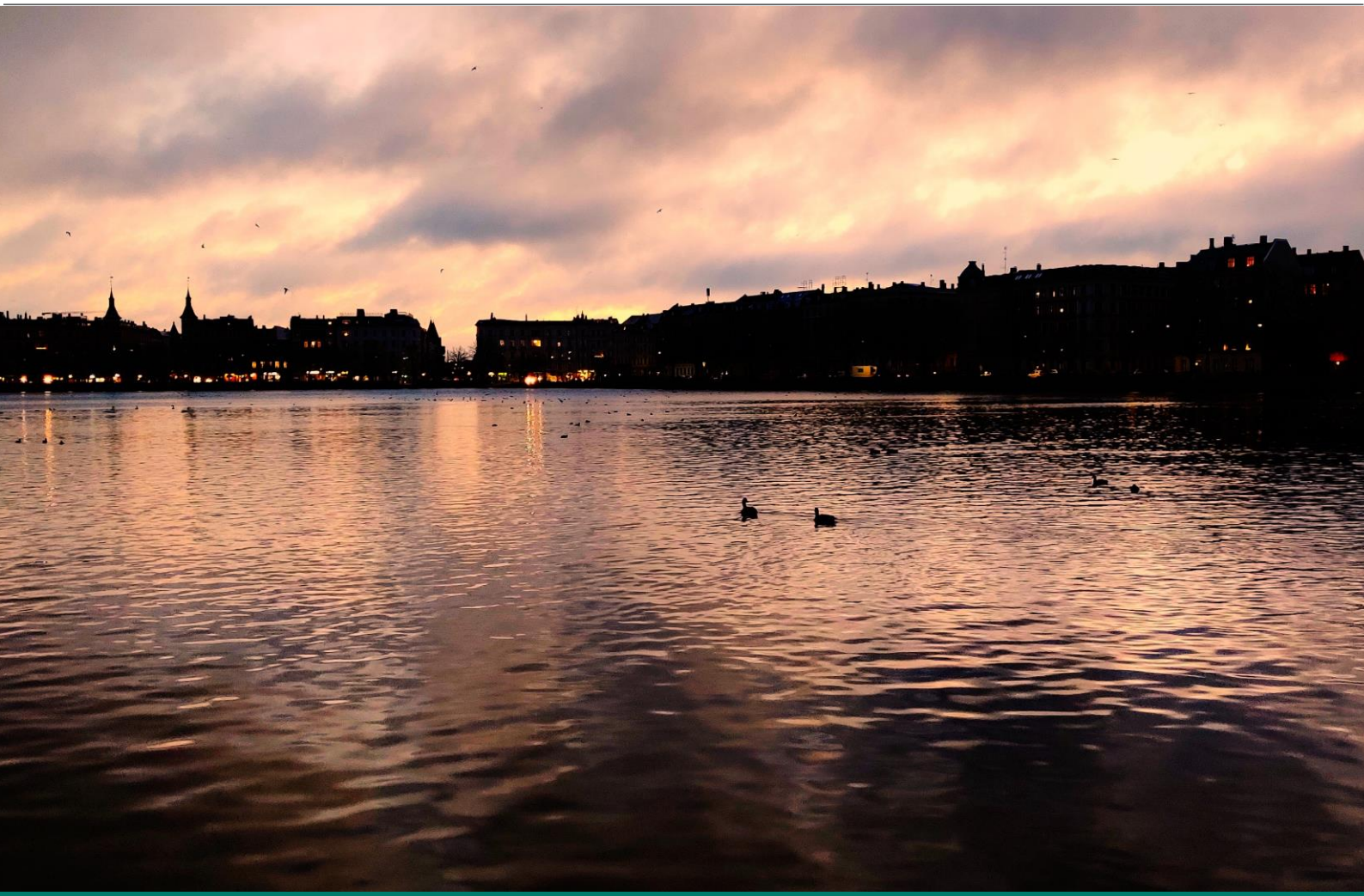
Circular economy country profile – Switzerland



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Contents

Introduction

The European Commission requested the EEA to produce EU country profiles that offer an updated view of the following elements:

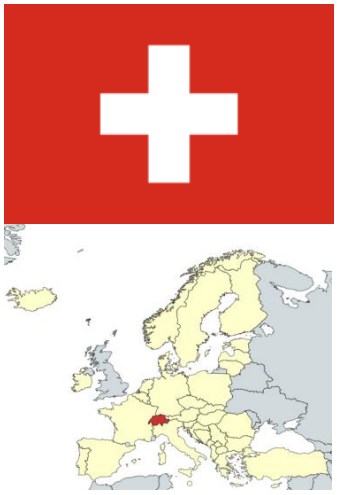
- what circular economy policies are being implemented at a national level with a particular focus on elements that go beyond EU mandatory elements; and
- what are best practices with a focus on policy innovation.

Switzerland joined the process of developing country profiles as an EEA member country.

This circular economy country profile is based on information reported by the Eionet network and in particular, the Eionet Group on Circular Economy and Resource Use in the second quarter of 2022. The information was reviewed and edited by the European Topic Centre on Circular economy and resource use. A selection of Eurostat data was made to further complement this country profile.

The information is current as of 3 October 2022 (final review), when members of Eionet verified the content of this profile.

Switzerland – facts and figures



GDP: EUR 659.7 billion

GDP per person: EUR 76 720 (purchasing power standard)

Use of materials (domestic material consumption (DMC))
90.7 million tonnes DMC
10.5 tonnes DMC/person

Structure of the economy:
Agriculture: 0.7 %
Industry: 26.0 %
Services: 73.3 %

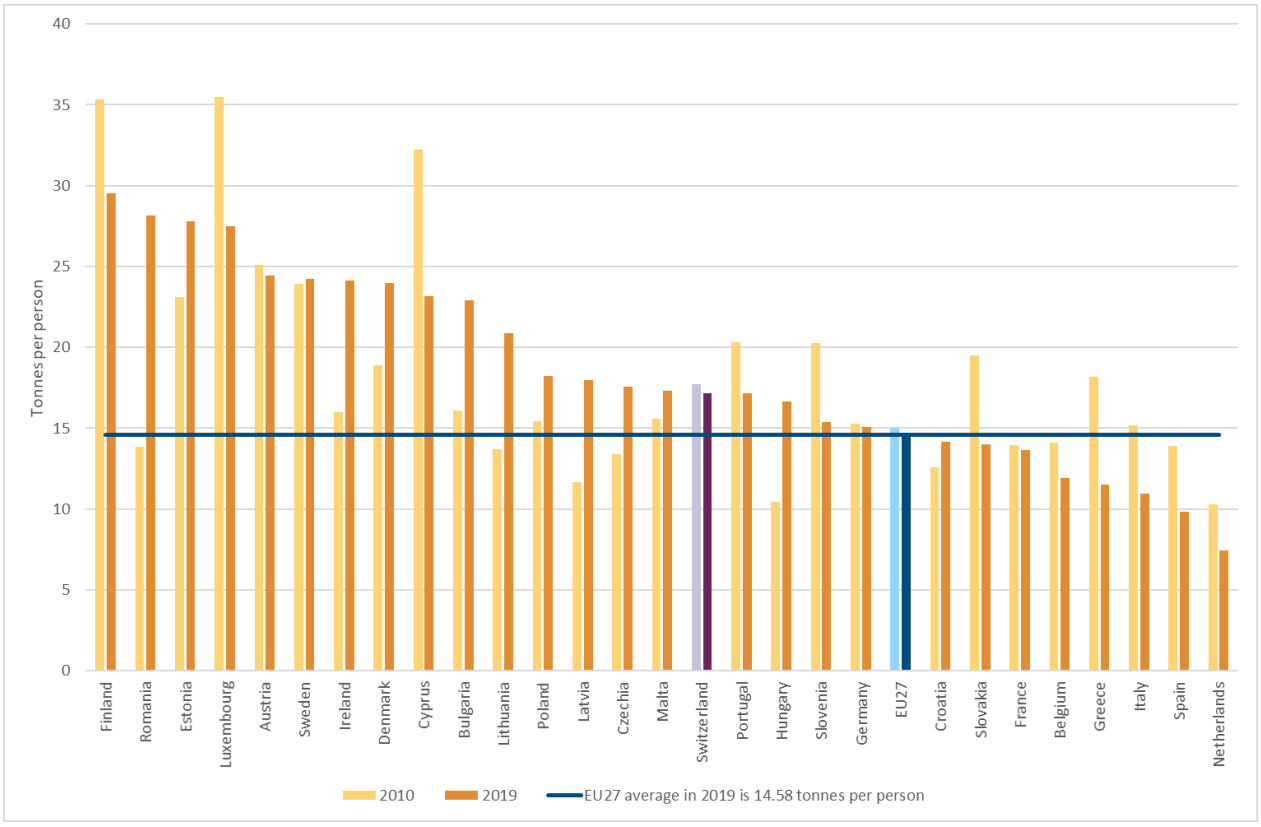
Surface area: 41 287 square kilometres

Population: 8 606 033

Note: all definitions and metadata used in this profile are taken, as shown, from Eurostat

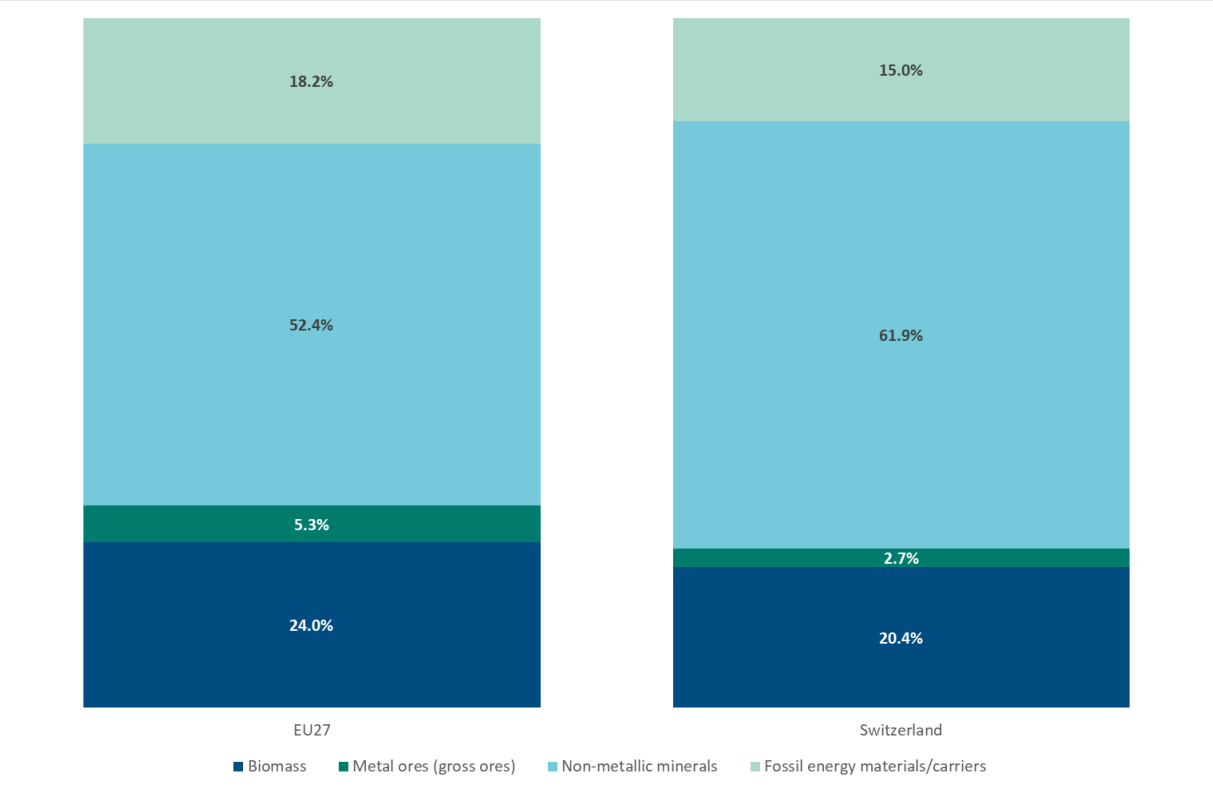
Source: Eurostat datasets, EU27 2020 (accessed 20 June 2022)

Figure 1 Material footprint (raw material consumption), 2010 and 2019, tonnes per person



Source: Eurostat (2020) [env_ac_rme] (accessed 4 July 2020)

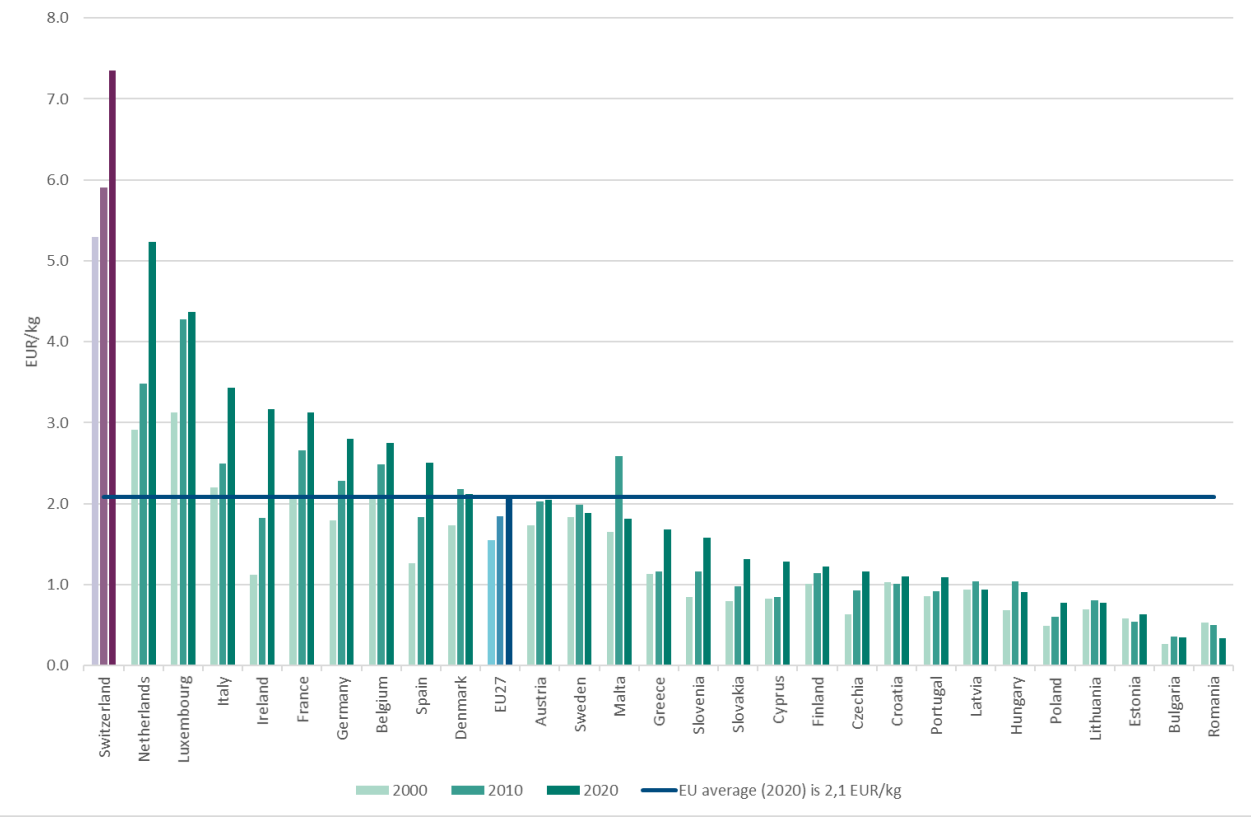
Figure 2 Domestic material consumption by selected material category, EU27 and Switzerland, 2020, per cent



Note: totals may not sum to 100 % due to rounding

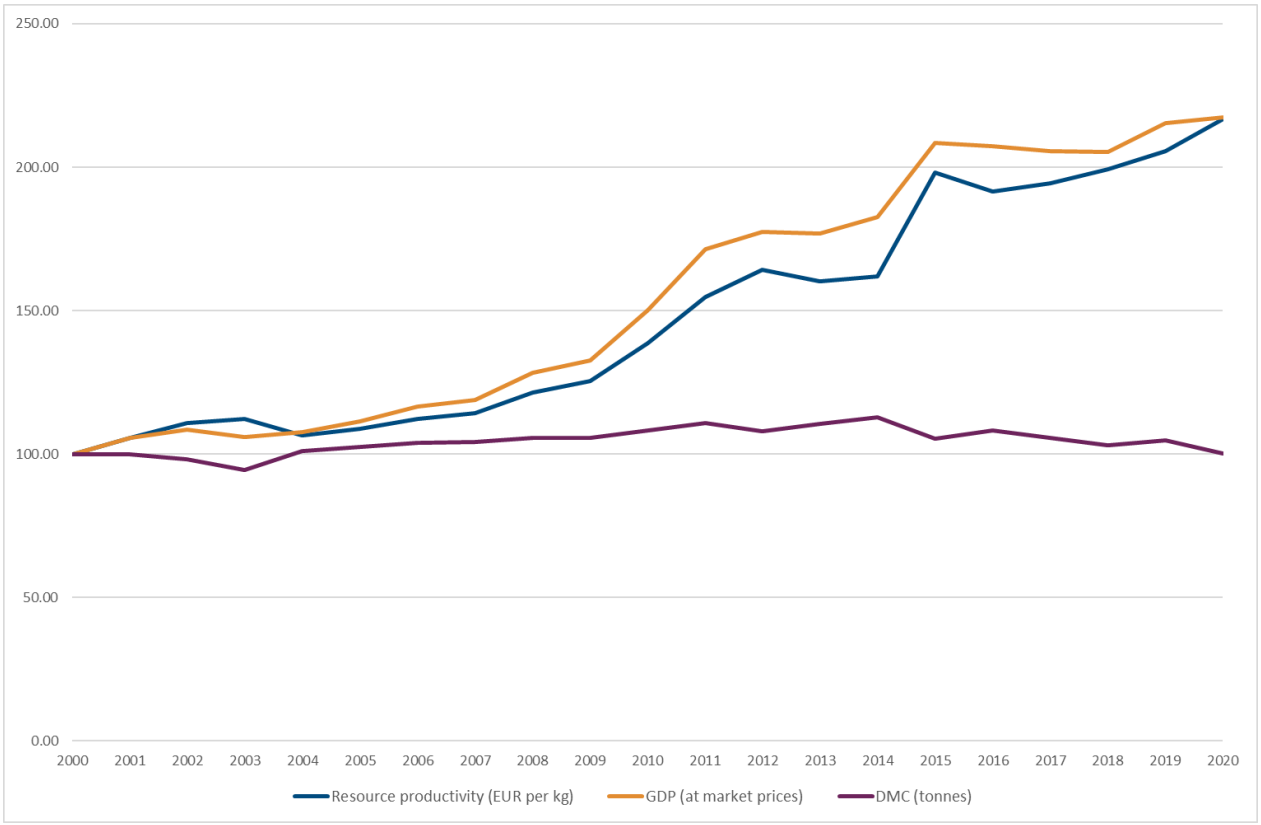
Source: Eurostat (2022) [env_ac_mfa] (accessed 20 June 2022)

Figure 3 Resource productivity (gross domestic product/domestic material consumption), EU and Switzerland, 2000, 2010 and 2020, EUR per kilogram



Source: Eurostat (2022) [env_ac_rp] (accessed 20 June 2022)

Figure 4 Gross domestic product, domestic material consumption and resource productivity trends, Switzerland, 2000–2020, index (2000=100)



Source: Eurostat [env_ac_mfa], [env_ac_rp] & [nama_10_gdp] (accessed 4 July 2022)

Existing policy framework

Dedicated strategy, roadmap or action plan for circular economy

Switzerland currently does not have a dedicated national or regional circular economy (CE) vision, strategy, action plan or roadmap. The "**Ordinance on the Avoidance and the Disposal of Waste**"([1]), which is based on the environmental protection law (Umweltschutzgesetz, USG) can be considered **a political framework**. It is further detailed in several regulations as e.g. the regulation on the return, take-back and disposal of electrical and electronic equipment([2]).
In 2020, a **parliamentary initiative 20.433**([3]) to strengthen the Swiss circular economy has been initiated and is currently discussed in parliament. This would be implemented as a change of the Environmental Protection Act. CE measures can be proposed under Art. 35i, in accordance with the EU Ecodesign Directive. The political decision and, in the case of a referendum, a popular vote are **expected for 2024**.

Circular economy policy elements included in other policies

Circular economy policy element	Included in policy
Availability of spare parts for certain products	Energy efficiency regulation (allows to regulate some (not all) CE aspects in accordance with the EU eco-design Directive)(in German, French and Italian)

1 SR 814.600 - Ordinance of 4 December 2015 on the Avoidance and the Disposal of Waste (Waste Ordinance, ADWO) (admin.ch) (in English, German, French and Italian)
2 https://www.fedlex.admin.ch/eli/cc/1998/827_827_827/de (in German, French and Italian)
3 https://www.parlament.ch/de/ratsbetrieb/suche-curia-vista/geschaeft?AffairId=20200433 (in German, French and Italian)

Monitoring and targets

Assessment of circular economy performance

The report Federal government measures for resource conservation[4] is taking stock in the area of resource use and progress towards a green economy stated: *"Despite efficiency gains, Switzerland is currently far from achieving the sustainable use of resources. As a result of the rising global consumption of resources, climate stability and ecosystems are at the limits of their resilience worldwide. Switzerland is contributing to this through its high consumption of resources per capita. Additional measures are essential so that future-proof, resource-conserving consumption and production models can be strengthened."*
The country report([5])to the UN regarding the Agenda 2030 contains a reporting regarding SDG 12 (consumption and production) stated: *"Greater resource-efficiency and better air quality in Switzerland should not distract from the fact that there is still much to be done. In common with most other developed economies, current consumption and production patterns are based on very high levels of resource use. […] Resource-efficient consumption and production patterns can be achieved only by decisive action. It will take the commitment of the government, including the cantons and communes, and the support of all sectoral policies, the private sector, the academic community and the whole of society."*

Circular economy monitoring frameworks and their indicators beyond the ones from Eurostat

In Switzerland, FOEN as well as the Federal Statistical Office publish indicators related to resource use. FOEN publishes among other thematic areas indicators in the field of Economy and Consumption[6]. Indicators related to resource use are:

- Environmental footprint indicators: Material (Raw Material Consumption, RMC), Biodiversity, Water, Greenhouse Gases and the Ecological Footprint as well as the Total Environmental footprint[7];
- Ecology in the construction sector: This indicator depicts the certified energy reference area and hence the demand for buildings certified by the minergie ECO standard([8]);
- Waste and Recycling: indicators on municipal solid waste and recycling rates

In the future, the circular material use rate calculated by the Swiss Federal Statistical office will be integrated as well (see website[9]).

The environmental footprints are also shown as efficiency indicators. The focus lies on per capita and national footprints in absolute numbers because an increase of efficiency alone is not a sufficient information, since it can result from GDP growth alone. Instead, FOEN([10]) provides a **comparison with available limits derived from the planetary boundaries** to communicate the need for action.

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4 https://www.bafu.admin.ch/bafu/en/home/topics/economy-consumption/info-specialists/federal-government-measures-for-resource-conservation.html (website in English, report in German and French)

5 https://www.eda.admin.ch/agenda2030/en/home/strategie/nationale-berichterstattung.html (in English, German French and Italian)

6 https://www.bafu.admin.ch/bafu/en/home/daten--indikatoren--karten/indikatoren.exturl.html/aHR0cHM6Ly93d3cuaW5kaWthdG9yZW4uYWRtaW4uY2gvUHVibG/ljL0FlbVNlYXJjaA==.html?fIndtitlesearch=&fTopic=150&Search=Y&Results=Y&tLang=en&lQuery=Subj%3DN&tCol=Topic%2CIndtitle%2CState%2CDev&tSortBy=Typ+DESC%2CTopic%2CIndtitle (in English, German, French and Italian)

7 Aggregated impacts related to Swiss consumption at home and abroad with ecopoints based on the "ecological scarcity method" (also known as UBP Method, (see report in German, French and Italian)

8 https://www.minergie.ch/de/standards/neubau/eco/ (in German, French and Italian)

9 https://www.bfs.admin.ch/bfs/en/home/statistics/catalogues-databases/graphs.assetdetail.17884673.html (in German)

10 https://www.bafu.admin.ch/bafu/en/home/topics/economy-consumption/info-specialists/resource-consumption.html (in English, German French and Italian)

Circular economy targets

The 2030 Sustainable Development Strategy contains the target "**The materials footprint is reduced substantially and in harmony with the 1.5-degree target set in the Paris Climate Agreement**"([11]). However, this goal is not legally binding and has so far not been specified.
There are recycling targets in the ordinance of beverage packaging**, at least 75% of PET, Alu and glass beverage packaging have to be recycled.**

[11] https://www.are.admin.ch/are/en/home/sustainable-development/strategy/sds.html ,page 16

Innovative approaches and good practices

Examples of public policy initiatives (national, regional or local)

➔ *Good practice example: Public procurement*

With the revision of the federal public procurement act, sustainability has become a strategic focus for public procurement. To support the development of a new procurement culture, a knowledge platform([12]) has been set up . The platform contains dedicated information for procurers. One section is in particular for small procuring entities. It is a **toolbox**([13]) for sustainable public procurement with guidance for the most common product groups (paper, lightning, vehicles, print products, natural stones, furniture etc.). For each of them **specific circular procurement criteria** are included.

➔ *Good practice example: Research*

The **National Research Programme "Sustainable Economy: resource-friendly, future-oriented, innovative"** (NRP 73)([14]) aims to generate scientific knowledge about a sustainable economy that uses natural resources sparingly, creates welfare and increases the competitiveness of the Swiss economy. The **circular economy is one of the key topics**, as well as building and construction.[15] However, there are other projects addressing a broad range of sustainability issues, as:

- Desing et al. 2020: **A circular economy within the planetary boundaries**: Towards a resource-based, systemic approach ([16])
- PwC/WWF 2021 - Whitepaper: Circularity as the new normal - Future fitting Swiss businesses([17])

➔ *Good practice example: Regulation*

Regulation on the return, take-back and disposal of disposal of electrical and electronic equipment (VREG): The revision of the ordinance from 2021 helps to **strengthen the recycling of old equipment** and thus close the resource cycle. Rare technology metals such as neodymium or tantalum are now to be recovered if the necessary processes exist. The scope of the ordinance is to be extended to all electrical and electronic equipment. This includes, in particular, medical devices, monitoring and control instruments, dispensing machines and photovoltaic modules, which will in future fall under the VREG([18]).

Examples of private policy initiatives (sectoral)

Recycling Zinc from fly ashes

The branch of waste-to-energy plants in Switzerland, encompassing over **30 regional exploitation sites** in charge of the thermal treatment of domestic waste streams, have founded in common a new company with the aim of recycling the Zinc metal contained in the fly ashes produced during the combustion of waste. They will **finance all together one factory** with an investment of 65 Mio. CHF and bring their fly ashes to this one place so that it can be treated efficiently. Zinc metal will be produced in Switzerland at a rate of 7-9 Tons per day, so that Switzerland will be **self-sufficient in Zinc metal** at a rate of 40-60% in 2026.

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12 www.pap.swiss

13 www.pap.swiss/toolbox (in German and French)

14 https://nfp73.ch/en/portrait/

15 https://nfp73.ch/en/schwerpunkte

16 https://www.sciencedirect.com/science/article/pii/S0921344919305798#:~:text=The%20Circular%20Economy%20is%20a,physical%20limits%20and%20planetary%20boundaries

17 https://serval.unil.ch/en/notice/serval:BIB_E51A7CD02E0A

18 Luft und Recycling: Bundesrat genehmigt Verordnungen im Umweltbereich (admin.ch) (in German, French and Italian)

The way forward

Addressing barriers and challenges

From the FOEN point of view, there is a number of challenges for the implementation of resource efficiency, circular economy and raw material policies.

Political reasons

- In the past, there were no majorities for a political breakthrough in the field of green economy / circular economy.

Economic reasons

- Comparatively **low prices for unsustainable products and primary resources** (externalities are not internalised); there is no incentive / businesses underestimate the potential for cost cutting
- Slow diffusion of resource-efficient technologies
- **Low acceptance of secondary raw materials** on the marketplace
- Partly missing transparency in supply chains
- Correlation of economic wealth and throwaway society

Political and socio-economic reasons

- **Missing sense of urgency** in economy and among citizens.

Further information on obstables for the circular economy:

- Report([19]) of the Federal Council of 11 March 2022 in fulfilment of Postulate 18.3509 Noser "**Dismantling the barriers** to resource efficiency and the circular economy" of 13.06.2018
- **Status report of Swiss CE**([20]) at the company level.
- Stucki & Wörter (2021)[21]: Entry into and expansion of the circular economy are primarily hampered by **three factors**: **suitability** of products and services for the CE, high **investment costs** and **technical implementation** difficulties.

Ways to address the barriers:

- Circular economy is an **instrument** to reduce environmental impacts and **not a goal in itself**. There should be a focus on those CE political instruments and measures effectively and efficiently reduce environmental impacts as greenhouse gas emissions. For example, both **an incentive tax on landfilled construction materials as well as and limit values for embodied greenhouse gas emissions from buildings** can incentivize some aspects of the circularity of buildings. However, limit values have a much higher effect on greenhouse gas reduction (see economic analysis[22] of CE instruments in the construction sector based on the parliamentary

19 https://www.admin.ch/gov/de/start/dokumentation/medienmitteilungen.msg-id-87538.html#:~:text=Mit%20dem%20Postulat%2018.3509%20von,die%20Entwicklung%20der%20Kreislaufwirtschaft%20behindern (in German, French and Italian)

20 https://www.bfh.ch/dam/jcr:c94f7cfb-250d-4c23-8cd1-45069da075d4/W_Brosch_Studie_Kreislaufwirtschaft_211126_W_def.pdf (in German)

21 https://www.arv.ch/data/docs/de/5970/Kreislaufwirtschaft-2021-11-repr%C3%A4sentative-Studie-zur-Umsetzung-der-Kreislaufwirtschaft.pdf?v=1.0 (in German)

22 https://www.bafu.admin.ch/dam/bafu/de/dokumente/wirtschaft-konsum/externe-studien-berichte/vobu-kreislaufwirtschaftsmassnahmen-im-bauwesen.pdf.download.pdf/VOBU_Kreislaufwirtschaft_Bauwesen.pdf

initiative 20.433, Art. 45 para. 3[23] of the proposed change on the Energy Act or the existing regulation in France[24] or Denmark[25]).

- Use **financial support** for information and consulting services as well as education and training (also proposed by the parliamentary initiative 20.433);
- **Consumer information**, product declaration (general article, without specific implementation proposed by the parliamentary initiative 20.433);
- Use clear **targets** on different levels (recycling rates or content, consumption footprints etc.) for policymaking and measuring progress;
- Consider eco-modulation of anticipated fees([26]). However, be aware of limitations (fee modulation oftentimes only leads to a marginal price effect and thereby change of eco-design);
- Work towards **internalization of external costs** (long-term goal);
- Use life-cycle analysis and offer public access and information (e.g. information on construction materials([27]);
- **Consider shifting tax burden from labour to resources** to incentivize labor intensive circular economy activities, as e.g. repairing (low political chances, not an issue in the political discussion at the moment) (long-term goal);
- Besides anticipated fees and the extended producer responsibility consider **obligations for a material recovery**. In Switzerland, there is an obligation for the recovery of phosphorus from 2026 onwards. To be further analysed: material recovery for insulation material could make the recycling and phase out of harmful substances profitable (economies of scale) ([28]).

Ranking types of barriers

High barrier	Institutional challenge to develop policy for a complex cross-sectoral issue
	Companies' ability to grasp opportunities
⬆	Market barriers for recycled resources
	Consumer behaviour and awareness
Low barrier	Good indicators and targets

Future policy plans

The EU Recovery Facility is for EU countries only.

In 2020, a **parliamentary initiative 20.433**([29]) to strengthen the Swiss circular economy has been initiated and is currently being discussed in parliament. The present preliminary draft creates new legal foundations with the aim of strengthening the circular economy. In addition, the new provisions are intended to contribute to reducing environmental pollution, **increasing the performance and security of supply** of the

23 https://www.parlament.ch/centers/documents/de/vernehmlassung-20-433-urek-n-vorentwurf-d.pdf

24 https://www.ecologie.gouv.fr/re2020-nouvelle-etape-vers-future-reglementation-environnementale-des-batiments-neufs-plus

25 https://im.dk/Media/637602217765946554/National_Strategy_for_Sustainable_Construktion.pdf

26 https://op.europa.eu/en/publication-detail/-/publication/08a892b7-9330-11ea-aac4-01aa75ed71a1/language-en or https://www.legifrance.gouv.fr/codes/article_lc/LEGIARTI000043974919

27 https://www.kbob.admin.ch /kbob/de/home/themen-leistungen/nachhaltiges-bauen/oekobilanzdaten_baubereich.html (in German, French and Italian)

28 See e.g. https://www.ivv.fraunhofer.de/en/recycling-environment/recycling-of-contaminated-plastics/polystyreneloop.html or https://www.sciencedirect.com/science/article/pii/S0921344919305373

29 https://www.parlament.ch/de/ratsbetrieb/suche-curia-vista/geschaeft?AffairId=20200433 (in German, French and Italian)

Swiss economy and achieving a lasting improvement in resource efficiency([30]). The political decision and, in the case of a referendum, a popular vote are **expected for 2024**.

30 https://www.parlament.ch/de/organe/kommissionen/sachbereichskommissionen/kommissionen-urek/vernehmlassung-urek-20-433 (in German, French and Italian)

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