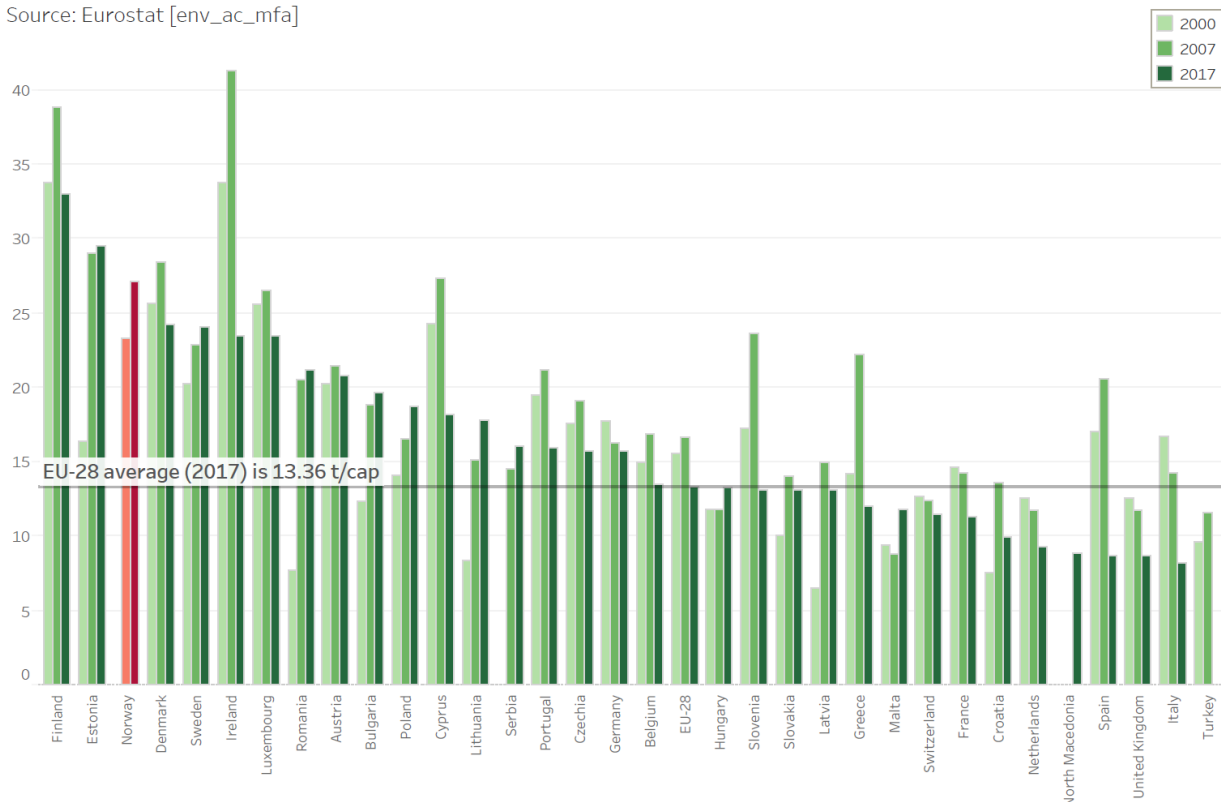
Norway, facts and figures

Note: data in this section was sourced from Eurostat databases, except where noted otherwise

	<p>GDP: EUR 354.3 billion (2.2 % of total EU28 in 2017)</p> <p>Per capita GDP: EUR 67,100 (purchasing power standard) (223.6 % of EU28 average per capita figure in 2017)</p> <p>Use of materials (domestic material consumption (DMC)) 142.9 million tonnes DMC (2.1 % of EU28 total in 2017) 27.1 tonnes DMC/capita (202.7 % of EU28 average per capita in 2017)</p> <p>Structure of the economy: agriculture: 2.2 % industry: 33.0 % services: 64.8 %</p> <p>Surface area: 323.8 thousand square kilometres (km²) (7.3 % of total EU28)</p> <p>Population: 5.3 million (1.0 % of EU28 total in 2017)</p>
	

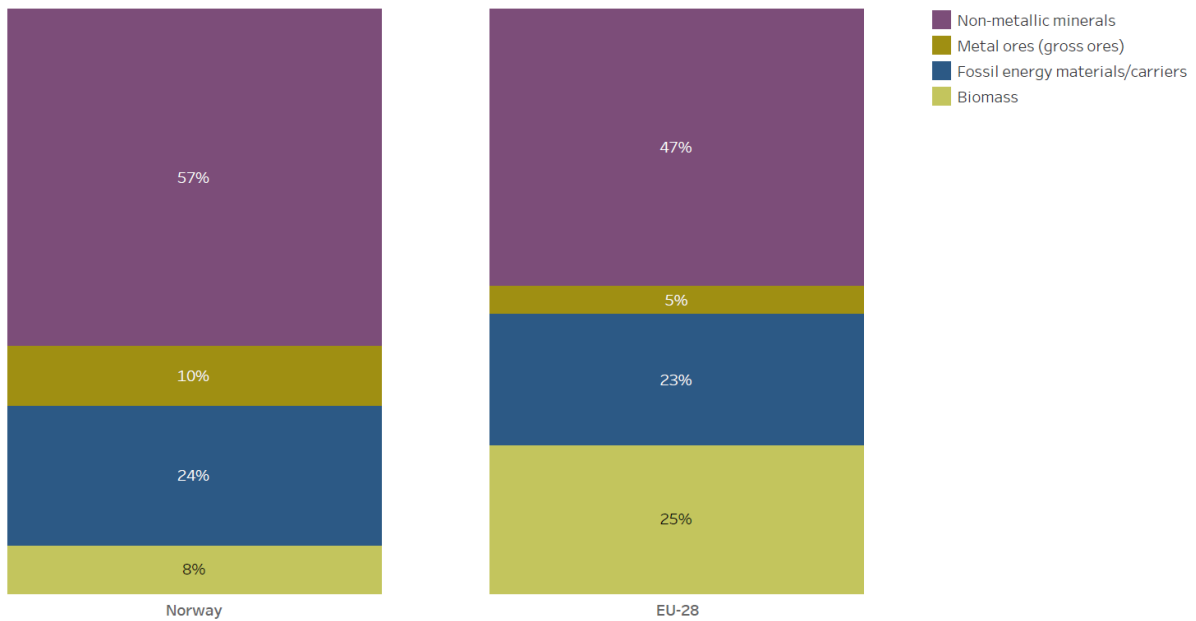
Use of materials (DMC) per person in Europe, 2000, 2007 and 2017, tonnes DMC per capita.

Source: Eurostat [env_ac_mfa]



Norway & EU-28. Domestic Material Consumption by material category, 2017.

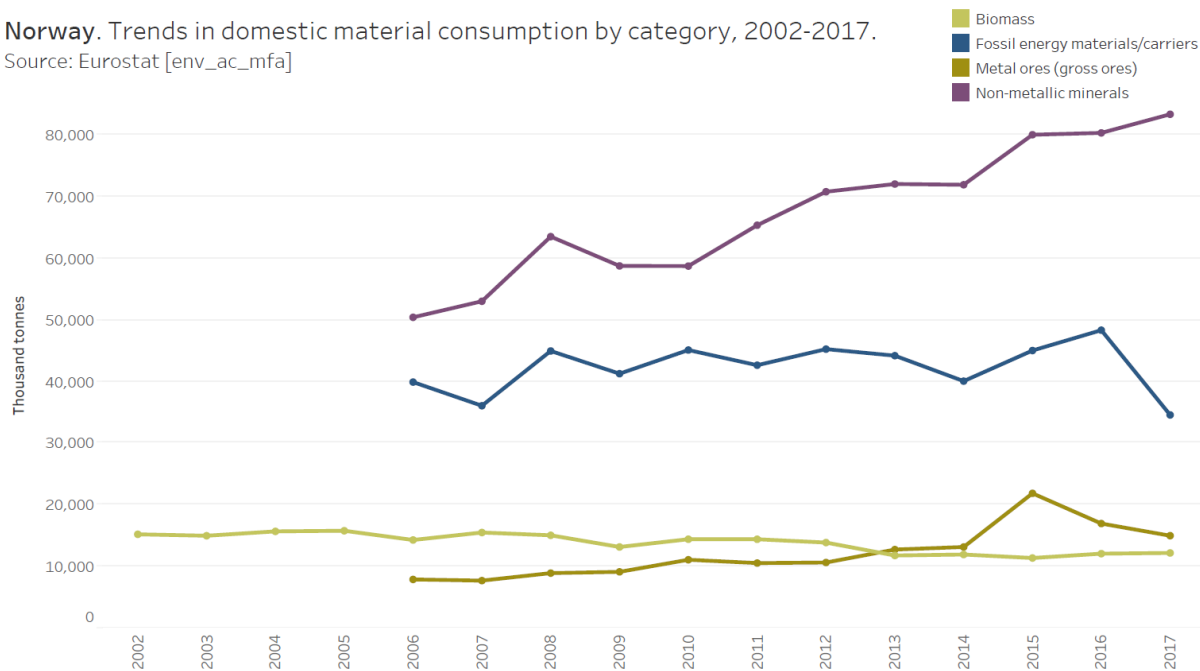
Source: Eurostat [env_ac_mfa]



Note: The domestic material consumption categories 'other products' and 'waste for final treatment and disposal' are excluded from the figure.

Norway. Trends in domestic material consumption by category, 2002-2017.

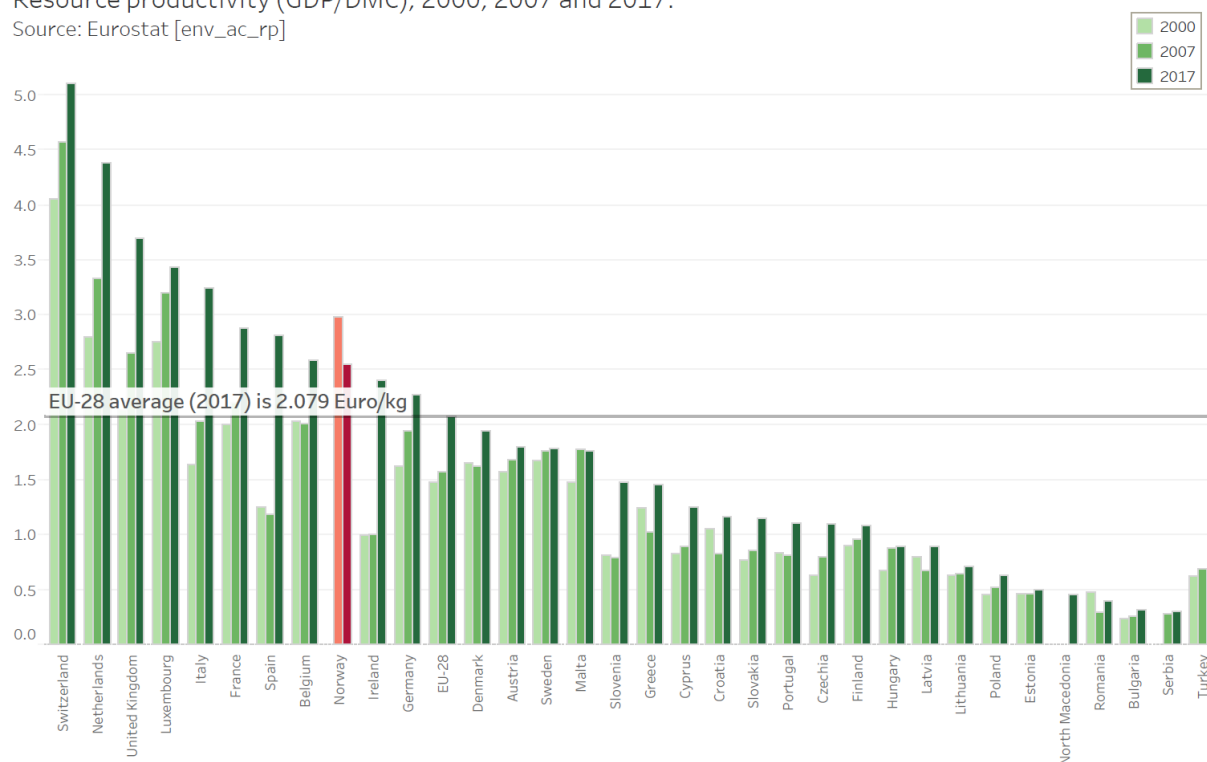
Source: Eurostat [env_ac_mfa]



Note: The domestic material consumption categories 'other products' and 'waste for final treatment and disposal' are excluded from the figure.

Resource productivity (GDP/DMC), 2000, 2007 and 2017.

Source: Eurostat [env_ac_rp]



Note: GDP expressed in chain linked volumes 2010.

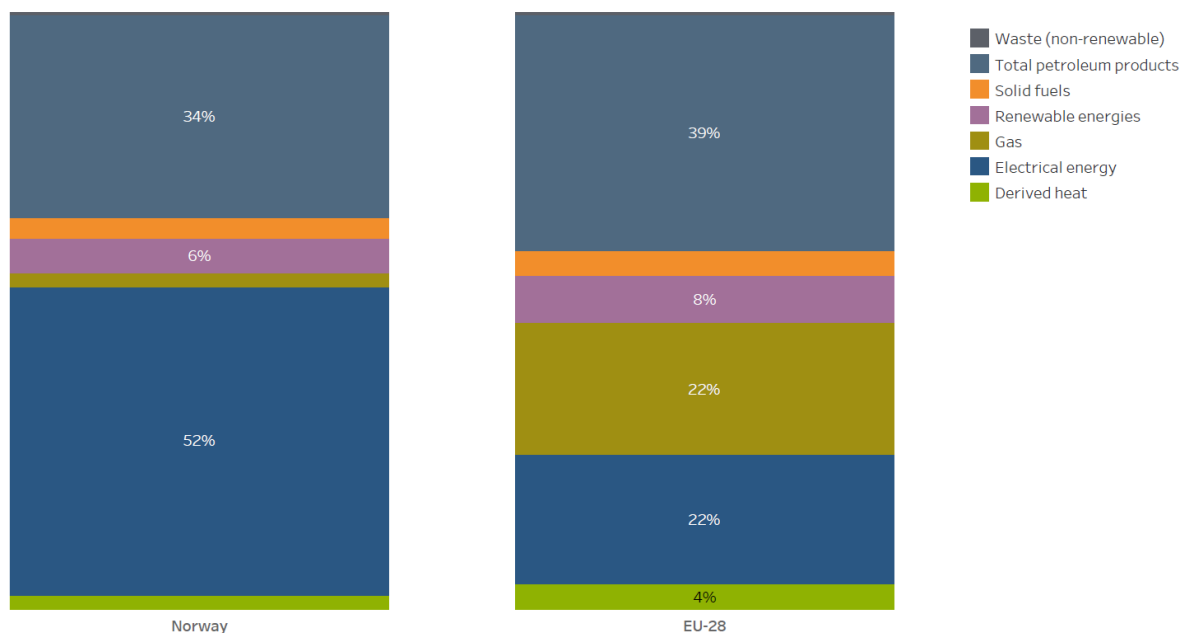
Norway. GDP, DMC and resource productivity trends, 2002-2017, index 2002=100.

Source: Eurostat [env_ac_mfa], [env_ac_rp] & [nama_10_gdp]



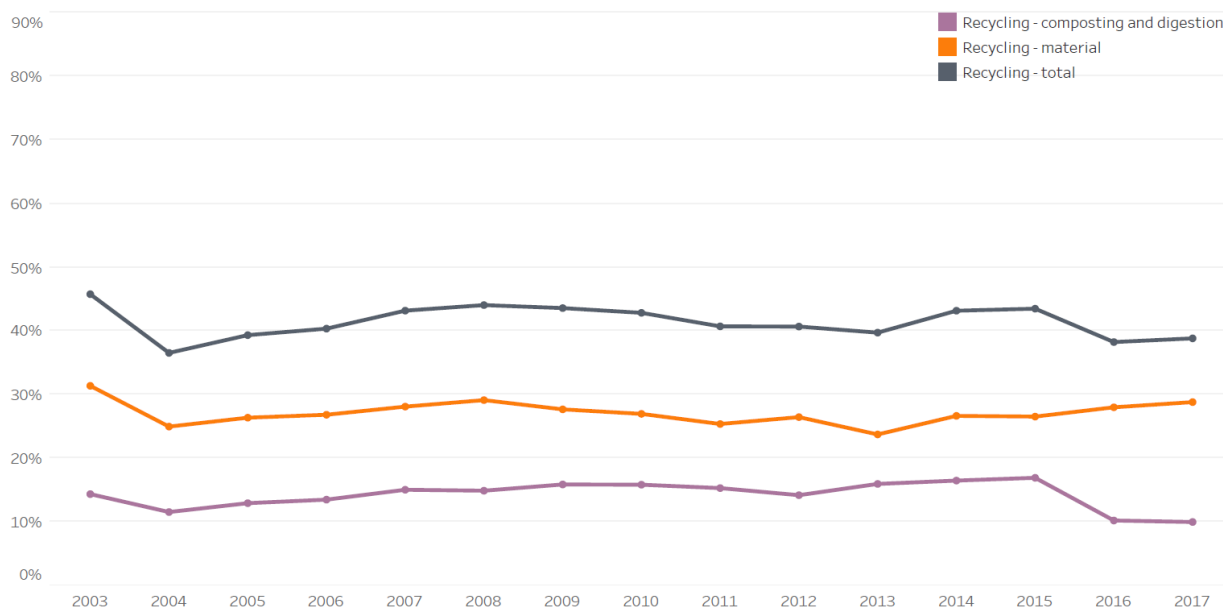
Norway & EU-28. Primary energy consumption by energy product, 2016.

Source: Eurostat [nrg_100a]



Norway. Recycling of municipal waste, 2003-2017, as share of total waste treatment.

Source: Eurostat [env_wasmun]



Note: The amount of municipal waste treatment is reported for the treatment operations incineration (with and without energy recovery), recycling, composting and landfilling.

Policy framework

Driving forces for material resource efficiency and circular economy

The major concerns that drive the development and implementation of policies related to material resource efficiency, circular economy and raw material policies are to be found within the field of environment, especially waste management. The most recent policy development is described in the 2017 White Paper on waste and the circular economy, as referred to in the section on Dedicated national strategies or roadmaps for material resource efficiency and a circular economy (below).

Arguments for a more circular economy are several: increased resource efficiency and reduced pressure on natural and/or limited resources, reduction and prevention of environmental damage caused by economic activity, general economic benefits and business opportunities. Norway has no single strategy on circular economy nor a single responsible ministry. The various aspects of circular economy are addressed as appropriate by several ministries under their respective areas of responsibility.

Dedicated national strategies or roadmaps for material resource efficiency and a circular economy

Resource efficiency and material use are relevant to a number of policy areas but there is no single strategy or action plan in Norway.

The Norwegian government launched a White Paper on waste and the circular economy¹ in June 2017, addressing important steps forward for Norwegian waste policies. The aim of the White Paper is to emphasise resource efficiency as the core of a good economy. It addresses in particular

- measures for the reduction of food loss;
- measures for recycling;
- a strategy for plastics, in which microplastics and marine littering are prioritised.

The White Paper also outlines ideas for implementing the European Commission's proposed new waste regulations, especially measures on how to reach new and more ambitious recycling targets for municipal waste.

Overview of dedicated national or sectoral strategies for raw materials

We refer to the general description of how Norwegian policy is organised in the section on Institutional setup and stakeholder engagement. Possible questions regarding raw materials in particular sectors are not the responsibility of the Ministry of Climate and Environment and can only be answered by the ministries responsible for those sectors.

Policies which include elements of material resource efficiency

The circular economy and its relevance to waste is addressed in the government's White Paper to Parliament of 21 June 2017 on waste policies in a circular economy. Norwegian policy on waste, products and hazardous chemicals is fully in line with European Union (EU) policy and regulatory framework, pursuant to Norway's obligations as member of the European Economic Agreement (EEA). The White Paper presents plans and measures to meet new EU regulations from, including requirements under the 2015 Circular Economy Package. It also introduces a new national plastics strategy in order to reduce marine litter. The White Paper is currently being handled by the Parliament and is due for discussion in February 2019.

¹ <https://www.regjeringen.no/no/dokumenter/meld.-st.-45-20162017/id2558274/> (Norwegian) and <https://www.regjeringen.no/en/aktuelt/the-norwegian-government-steps-up-the-efforts-to-turn-waste-into-resources-and-reduce-marine-litter/id2558322/> (English)

Among other relevant policy initiatives is the 2016 National Bioeconomy Strategy, and an agreement from 23 June 2017, signed by five ministries on behalf of the Norwegian government and 12 food industry organisations, to halve food waste across the food value chain in Norway by 2030. Food waste in Norway refers to the edible part of food waste. This reduction target is in line with UN Sustainable Development Goal (SDG) 12.3 and in fact is a bit more ambitious because the goal applies to the entire food value chain from primary production to consumers.

A similar invitation to textile producers and retailers to cooperate on minimising waste from textiles and increase reuse and recycling has recently been initiated.

In October 2017 the government's Strategy for Green Competitiveness was launched. This contains basic principles that will form the basis of future policies, as well as a description of its core aspects, including the circular economy as a possible contribution to green competitiveness. Norwegian business and industry have also put forward roadmap proposals for enhancing green competitiveness within their industries or branches, which will be subject to further dialogue between the public and private sectors.

Institutional setup and stakeholder engagement

The efficient use of core national resources for the Norwegian economy is the responsibility of the respective ministries for key economic sectors such as oil and gas production, agriculture and forestry, mining, fisheries and aquaculture, etc. There is no one general strategy on resource efficiency covering all sectors.

The Ministry for Climate and Environment is responsible for Norway's national policy on climate and environment. Its objective is to prevent and reduce environmental damage.

Resource efficiency may form part of such a policy, to the extent that it contributes to reducing, avoiding or repairing environmental damage caused by human activities. As a general rule, regulations according to law or individual permits normally make use of basic functional requirements, leaving the choice of solutions for implementation to the permit holder/polluter within the established regulatory environmental framework. More efficient energy use or production methods may be one solution, but there may also be other ways for the permit holder or business entity to meet required environmental standards.

Approaches to resource efficiency and circular economy policy evaluation

Before proposing or revising laws and regulations, Norwegian authorities are in general required to investigate costs, benefits and socio-economic impacts before adoption and implementation.

Monitoring and targets

Targets for resource efficiency and circular economy

Norway implements EU regulations in this area pursuant to obligations under the EEA agreement. Norway has implemented several EU directives with material-specific targets through the different waste directives. Apart from these regulations, Norway's central national objectives have stated that the growth in the quantity of waste generated will be considerably lower than the rate of economic growth, and the resources in waste will be used as fully as possible through recycling and energy recovery.

This is measurable by using two indicators: growth in the generation of waste relative to economic growth expressed as change in gross domestic product (GDP), and the proportion of non-hazardous waste

recovered, based on figures for the total quantity of waste for which information on treatment and disposal is available.

In addition, a new regulation on packaging waste defines material-specific targets, such as 30 per cent recycling of plastic packaging and 60 per cent recycling of metal packaging.

There are also local and regional targets determined by local and regional authorities, but there are variations in how such targets are measured, integrated in regional policies and connected to national legislation.

Indicators to monitor progress towards a resource-efficient circular economy

As indicated in the section on Targets for resource efficiency and circular economy, national objectives are monitored through growth in waste generation relative to economic growth, expressed as change in GDP, and the proportion of non-hazardous waste recovered, based on figures for the total quantity of waste for which information on treatment and disposal is available.

In addition, there are a few relevant indicators on sustainable development, such as available productive land, energy intensity and open lowlands. The authorities are also developing indicators for monitoring and reducing food loss and food waste, but these are not yet fully developed.

Resource efficiency, circular economy and the 2030 Sustainable Development Goals

Norway provides financial and in-kind support to developing countries to improve their technical capacity and strengthen their institutions through the Millennium Ecosystem Assessment, the Global Green Growth Institute and the UN Partnership for Action on Green Economy. Norway also works internationally to promote good governance, as we consider good governance as the most important factor for a country to make economic progress.

Recently, the government and several food industry organisations signed a binding agreement to halve food waste² throughout the food value chain by 2030. The agreement is a follow-up measure to the SDGs and the reduction target is in line with the SDG 12.3. It is in fact a bit more ambitious because the goal applies to the entire food value chain, from primary production to consumers. The agreement is voluntary but binding for the contracting parties. Primary producers, manufacturers, wholesalers, retailers, restaurants, households and the authorities must all take responsibility for reducing food waste. The agreement will extend collaboration between private and public partners throughout the value chain, including consumers.

Recently, the Norwegian government also decided to exempt food that is given to charity from value added tax (VAT).

Examples of innovative approaches and good practice

Examples of good practice and innovative approaches

Norway seeks to achieve sustainable management and the efficient use of natural resources through a combination of legislation and incentives. There are several governmental and non-governmental initiatives, which are partly based on EU regulatory requirements, but also national needs, that support resource efficiency and/or the circular economy covering: waste policy in general, including such measures

² https://www.regjeringen.no/contentassets/1c911e254aa0470692bc311789a8f1cd/industry-agreement-on-reduction-of-food-waste_norway.pdf (English)

as extended producer responsibility (EPR) schemes on waste electrical and electronic equipment (WEEE), batteries, tyres, end-of-life vehicles (ELVs), packaging waste and beverage packaging. There is a tax on beverage packaging and approval of take-back schemes for beverage packaging. Every producer or importer of beverage packaging must pay the tax, but it is reduced if the collection rate of the beverage packaging waste is high. The purpose of the provisions is to facilitate effective take-back systems with high recycling/recovery rates. Some of the take-back schemes use deposit systems. Norway is also investigating possible EPR schemes and financial mechanisms for new take-back systems on leisure boats and equipment from the fishing and fish-farming industries.

A government funding mechanism called Innovation Norway³ aims to support entrepreneurs and innovative business models through grants. Sustainability and green innovation are central elements of its services. Innovation Norway has existed for several years, and the grants and financial mechanisms have encouraged many innovative projects in different fields.

Norwegian authorities have taken measures to reduce the amounts of food waste. Recently, the government and several food industry organisations signed a binding agreement to halve food waste⁴ throughout the food value chain by 2030. The agreement is a follow-up measure to the SDGs and the reduction target is in line with the SDG 12.3. It is in fact a bit more ambitious because the goal applies to the entire food value chain, from primary producers to consumers. The agreement is voluntary but binding for the contracting parties. Primary producers, manufacturers, wholesalers, retailers, restaurants, households and the authorities must all take responsibility for reducing food waste. The agreement will extend collaboration between private and public partners throughout the value chain, including consumers.

Recently, the Norwegian government also decided to exempt food that is given to charity from value added tax (VAT).

Seeking synergies with other policy areas

Norway has developed a National Biogas Strategy⁵ covering all relevant sectors, including agriculture, waste, transport, energy and public services. The Strategy has encouraged synergies between waste management and the agricultural sector, as the farming industry is increasingly using fertiliser made from food waste.

The government's 2017 Strategy for Green Competitiveness, as mentioned in the section on Policies which include elements of material resource efficiency, aims to create such synergies.

Of relevance of initiatives which seek to make imports of materials and products more sustainable is the policy on public contracts, which is not to award them solely on the basis of nominal costs, but also on the basis of environmental impact.

In addition, the aim of the Norwegian Product Control Act (1976) is to prevent products or consumer services from causing damage to health or environmental disturbance. One example is Article 3a, stating that businesses using a product that contains a chemical causing damage to health or the environment should investigate alternatives in order to reduce the risk of negative impacts.

³ <https://www.innovasjon Norge.no/en/start-page/> (English)

⁴ https://www.regjeringen.no/contentassets/1c911e254aa0470692bc311789a8f1cd/industry-agreement-on-reduction-of-food-waste_norway.pdf (English)

⁵ <https://www.regjeringen.no/contentassets/255fa489d18d46feb3f8237bc5c096f0/t-1545.pdf> (Norwegian)

Resource efficiency and circular economy policy initiatives from subnational to local level

Norwegian municipalities are responsible for the management of household waste. Investment in green technology for waste management businesses is therefore dependent on the financial situation, local government and the political will of politicians at local and regional levels.

Some municipalities and inter-municipal waste management companies have invested in central sorting plants for waste based on near infrared (NIR) technology and/or optical sorting systems. The RoAF plant⁶ outside Oslo sorts plastic into five fractions – polyethylene terephthalate (PET), polypropylene (PP), polyethylene (PE), foil, and mixed – and then transported for further processing and recycling. There are also biogas plants such as the Magical Factory (VESAR)⁷ outside the city of Tønsberg and the Romerike Biogas Plant in Oslo⁸, which process food waste into biofuel and fertiliser.

⁶ <https://www.roaf.no/> (Norwegian)

⁷ <http://www.vesar.no/den-magiske-fabriken> (Norwegian)

⁸ https://www.oslo.kommune.no/getfile.php/134907/Innhold/Avfall%20og%20gjenvinning/Behandlingsanlegg%20for%20avfall/Fact_sheet-Biological_treatment_of_food_waste.pdf (English)

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