

# The Sustainable Development Goals Extended Report 2024

Inputs and information provided as of 30 April 2024

## 12 RESPONSIBLE CONSUMPTION AND PRODUCTION



**Note:** This unedited 'Extended Report' includes all indicator storyline contents as provided by the SDG indicator custodian agencies as of 30 April 2024. For instances where the custodian agency has not submitted a storyline for an indicator, please see the custodian agency focal point information for further information. The 'Extended Report' aims to provide the public with additional information regarding the SDG indicators and is compiled by the Statistics Division (UNSD) of the United Nations Department of Economic and Social Affairs.

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Target 12.1 Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries

**Indicator 12.1.1** Number of countries developing, adopting or implementing policy instruments aimed at supporting the shift to sustainable consumption and production

**Leapfrogging to the Future We Want with more sustainable and circular approaches**

Sustainable consumption and production (SCP) patterns and circular actions are increasingly recognized as a comprehensive approach and a cross cutting action to address environmental degradation, decouple economic growth and promote inclusive societies. The figure shows (figure 1) the rate of SDG12.1.1 reporting from 2019-2023 which is considerably significant: 516 policy instruments reported by 63 member states including the EU at the midpoint to the 2030 Agenda, underscoring sustainable and circular approaches to accelerate progress moving forward. Newly reported policies highlight sustainable consumption and production patterns with values to ensure gender and social inclusiveness (Cambodia), and responsible use of natural resources (Mozambique). SCP approaches can be a mechanism for coordinated assistance to enhance UN support to achieve overall SDG at national level (Niger).

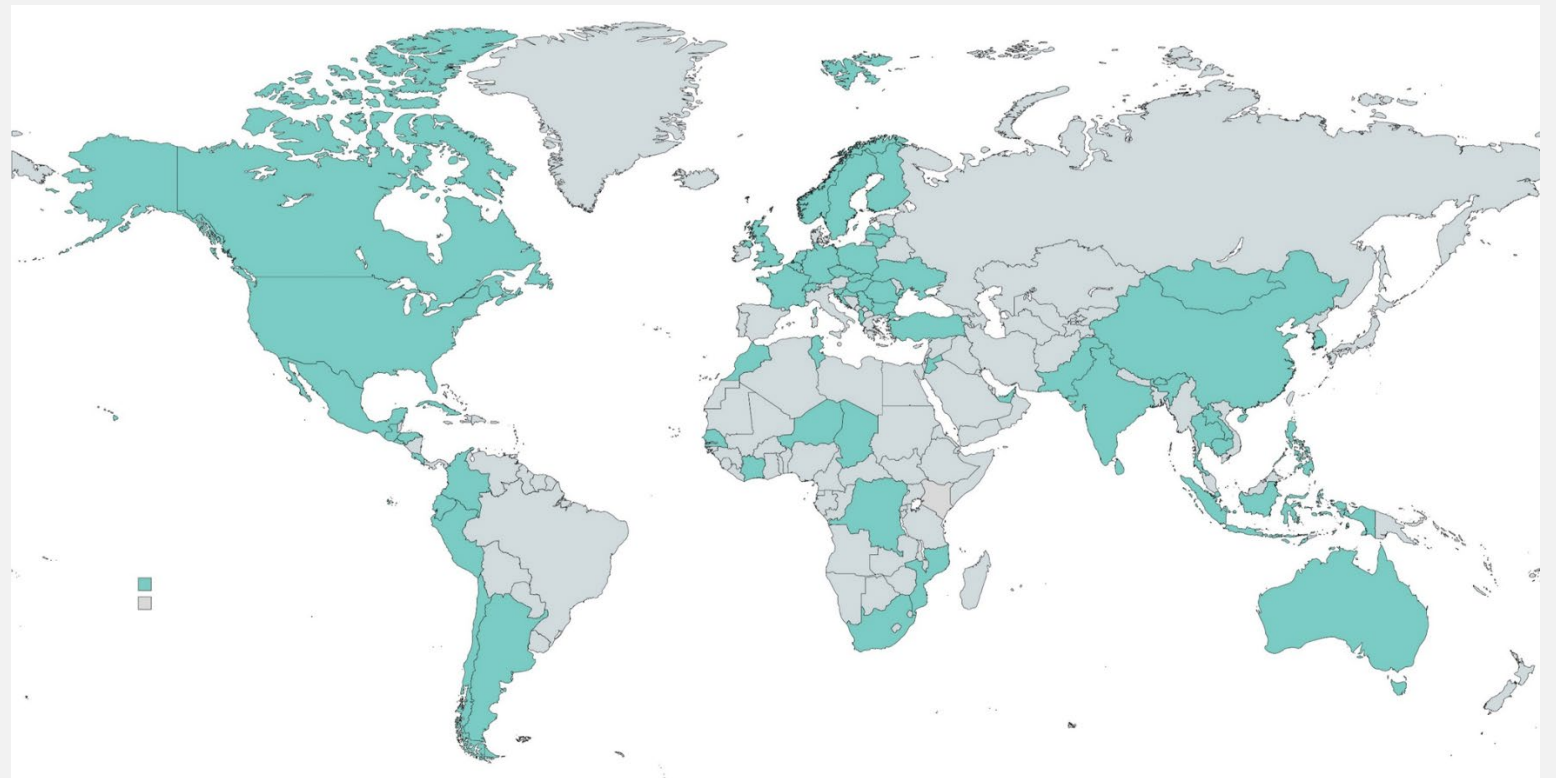
As of 2023, most of the policies reported are national roadmaps/strategies (49%) that foster the sustainability transition and communicate shared outcomes and aligned roles of responsibilities of key stakeholders in the national context of actions, laying foundation for implementation. Some countries advanced to enforce sustainable consumption and production actions through legal instruments (30%) while voluntary instruments are decreasing (14%). It is prominent in segmenting uptakes of SCP and circular approaches to address triple planetary crisis (figure 2).

It is worth noting that new policies in 2023 underline co-benefits of integrating SCP into high impact sectors because SCP concept has high implications to national economic development and strengthens the shift to an inclusive development pathway. The Philippines, for example, adopted the rationalization of the mining fiscal regime to enable responsible mining and to enhance compliance to environmental laws, rules and regulations. The U.S. Department of Agriculture

(USDA) announced details of a framework to transform the food system to benefit consumers, producers and rural communities by providing more options, increasing access and creating new, more and better markets for SME producers. Australia reported the Water Efficiency Labelling and Standards (WELS) scheme which is a national programme that mandates registration and water efficiency labelling of certain designated water-using and water-saving products supplied across the country. The scheme aims to reduce demand for high quality drinkable Australian water by providing consumers with product specific water efficiency information at the point of sale and promoting the adoption of more water efficient technologies. This results in society benefiting from the more efficient use, or freeing up of, public resources or revenue – including from greater water availability, and lower cost water service provision due to less need for major investments. The environment benefits from water savings that contributes to environmental improvements and reductions in greenhouse gas emissions.

The linkage with SDG13 remains promising as stated in the outcome of the CoP28 stock-take, recognizing the importance of transitioning to sustainable lifestyles and sustainable patterns of consumption and production in efforts to address climate change, including through circular economy approaches, and encourages efforts in this regard (figure 3). It is compelling to notice covalent linkages to other global commitments especially SDG16 promoting inclusiveness and justice, addressing the social costs and inequalities that may result from unsustainable consumption and production patterns.

**Figure 1: Countries reported progress on SDG12.1 in 2019-2023**



**Figure 2: Policies reported by type from 2019-2020, 2021-2022, and 2022-2023 (per cent)**

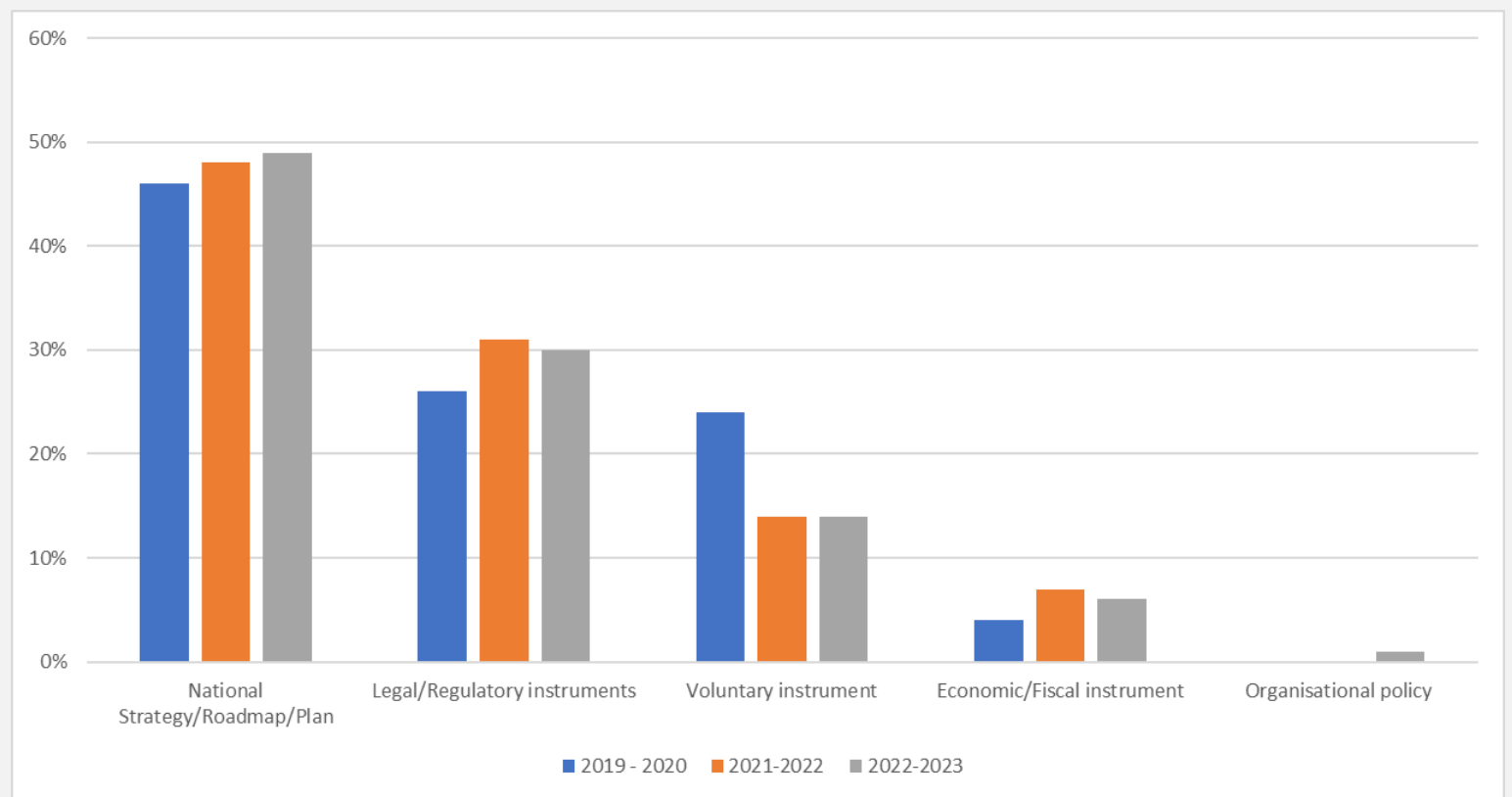
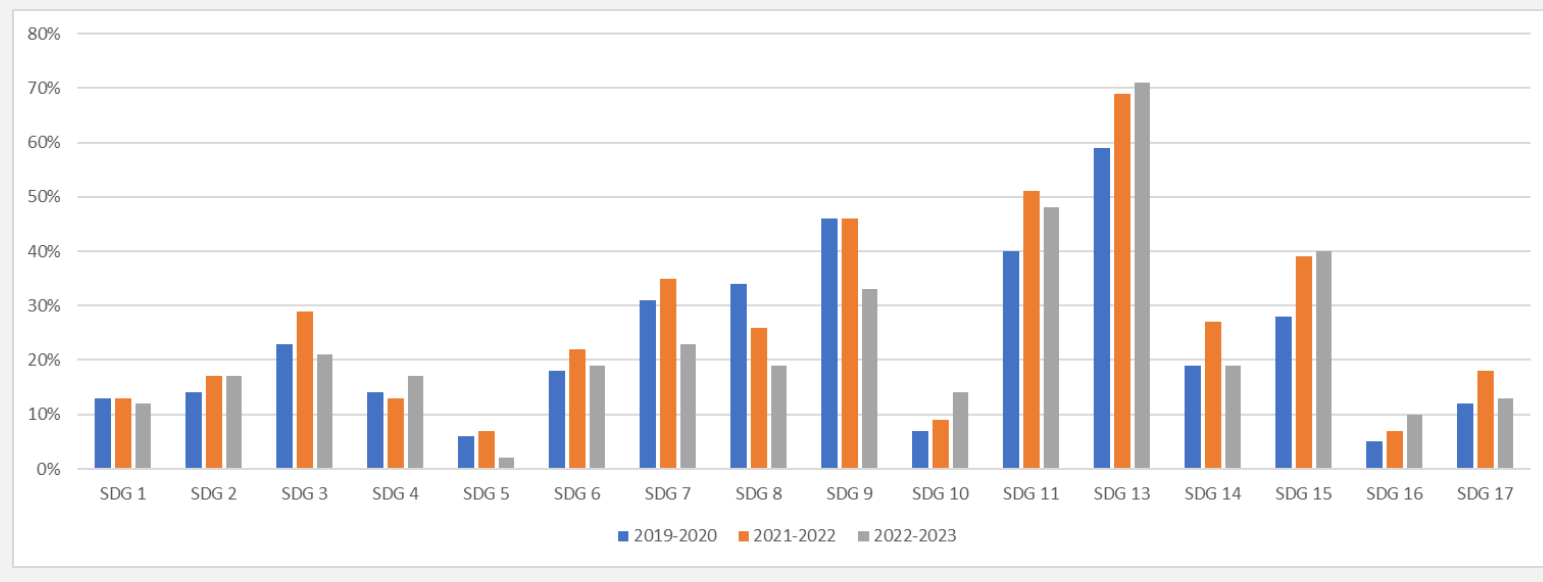


Figure 3: Relevance of reported policies to other SDGs for the periods 2019-2020, 2021-2022, and 2022-2023 (per cent)



**Additional resources, press releases, etc. with links:**

- Outcome of the first global stocktake. Draft decision-/CMA.5: [https://unfccc.int/sites/default/files/resource/cma2023\\_L17\\_adv.pdf](https://unfccc.int/sites/default/files/resource/cma2023_L17_adv.pdf)

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Custodian agency(ies): UNEP

## Target 12.2 By 2030, achieve the sustainable management and efficient use of natural resources

**Indicator 12.2.1** Material footprint, material footprint per capita, and material footprint per GDP

**Indicator 12.2.2** Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP

### Global Material Consumption growth slows, but regional disparities persist

Domestic Material Consumption (DMC) measures the total materials directly utilized within an economy. It accounts for domestic material extraction and the physical balance of imports and exports.

The period from 2000 to 2022 is characterised by a 69% growth of DMC with 56.6 billion tonnes in 2000 up to 96.0 billion tonnes in 2022. Slowing down growth dynamics can be observed for the indicator translating into compound annual growth rate (CAGR) of 3.9% in the 10 years period starting from 2003, decelerating to 0.8% CAGR in the decade starting in 2013.

In spite of being the most widely used MFA-based indicators in policy processes, DMC does not take into account the raw materials utilized to produce imported and exported goods. This limitation may render DMC an inaccurate measure of material consumption for countries engaged in high-intensity international trade. Analyzing the Material Footprint (MF), which includes the raw material equivalents of goods traded, can achieve a more accurate indicator of actual material consumption.

From 2000 to 2022, the global MF, similarly to DMC, has increased by 71% from 57.4 billion tonnes to 98.0 billion tonnes. A corresponding slowdown in the growth rate can be observed, with the CAGR of MF decreasing from 3.9% between 2003 and 2012 to 0.9% between 2013 and 2022. This deceleration indicates a moderation in the environmental pressure exerted by material consumption.

The composition of MF is undergoing continuous, directional structural changes (see chart 1). The most apparent relative dynamics can be observed for the share of biomass and non-metallic minerals. In 2000, biomass accounted for 32% of the MF and non-metallic minerals for 41%. By 2022, the shares shifted, with biomass at 27% and non-metallic minerals at 48%. This shift reflects evolving patterns of MF and emphasizes the increasing utilization of non-metallic minerals and decreasing relative impact of biomass in global material consumption.

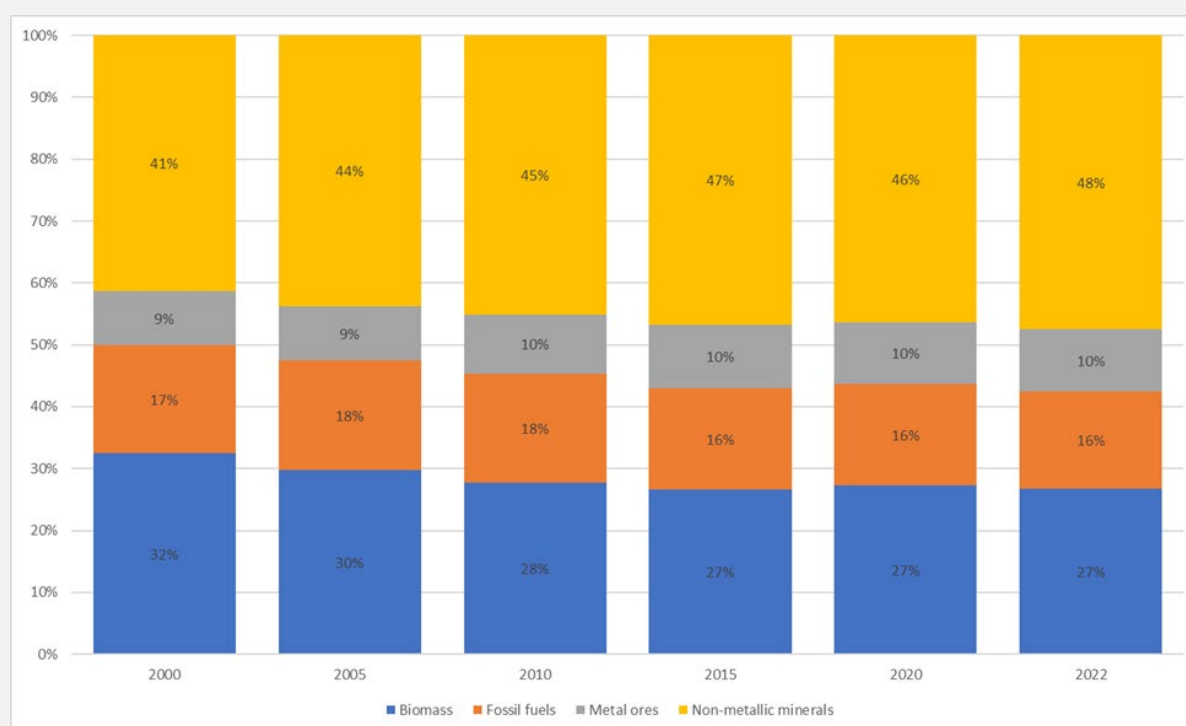
The data indicate that the fossil fuel category is a major factor in the growth rate slowdown, with the CAGR dropping from 3.4% between 2003 and 2012 to 0.3% from 2013 to 2022. Similarly, the growth rates for the remaining categories have also decelerated, with biomass dropping from 2.0% to 1.0%, metal ores from 5.3% to 1.0%, and non-metallic minerals from 5.0% to 1.0%.

While the dynamics of both indicators are consistent at the global level, analysing the regional discrepancies between DMC and MF can lead to further insights.

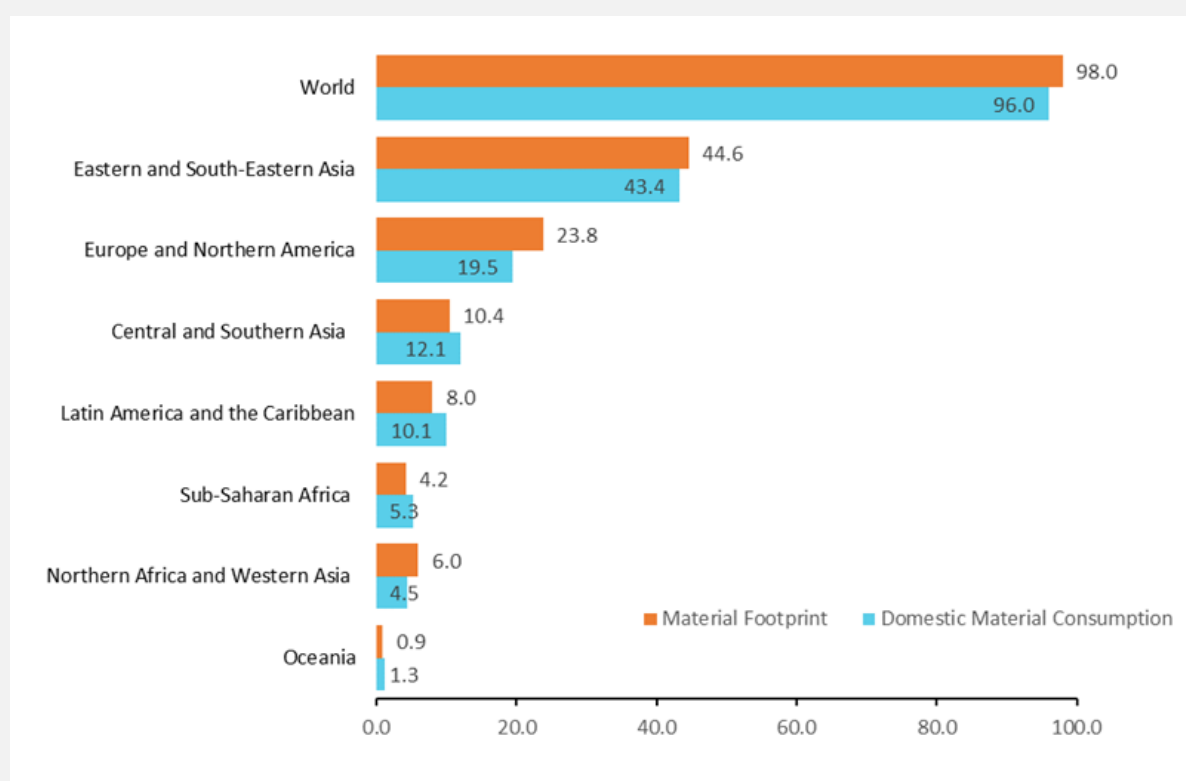
It can be observed that the DMC deceleration is stronger than the slowdown of MF in the regions where MF is already higher than DMC. The Material Footprint

surpasses the Domestic Material Consumption in Eastern and South-Eastern Asia, Europe and Northern America, and Northern Africa and Western Asia regions consistently from 2000 to 2022 (see chart 2). For those higher MF regions, CAGR of MF decreased from 3.7% to 0.8% between the decades of 2003-2012 and 2013-2022, while DMC experienced a more significant deceleration, dropping from 3.9% to 0.5%. Conversely in lower MF regions - Central and Southern Asia, Latin America and the Caribbean, Sub-Saharan Africa, and Oceania - CAGR decreased from 4.5% to 1.3% for MF and from 3.8% to 1.6% for DMC between the respective decades, indicating a growing gap between the two indicators at the regional level (see table 1). These trends may entail an increasing disparity between regions with higher MF compared to those with higher DMC when the two indicators are concerned, suggesting varied environmental pressure caused by material consumption.

**Chart 1. Structure of global Material Footprint, 2000-2022 (per cent)**



**Chart 2. Indicators of economic pressure on the environment, 2022 (billion tons)**



Note: MF is based on estimates, whereas DMC presents a combination of estimates and country data (mainly from the European Union Member States).

**Table 1. Compound annual growth rate (CAGR) of Material Footprint (MF) and Domestic Material Consumption (DMC)**

		2003-2012	2013-2022
Regions with MF higher than DMC: Eastern and South-Eastern Asia, Europe and Northern America, Northern Africa and Western Asia	MF	3.7%	0.8%
	DMC	3.9%	0.5%
Regions with MF lower than DMC: Central and Southern Asia, Latin America and the Caribbean, Sub-Saharan Africa, Oceania	MF	4.5%	1.3%
	DMC	3.8%	1.6%

**Additional resources, press releases, etc. with links:**

- Global Material Flows Database: <https://www.resourcepanel.org/global-material-flows-database>
- The Use of Natural Resources in the Economy: A Global Manual on Economy Wide Material Flow Accounting: <https://wedocs.unep.org/handle/20.500.11822/36253;jsessionid=A5781145463327FABDD534FF8788E01C>

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**Custodian agency(ies):** UNEP

**Target 12.3** By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses

**Indicator 12.3.1** (a) Food loss index and (b) food waste index

**19% of food available to consumers worldwide was wasted in 2022**

UNEP estimates, based on available country data and modelling, that the world wasted 1.05 billion tonnes of food, or 19% of all food available to consumers in 2022. Most of this wastage occurred in households (60%), where on average each person wastes 79 kg over a year, greater than the weight of the average person. Conservatively, one billion meals worth of edible food are wasted every day in homes around the world, enough for 1.3 meals per person impacted by hunger per day.

These figures, staggering in their own right, grow even more significant when examining how food waste converges with other issues. Food waste generates 8-10% of global greenhouse gas emissions, costs upwards of \$1 trillion USD, contributes to stress on agricultural land and biodiversity loss, and occurs while 783 million people in 2022 are affected by hunger. In this light, making strides towards achieving SDG 12.3, to halve food waste and reduce losses by 2030, greatly advances other work towards environmental, economic, and equity goals.

Following a near doubling of data coverage since the 2021 Food Waste Index Report was published, there has been increased convergence in the average per capita household food waste. Data suggests that the average observed household food waste in high-income, upper-middle income and lower-middle income countries vary by just 7 kg/capita/year. However, hotter countries appear to have more food waste per capita in households, potentially due to increased consumption of fresh foods with substantial inedible parts and lack of robust cold chain (see table 1).

With a handful of years remaining before 2030, many more countries can step up to the plate in addressing the food waste issue. As of 2022, only 9 of 193 countries have included food waste in their Nationally Determined Contributions (NDCs).

**Table 1: Average food waste per capita per year in 2022, by income group (kilograms)**

Income group	Household	Food Service	Retail
High-income countries (HIC)	81	21	13
Upper middle-income countries (UMC)	88	<i>insufficient data</i>	
Lower middle-income countries (LMC)	86	<i>insufficient data</i>	
Lower-income countries (LIC)	<i>insufficient data</i>	<i>insufficient data</i>	

**Additional resources, press releases, etc. with links:**

- Link to 2024 Food Waste Index: <https://www.unep.org/resources/publication/food-waste-index-report-2024>

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**Custodian agency(ies):** FAO, UNEP

**Target 12.4** By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

**Indicator 12.4.1** Number of parties to international multilateral environmental agreements on hazardous waste, and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement

**Chemicals and Waste Multilateral Environmental Agreements make steps to answer emerging global challenges and evaluate and enhance existing mechanisms**

Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and Stockholm Convention on persistent organic pollutants (POPs) continue to make strides in meeting their obligations and in policy-making to keep pace with rapidly changing global circumstances.

At the Basel Convention's sixteenth meeting of the Conference of the Parties (COP-16) in 2023, a central focus was to continue mobilising efforts to respond to the growing challenges created by contemporary waste streams such as plastics wastes and e-waste. Parties to the Basel Convention adopted the updated technical guidelines for the environmentally sound management of plastic waste reflecting the first global understanding of how to minimize the generation of plastic wastes and to ensure that their collection, transport and disposal minimize negative impacts on human health and the environment.

Another significant development was the establishment of an intersessional process open to all Parties and observers to identify challenges and best practices in the implementation of the procedure to control transboundary movements of wastes, the Prior Informed Consent (PIC) procedure, and develop recommendations for improving its functioning. The transboundary movements of hazardous and other wastes must comply with the PIC procedure and the failure to abide by the procedure constitutes illegal traffic, which the Basel Convention requires Parties to criminalize through their respective domestic legislation.

One of the main achievements of the eleventh meeting the Conference of the Parties to the Rotterdam Convention in 2023, was the listing of the pesticide terbufos, which poses an extremely high hazard to terrestrial organisms. This listing makes the pesticide subject to the PIC procedure, thereby granting Parties the right to decide on its future import and ensuring a corresponding obligation on exporting Parties to ensure exporters respect such decisions.

The eleventh meeting of the Stockholm Convention 2023 welcomed outcomes of the second effectiveness evaluation of the Stockholm Convention covering the period between 2017 and 2023 and concluded that the Convention provides an effective and dynamic framework to regulate POPs throughout their lifecycle, addressing the production, use, import, export, releases and disposal of these chemicals worldwide. The initial POPs, concentrations measured in air and in human populations have declined and for the newly listed POPs, concentrations are beginning to show decreases, although in a few instances, increasing and/or stable levels are observed.

Significant developments and follow-up measures included the listing of three chemicals for elimination of all production and use (with specific exemptions) under Annex A, namely UV-328, Dechlorane Plus and the pesticide methoxychlor, the former two of which are used in the plastic production. Finally, after 15 years of negotiations, Parties adopted the compliance procedures and institutional mechanisms under Article 17 of the Stockholm Convention.

With this, all three conventions have put in place non-confrontational, transparent, cost-effective and preventive mechanisms to help Parties to comply with their obligations. These developments support Parties to move towards target 12.4. to achieve the environmentally sound management of chemicals and all wastes throughout their life cycle.

**Storyline authors(s)/contributor(s):** The Secretariat of the Basel, Rotterdam and Stockholm Conventions

**Custodian agency(ies):** UNEP

## An overwhelming majority of Parties to the Minamata Convention have complied with their obligations to nominate national focal points and submit their first full national reports

An overwhelming majority of Parties to the Minamata Convention have complied with their obligation to nominate National Focal Points as required by Article 17.4 of the Convention. Since the entry into force of the Convention in 2017, 138 out of 147 Parties (94%) have nominated their National Focal Points. This is a strong improvement compared to 2017 with 101 out of 114 Parties (88%) nominating their National Focal Points. The 2023 results per region are as follows: the Eastern European States and the Western European and Other States have completed their designation of focal points, each region reaching 100%, followed by Africa with 95%, and the Latin America and the Caribbean and Asia-Pacific regions with 88% percent each.

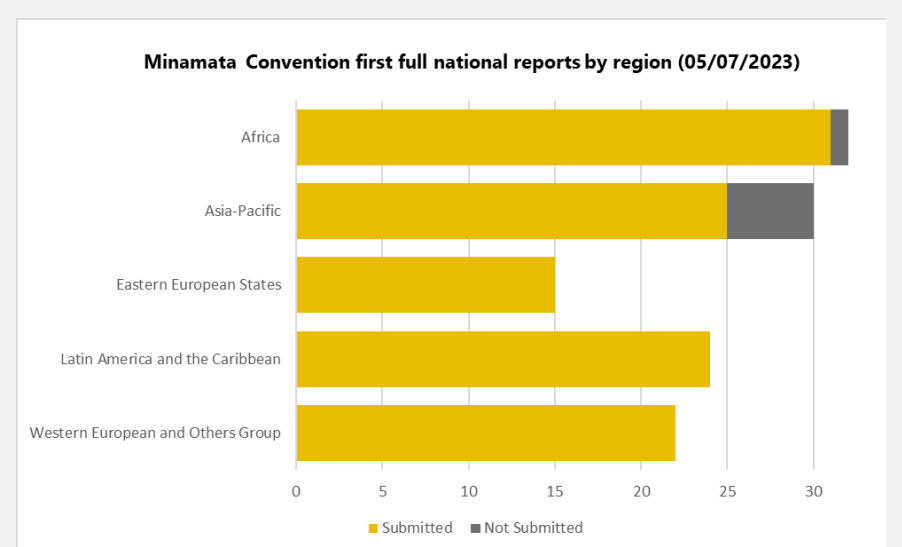
The Minamata Convention Parties are also close to achieving gender parity among with 51% male and 49% female designated National Focal Points during the reporting cycle.

With respect to their obligation under Article 21 of the Convention on Reporting, an impressive 95% of the Parties submitted their reports for the first full reporting period (16 August 2017 to 31 December 2020). This represents 117 of the 123 Parties to the Convention during the reporting period. The full national report, which Parties are required to submit every four years, has 43 multi-tiered questions that cover control and enabling measures under the Convention that require inter-agency coordination for the responses. The short national reports only covers four recurrent questions every two years.

While few parties raised the COVID-19 pandemic as an impediment to their efforts to implement the Convention during the reporting period, the high result shows the effort taken by the majority of Minamata Parties to prepare and meet their Article 21 reporting obligation. It also builds on the 91% reporting rate achieved by the Parties for their first short national reports (16 August 2017 to 31 December 2019). These impressive reporting results have allowed the Minamata Convention Secretariat to create a public information dashboard showing robust reporting by the Parties and facilitating further analysis.

The reporting rates by region are as follows: 22 of 22 parties from Western Europe and Others (100%) have submitted their reports, followed by Africa with 31 of 32 parties (97%), Eastern European states with 14 of 15 parties (93%), Latin America and the Caribbean with 23 of 24 parties (88%), and with 23 of 30 parties from the Asia Pacific region (77%) (Chart 1).

Chart 1: Minamata Convention first full national reports by region (05/07/2023)



### Additional resources, press releases, etc. with links:

- A list of national focal points is available at <https://www.mercuryconvention.org/en/parties/focal-points>
- More information on national reporting is available at <https://www.mercuryconvention.org/en/parties/reporting>
- Resources for national reporting is available at: <https://www.mercuryconvention.org/en/resources>
- Website <http://www.mercuryconvention.org>

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**Custodian agency(ies):** UNEP

## Montreal Protocol: Advancing climate action

While the coronavirus disease (COVID-19) pandemic did disrupt the normal flow of work under the ozone treaties in 2020, 2021 and the start of 2022 and current global crises have impacted the work under the Montreal Protocol on Substances that Deplete the Ozone Layer in various ways, parties' commitment to reporting was steadfast.

The parties have remained resolute in their annual reporting of statistical data and related information on production and consumption of controlled substances. The reported data provide the basis to assess compliance with control measures. Over the years, all parties have ultimately achieved 100 per cent compliance with their annual reporting obligations (see figure 1).

Historically, reporting obligations concerned annual national production and consumption of ozone-depleting substances (ODSs) which have shown a dramatic decrease from global baseline levels. As most ODSs are also powerful greenhouse gases, this decrease has led to a reduction of over 12 billion tonnes CO<sub>2</sub> equivalent (see figure 2).

Article 5 (developing) parties are assisted by the Protocol's Multilateral Fund (MLF), which in 2023 was replenished at the highest amount ever of US\$ 965 million for 2024-2026. The bulk of this replenishment will support these parties to comply with the Protocol's control measures, including fulfilling the reporting requirements in the next few years.

With the entry into force of the 2016 Kigali Amendment to the Montreal Protocol in 2019, all parties that ratify the Amendment commit to phasing down hydrofluorocarbons (HFCs). While HFCs are not ozone depleting, they are potent greenhouse gases. As of January 2024, 156 out of 198 parties have ratified the Kigali Amendment. This shows a growing commitment by the parties to continue advancing the climate warming mitigation efforts under the Protocol.

By controlling climate-warming HFCs, the Amendment is expected to avoid up to 0.5°C of global warming by 2100. In tandem, parallel adoption of energy efficient and sustainable cooling technology could potentially double this benefit. This is an important contribution in the context of the Paris Agreement, which aims to keep global temperature rise this century to well below 2°C above pre-industrial levels.

Figure 1: Annual patterns of reporting by the Parties to the Montreal Protocol in 2015-2022

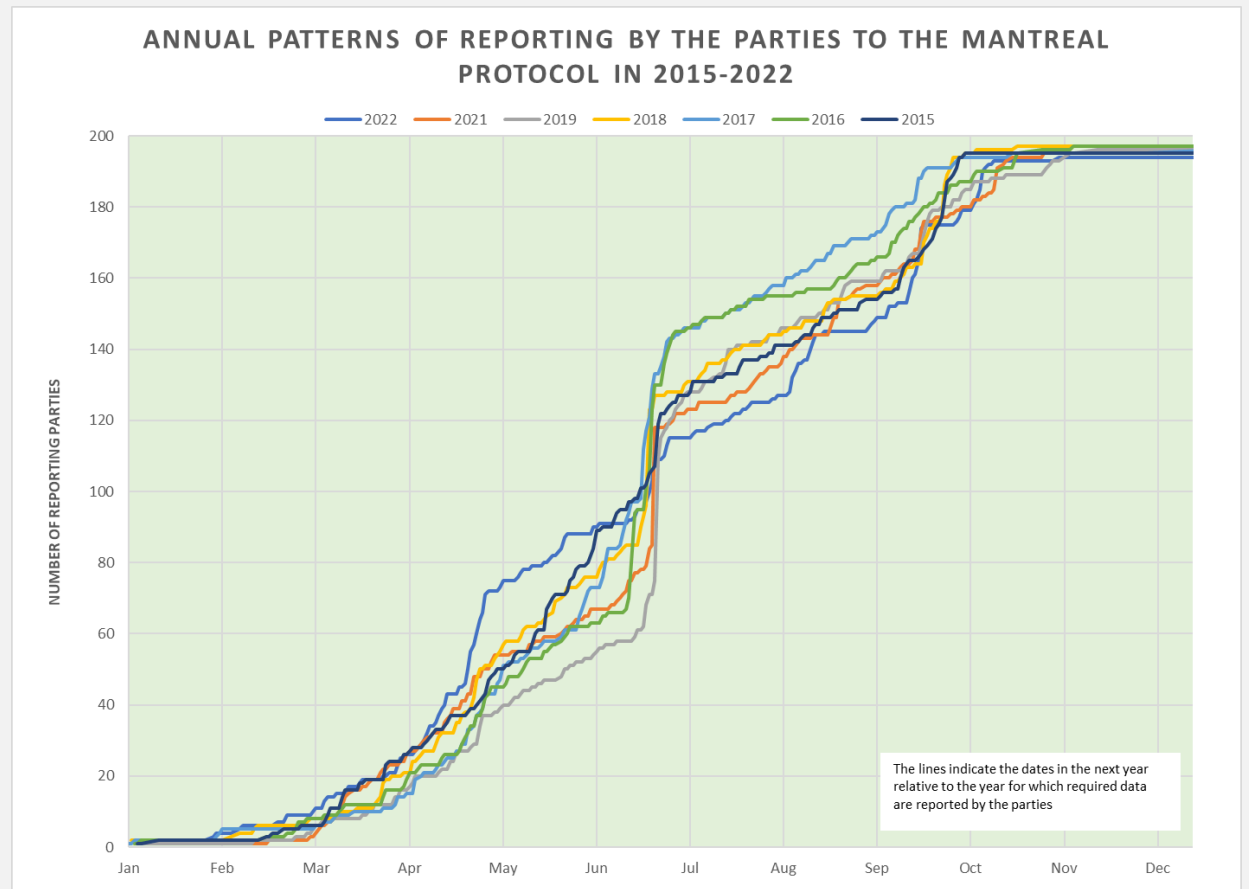
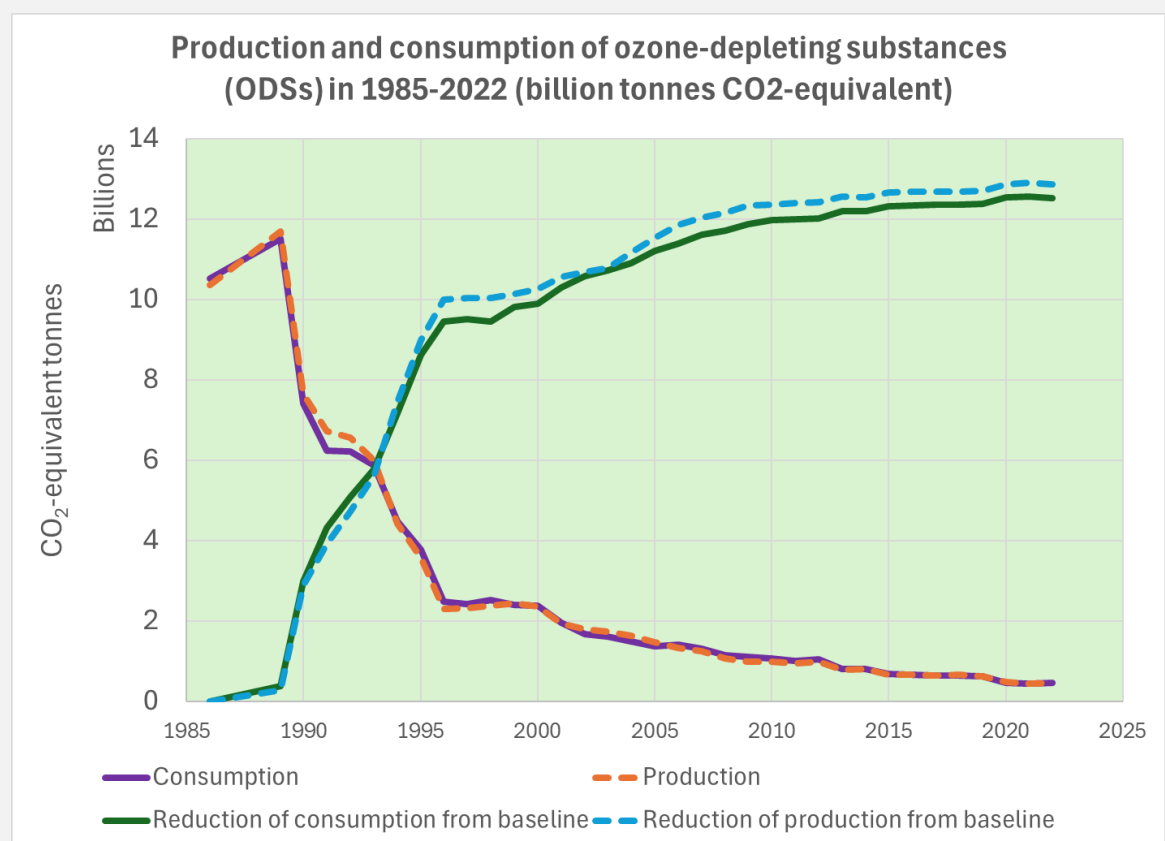


Figure 2: Production and consumption of ozone-depleting substances (ODSs) in 1985-2022 (billion tonnes CO<sub>2</sub>-equivalent)



**Additional resources, press releases, etc. with links:**

- Ozone Secretariat website: <https://ozone.unep.org>
- Country profiles: <https://ozone.unep.org/countries>
- Status of Kigali Amendment ratification: <https://ozone.unep.org/all-ratifications>
- Data centre: <https://ozone.unep.org/countries/data-table>
- Avoided CO<sub>2</sub> equivalent: <https://ozone.unep.org/avoided-co2e/table> (CO<sub>2</sub>e App)
- Scientific Assessment Panel (SAP): [Scientific Assessment of Ozone Depletion 2022](#);
- [Scientific Assessment of Ozone Depletion 2022: Executive Summary; Twenty Questions and Answers About the Ozone Layer: 2022 Update](#)
- Environmental Effects Assessment Panel (EEAP): [Environmental Effects of Stratospheric Ozone Depletion, UV Radiation, and Interactions with Climate Change: 2022 Assessment Report](#);
- [Questions and Answers about the Effects of Ozone Depletion, UV Radiation, and Climate on Humans and the Environment - Supplement of the 2022 Assessment Report of the UNEP Environmental Effects Assessment Panel.](#)
- Technology & Economic Assessment Panel (TEAP): [TEAP Assessment Report 2022](#)

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**Custodian agency(ies):** UNEP

**Indicator 12.4.2 (a)** Hazardous waste generated per capita; and (b) proportion of hazardous waste treated, by type of treatment

**Custodian agency(ies):** UNSD, UNEP



## Target 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

### Indicator 12.5.1 National recycling rate, tons of material recycled

#### The growth in e-waste outpaces the growth in collection, more global action needs to be taken to turn the tide by 2030

The use and subsequent disposal of electronic and electrical equipment significantly contributes to large stockpiles of e-waste. In 2022, the amount of e-waste generated was 7.8 kg per capita (see chart 1). The rapid growth of global e-waste is driven by growing consumption, short product life cycles, and little repair. There are also new products such as wide usage of photovoltaic panels that are entering the global market rapidly, and the first generation is already becoming e-waste these days.

The waste of electronic and electronic equipment (e-waste) becomes part of a fast-growing waste stream that contains both valuable and hazardous materials. Only 1.7 kg per capita (22.3 per cent of total e-waste generated) is documented to be managed in an environmentally sound manner which means that all hazardous substances are dismantled, treated adequately, and recyclable materials are reclaimed.

In high income countries, the e-waste collection environmental treatment is generally advanced, which is illustrated by the high collection rates Europe and Northern Americas (46.3 per cent), and Australia and New Zealand (42.8 per cent) (see chart 2). Still, the majority of the e-waste is not adequately recycled and often mixed with other recyclable waste streams or parts are scavenged of, without selective proper removal of hazardous substances, such as the refrigerants. Next to that, e-waste, often regarded as a re-usable good, is also exported to other lower income countries.

In middle- and low-income countries, e-waste management infrastructure is not yet developed, or is totally absent and inadequate to manage the e-waste that is locally generated and illegally imported. The e-waste collection rates are below 5 per cent in Central and Southern Asia, Latin America and the Caribbean, and sub-Saharan Africa. Thus, it is mostly managed inappropriately by the informal sector so the refrigerants are emitted in the open air, valuable components are selectively dismantled, or extracted by open burning and acid baths which are polluting the environment and cause a loss of valuable resources. Moreover, this causes severe health effects to workers, but also to children who often also live, work, and play on the sites.

By 2030, the amounts of e-waste that generated still continues to increase to 10 kg/capita (see chart 3). In an aspirational scenario, all countries with existing e-waste management infrastructure boost their collection rates to the targets set in the European Union; upper-middle and high-income countries with no formal e-waste management infrastructure start to divert e-waste from landfills; and low- and lower-middle-income countries will require significant cooperation between the formal and informal sectors within those countries, and major improvements to formalization of the work of the informal sector. Hence, collecting and managing half of their e-waste in an environmentally sound manner.

Chart 1: E-waste generation and environmental sound e-waste management in 2010-2022 (kg/capita)

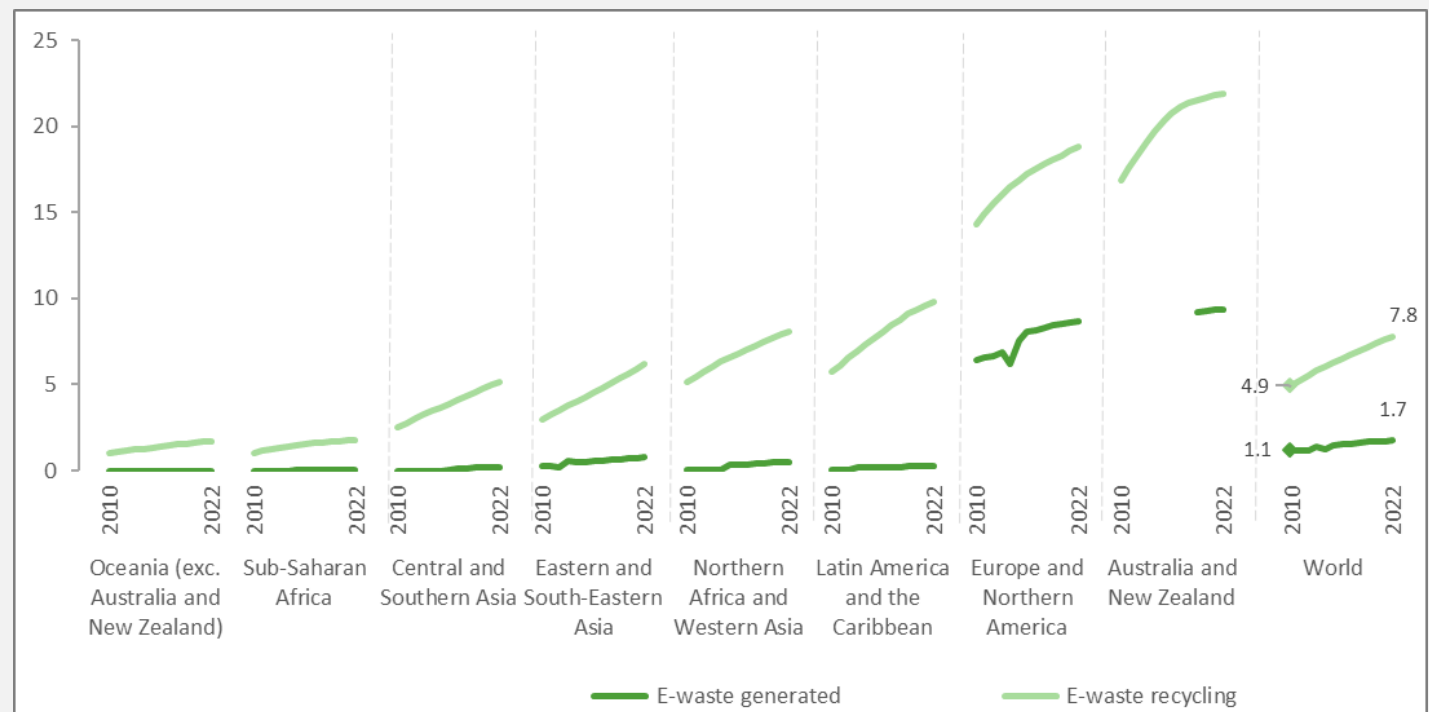


Chart 2: E-waste collection in 2022 (per cent)

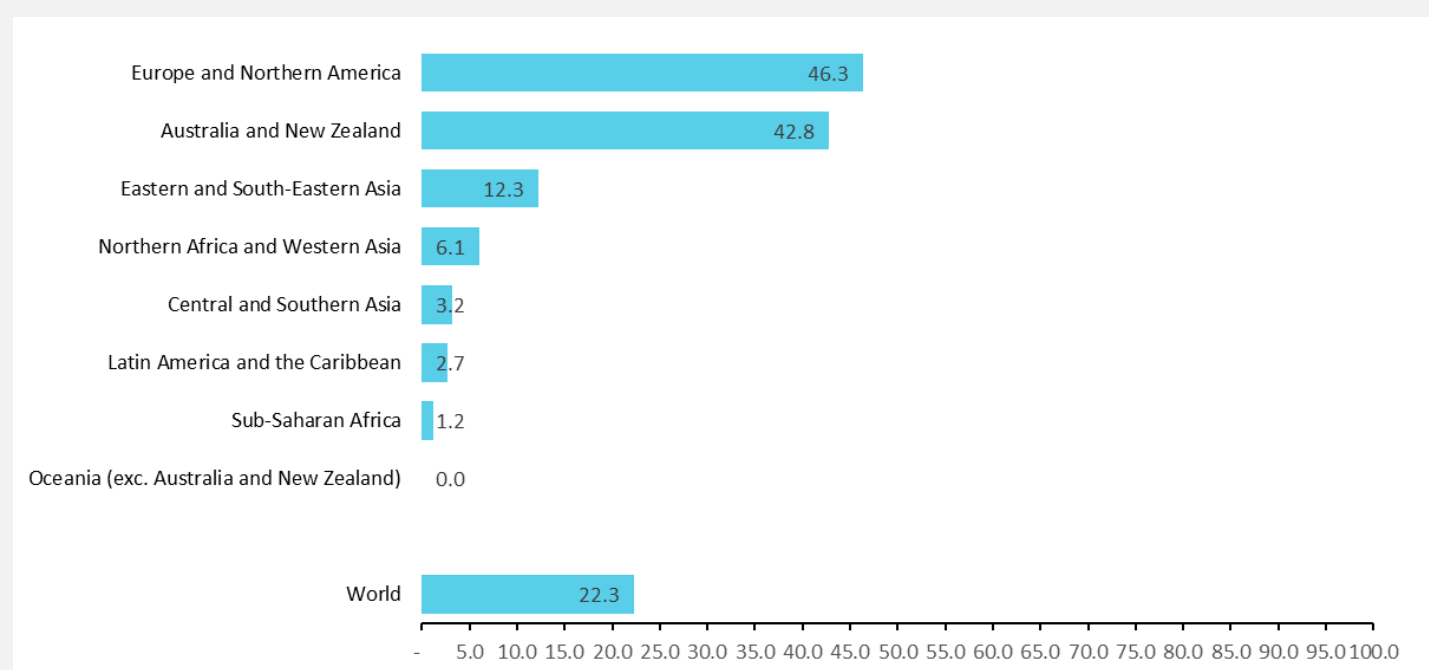
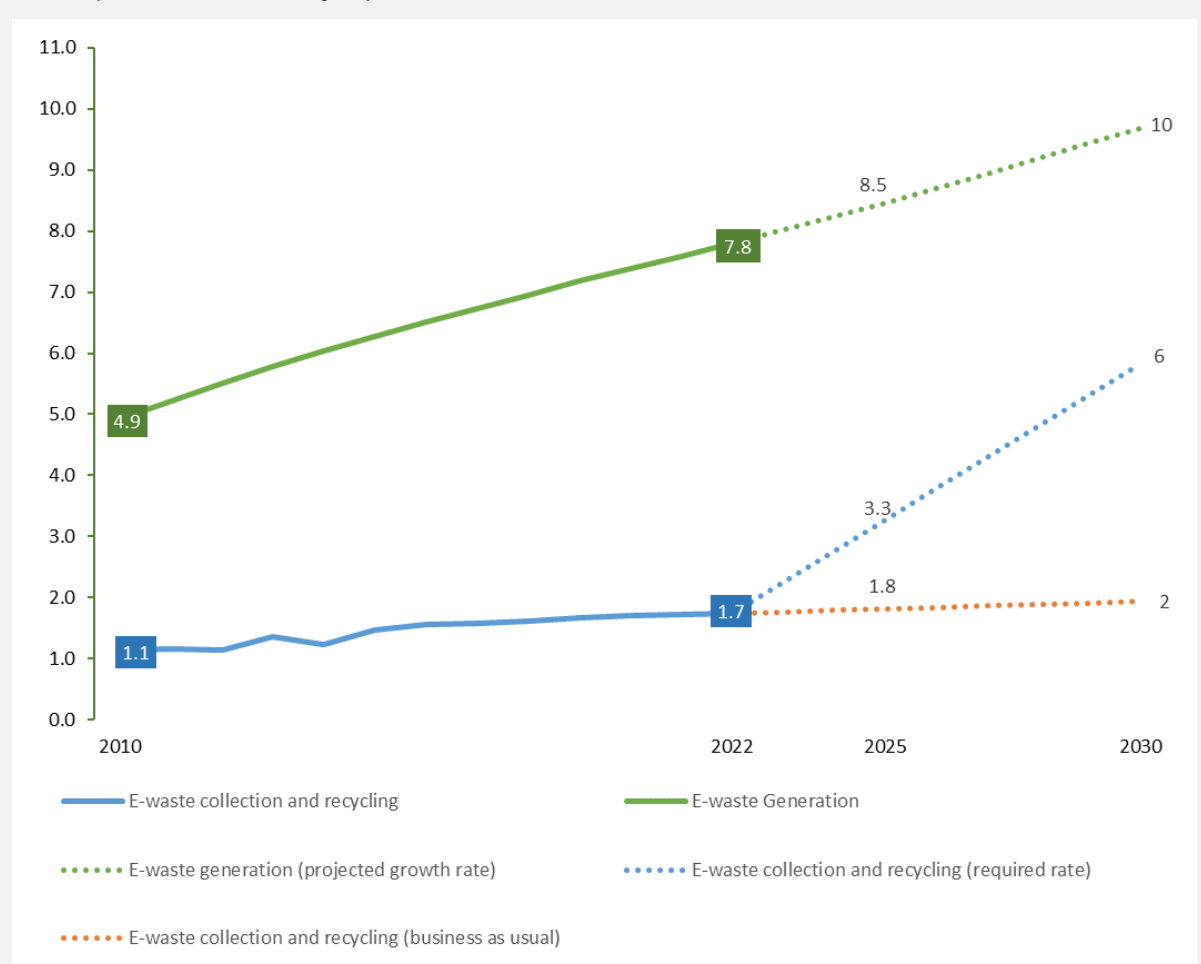


Chart 3: E-waste generation (2010-2022), and projected e-waste generation (2023-2030); environmental sound e-waste management (2010-2022) and required growth (2023-2030) to ensure environmentally sound management in an aspirational scenario (kg/capita)



In this aspirational scenario, the global e-waste collection rate will be 60 per cent, with 54 billion kg of e-waste being managed in an environmentally sound manner in 2030. An estimated 30 billion kg of metal resources will be viably recovered globally, including better recovery of precious and rare earth metals. The main gains for society are improvements in terms of releases into the environment, as 34 thousand kg of mercury emissions and 209 billion kg of CO<sub>2</sub>-equivalent emissions will be avoided. This will essentially be due to significant improvements in working conditions in the informal sector.

**Additional resources, press releases, etc. with links:**

- Cornelis P. Baldé, Ruediger Kuehr, Tales Yamamoto, Rosie McDonald, Elena D'Angelo, Shana Althaf, Garam Bel, Otmar Deubzer, Elena Fernandez-Cubillo, Vanessa Forti, Vanessa Gray, Sunil Herath, Shunichi Honda, Giulia Iattoni, Deepali S. Khetriwal, Vittoria Luda di Cortemiglia, Yuliya Lobuntsova, Innocent Nnorom, Noemie Pralat, Michelle Wagner (2024). Global E-waste Monitor 2024. United Nations Institute for Training and Research (UNITAR), International Telecommunication Union (ITU), Fondation Carminac, Bonn/Geneva/Paris.

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**Custodian agency(ies):** [UNSD](#), [UNEP](#)



## Target 12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities

Indicator 12.7.1 Number of countries implementing sustainable public procurement policies and action plans

**Custodian agency(ies):** UNEP

## Target 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

Indicator 12.8.1 Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment

**Custodian agency(ies):** UNESCO-UIS

## Target 12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production

Indicator 12.a.1 Installed renewable energy-generating capacity in developing and developed countries (in watts per capita)

### Installed renewable energy-generating capacity in developing and developed countries is making progress and is on a continuous rise

Renewable installed capacity per capita is making progress and is on a continuous rise. In 2022, it reached 424 watts per person globally, 1,073 watts per person in developed countries and 293 watts per person in developing countries. The renewable capacity grew 8.5 percent from 391 watts per person in 2021 and presenting an all-time trend of 8.1 percent compound annual growth rate (CAGR) over five-year periods. Developed countries had a smaller growth of 7.2 percent from 1,001 watts per person in 2021 and with a CAGR of 6.9 percent. Developing countries drove the global growth in 2022, increasing by 10.1 percent and with a CAGR of 9.5 percent.

The case of developing countries continues to be relevant as these countries are responsible for most of the growth in renewable capacity per capita given the proliferation of solar and wind energy of the 2010s.

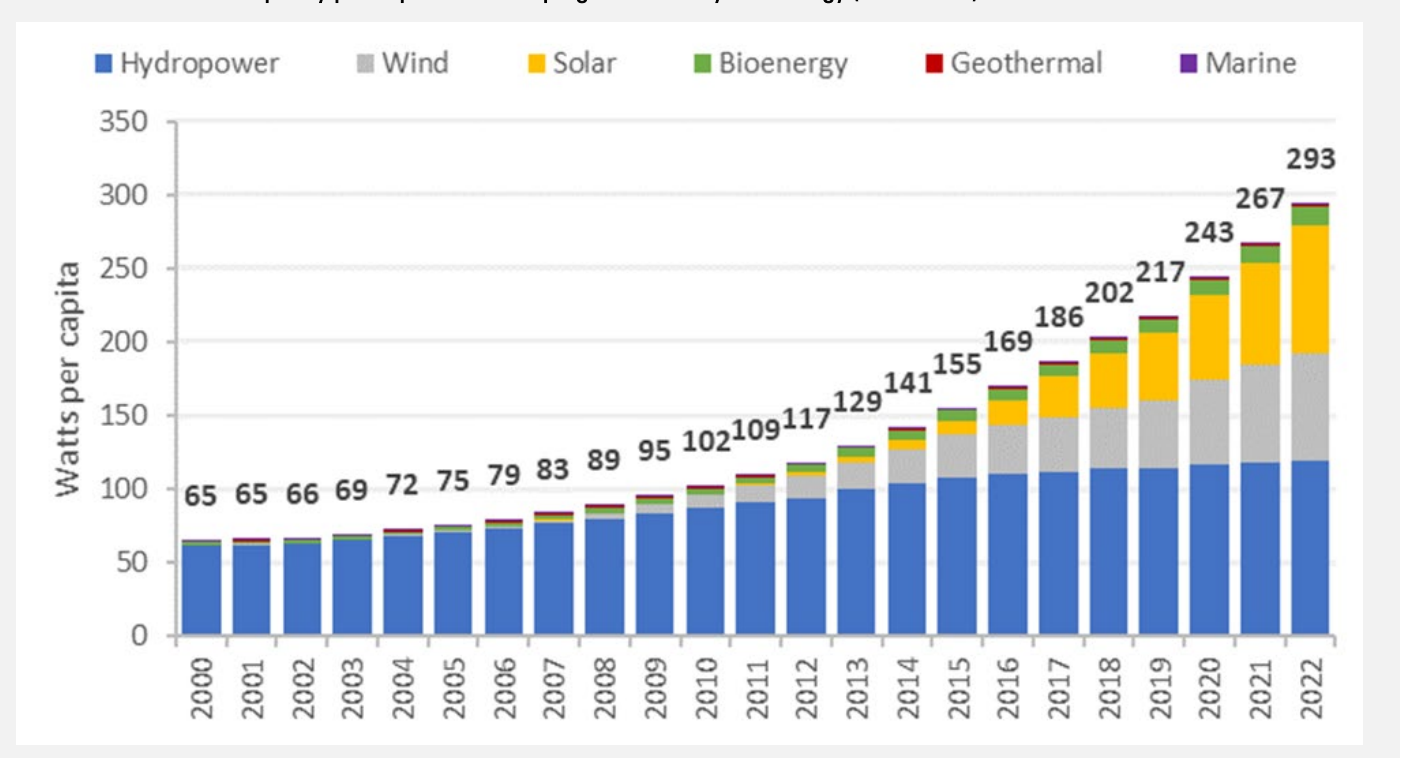
In 2022, the share of installed renewable energy-generating capacity reached its peak, at 40.3 percent, with 424 watts per capita of installed renewable capacity. This value has reached parity across developing groups, with developed countries reaching 40.1 percent and developing countries at 40.4 percent. While the share of renewables is equal across these groups, the story for renewable wattage per capita is vastly different.

Developing countries only had 293 renewable watts per person in 2022, close to the global average of 424 watts per person, but developed countries stood 3.7 times larger, at 1,073 watts per person, indicating large disparities in how renewable electricity covers the population in developing countries. In fact, it was not until 2015 that developing countries reached the same level of renewable electricity per person that developed countries had at the turn of the century.

Over the past decade, growth in renewable energy-generating capacity varied across regions. The greatest capacity growth was 13.2 CAGR seen in Eastern and South-eastern Asia, from 178 to 612 watts per person between 2012 and 2022, primarily due to additions of wind and solar power. The second largest growth rate also corresponds with the best performing region in 2022: 8.2 percent in Oceania, moving from 582 to 1,283 watts per person – larger than the developed world average. Other regions grew below the global average of 7.7 CAGR over the decade, with Latin America and the Caribbean showing the slowest growth rates at 4.8 CAGR and Sub-Saharan Africa with the lowest average values of 39 watts per person in 2022.

Meanwhile, growth rates across country groups reveal concerning disparities, with small island developing states (SIDS), least-developed countries (LDCs), and landlocked developing countries (LLDCs) lagging even behind other developing countries. In 2022, SIDS and LLDCs reached 101 watts per person, while LDCs stayed at 39 watts per person of renewable electricity. These regions represent a widening gap compared with the rest of the world. At current rates, LDCs would need almost 41 years, LLDCs would need 38 years, and SIDS would need 11 years to reach a level of deployment similar to the average levels in developing countries in 2022.

Renewable installed capacity per capita in developing countries by technology (2000-2022)



### Additional resources, press releases, etc. with links:

- More analysis will be published in the annual Tracking SDG 7 report

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## Target 12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products

### Indicator 12.b.1 Implementation of standard accounting tools to monitor the economic and environmental aspects of tourism sustainability

#### The monitoring of tourism for sustainable development is gradually progressing but more is needed, especially in Africa and SIDS

Compared to data reported in 2021, 2022 data shows an increasing number of countries implementing tools to monitor the sustainable development impacts of tourism, as called for in Target 12.b. This indicates that relevant statistical operations, paused during the COVID-19 pandemic, are being progressively resumed in countries. In addition, some countries implemented relevant statistical monitoring tools for the first time. These efforts not only support a better understanding of tourism's contribution to sustainable development but also highlight the resilience of national systems of tourism statistics.

A country's level of implementation of the Tourism Satellite Account (TSA) and the System of Environmental Economic Accounts (SEEA) provides a good indication of its capacity to measure the economic and environmental sustainability of tourism. This has been acknowledged in the Statistical Framework for Measuring the Sustainability of Tourism recently endorsed by the United Nations Statistical Commission.

The number of countries having developed at least one (TSA or SEEA) table for evaluating key elements of tourism's sustainability has increased, reaching a historical record of 99 countries with tables for 2019 (compared to 94 countries in the previous reporting exercise). This increase is mostly due to the increase in compilation of TSA tables, which are more widely implemented than SEEA tables. The decreasing number of countries with tables over the last three years is explained as a natural lag, consequence of the time required to produce the tables.

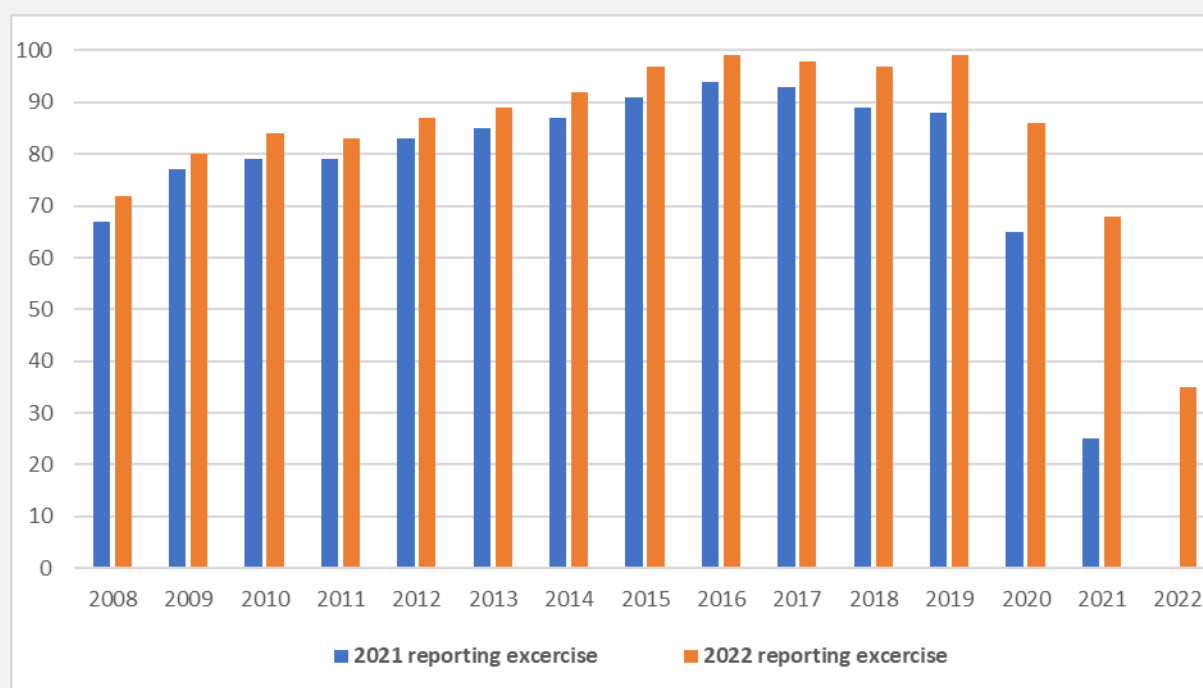
Globally the numbers are encouraging and all regions show an improved monitoring capacity since 2008. However, regional inequities in statistical capacities to confront the monitoring of sustainable tourism persist. For most regions, the share of countries able to report data does not surpass 50%. Only 'Eastern Asia and South-eastern Asia' and 'Northern America and Europe' are situated comfortably above this threshold, boasting in a majority of countries with a good statistical preparedness to monitor the sustainable development impacts of tourism.

'Oceania excluding Australia and New Zealand' and 'Sub-Saharan Africa' have relatively the lowest share of countries reporting data tables. On a more positive note, in both these cases, the reporting countries form a relatively stable cohort that manage to maintain their statistical infrastructures over the years.

Although the data shows that efforts are certainly paying off over the long run, work is needed to uplift statistical capabilities in more countries across all world regions. Capacity development and investments for implementing internationally agreed standards is imperative to steer action for sustainable development impacts of tourism, which is directly relevant to Target 12.b and also Targets 8.9 and 14.7. The recently endorsed Statistical Framework for Measuring the Sustainability of Tourism can function as a catalyst for this.

**Figure 1. Global implementation of tools to monitor the sustainable development impacts of tourism**

*Countries that report compiling at least one TSA/SEEA Table, comparison of tables reported in 2021 and 2022*



#### Additional resources, press releases, etc. with links:

- [Tourism statistics database](#)
- [Statistical Framework for Measuring the Sustainability of Tourism](#)

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**Custodian agency(ies):** UNWTO

Target 12.c Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities

**Indicator 12.c.1** Amount of fossil-fuel subsidies (production and consumption) per unit of GDP

**Subsidies to fossil fuel subsidies reached a record high in 2022, exceeding USD 1.5 trillion globally for the first time**

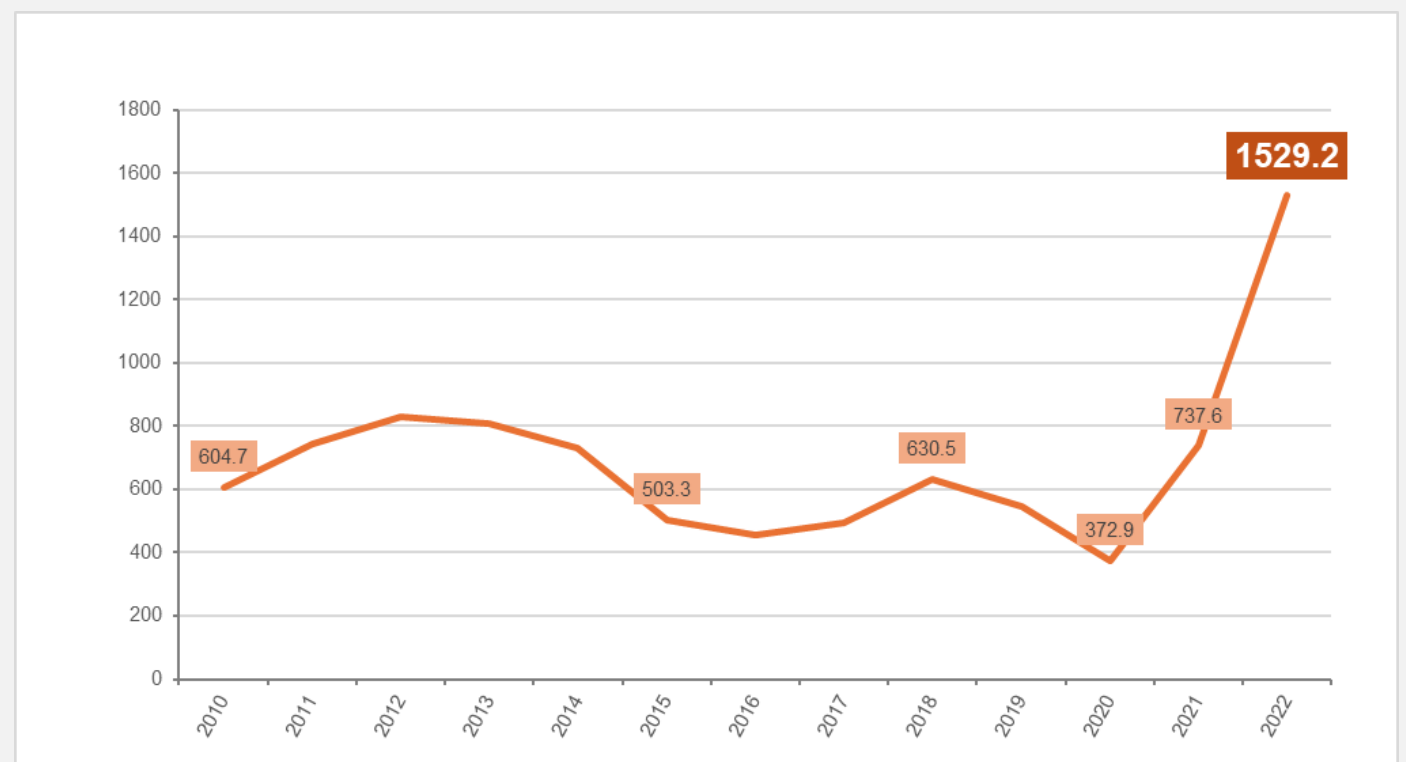
Disruptions in global energy markets brought by the invasion of Ukraine by Russia led to a spike in energy prices, which automatically inflated the volume of subsidies and widened the gap between the price paid by consumers and the actual cost of energy. It also led many Governments to introduce new measures to shelter their industry and populations from the pressure of inflation. While this upward trend in volume of subsidies was already felt in 2021 at USD 737 billion, the year 2022 saw a record high with 1.53 trillion USD of subsidies to fossil fuels (see Chart 1). As a result, public money supporting the production and consumption of oil, coal, and gas, has more than doubled between 2021 and 2022, and more than tripled from its level in 2015, reaching 455 billion USD in Northern America and Europe, 327 billion USD in Western Asia and Northern Africa, and 322 billion USD in Central and Southern Asia, the three regions providing the highest volumes of subsidies (see Chart 2). All regions saw an increase in subsidies of 36-58% between 2021 and 2022, except for Oceania (+22%) and Australia-New Zealand (+6%). Subsidies are provided in the form of direct budget expense (e.g. transfer to energy state-owned enterprises or cash transfers to consumers), revenue loss (e.g. tax cuts on fossil-fuel produced energy consumption for all or specific industries) and price support (e.g. through price stabilization mechanisms).

By artificially lowering the price of fossil fuels, such subsidies harm the competitiveness of cleaner energy sources and hinder the transition process to a low-carbon energy system. They can also be a large strain on government national budgets, especially at a time where a large number of countries are facing intense fiscal constraints and high debt levels. Finally, fossil fuel subsidies are often designed as a socio-economic instrument aiming to facilitate access to cheaper energy for vulnerable households and companies. Yet, such subsidies often benefit wealthy individuals and carbon-intensive companies disproportionately, as they tend to consume more energy than lower-income households.

Despite numerous pledges to phase out fossil fuel subsidies at national, regional and national levels, including the recent 2021 Glasgow Climate Pact, calling Governments to “phase-out ... inefficient fossil fuel subsidies, while providing targeted support to the poorest and most vulnerable”, data shows little to no action on this objective at global level.

Reporting at national level remains limited, with few countries having reported data since the data collection process was initiated in 2022. The lack of tracking and reporting is an obstacle to both reform and transparency. Credible, high-quality data is a requirement for the design of a reform aiming to phase out subsidies in a way that is both economically viable and socially fair. Furthermore, citizens are entitled to know what share of public finance goes towards supporting the consumption and production of fossil fuels.

**Chart 1: Global estimate of fossil fuel subsidies 2010 - 2022 (USD billion nominal)**



**Chart 2: Fossil fuel subsidies estimates by region in 2022 (per cent)**



**Additional resources, press releases, etc. with links:**

- Measuring Fossil Fuel Subsidies in the Context of the Sustainable Development Goals: <https://www.unep.org/resources/report/measuring-fossil-fuel-subsidies-context-sustainable-development-goals>

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