CHAMPIONS 12.3

SDG TARGET 12.3 ON FOOD LOSS AND WASTE: 2022 PROGRESS REPORT

An annual update on behalf of Champions 12.3

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

EXECUTIVE SUMMARY

Highlights

- At the near-halfway point of the Sustainable Development Goals (SDGs), global progress by governments and companies on achieving SDG 12.3 is slower than needed when compared to the Champions 12.3 Road Map.
- In regard to setting targets that align with SDG 12.3, both countries and companies are lagging behind where they should be. However, this may be because leaders assume that the SDGs serve as an implicit target and therefore do not need to restate a specific target for food loss and waste.
- Companies are outperforming national governments when it comes to measurement and reporting of food loss and waste, but significant data gaps still exist. Developments from the International Organization for Standardization (ISO) and the European Commission may improve country-level reporting in coming years.
- Companies are also taking action to address food loss and waste at a greater rate than countries, although some large countries have begun to take more prominent action.
- As for companies, more of them need to work with their suppliers to address food loss and waste through the entire supply chain. Retailers are currently leading other companies in this regard.
- With eight years to go until 2030, more countries and companies need to follow the examples of global leaders and begin systematically addressing food loss and waste.

ABOUT THIS PUBLICATION

SDG Target 12.3 on Food Loss and Waste: 2022 Progress Report is the seventh in an annual series of publications providing an assessment of the world's progress toward achieving Sustainable Development Goal Target 12.3. SDG 12.3 aims to "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." Prepared on behalf of Champions 12.3, this publication seeks to inform decision-makers in government, business, academia, and civil society about recent advances and what remaining steps need to be addressed if the world is to achieve the target. The *2016–2021 Progress Reports* can be found at https://www.champions123.org.

This progress report contains text from the previous editions in the series, with permission of the authors of those editions.

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Summary

According to the latest available data, about 8 percent of all food produced in the world is lost on the farm; 14 percent is lost between the farm gate and the retail sector; and 17 percent is wasted at retail, food service providers, and in households, resulting in significant impacts on human livelihoods and well-being, the global economy, and the environment. Over the past two years, events such as Russia's invasion of Ukraine and the COVID-19 pandemic have exacerbated food loss and waste by continually disrupting the human food supply chain.

In September 2015, the United Nations General Assembly adopted a set of 17 SDGs, with SDG 12 seeking to "ensure sustainable consumption and production patterns." The third target under this goal (SDG 12.3) calls for halving per capita global food waste at the retail and consumer levels and reducing food losses along production and supply chains (including postharvest losses) by 2030.

Companies and countries are both coming up short in using the "Target-Measure-Act" approach to addressing food loss and waste. By the end of 2021, just a handful of governments was implementing targets toward addressing food loss and waste, conducting measurement of the food loss and waste occurring within their borders, and taking action to systematically reduce food loss and waste. Companies have been more successful in implementing the "Target-Measure-Act" approach, but more companies across a wider range of sectors need to mobilize toward food loss and waste reduction.

The Challenge

According to the latest available data, about 8 percent of all food produced in the world is lost on the farm; 14 percent is lost between the farm gate and the retail sector; and 17 percent is wasted at the retail, food service, and household stages of the food supply chain (FAO 2018; UNEP 2021; WWF-UK 2021). This huge level of inefficiency has significant impacts.

Consider food security. In some areas, food loss is most common during either production or postharvest handling and storage. This can affect the ability of farmers to make a good living and, at times, feed their families. In other places, food waste near the end of the food supply chain can affect household nutrition and spending. Regardless of where the food loss and waste occur, in a world where nearly 1 in 10 people is undernourished (FAO 2018), it is a travesty that more than 2 billion tons of food each year never gets consumed (WWF-UK 2021).

In the past several years, global shocks including the COVID-19 pandemic and Russia's invasion of Ukraine have led to food shortages, restrictions on exports, and increased global food prices to the highest levels ever recorded (Glauber et al. 2022, Treisman 2022). In the face of such shocks, reducing food loss and waste effectively means increasing the amount of food available to consumers. Recovery of surplus food that would otherwise be wasted and ensuring its redistribution to people in need can also help address growing food security concerns.

Consider the economic costs. Food loss and waste results in more than US$1 trillion in economic losses globally per year (Scialabba 2015; WWF-UK 2021). Therefore, investing in food loss and waste reduction efforts can reap significant economic benefits. For example, one study found that food-related businesses such as canteens, hotels, and restaurants can experience up to a 14-fold return on their investment in food waste reduction programs (Hanson and Mitchell 2017).

Consider the environment. The production of food that is ultimately lost or wasted requires a land area greater than that of China (FAO 2013). Moreover, food loss and waste generates about 8–10 percent of global greenhouse gas emissions annually (IPCC 2020). To put this in perspective, if food loss and waste were a country, it would be the third-largest greenhouse gas emitter on the planet—surpassed only by China and the United States. In fact, reducing food loss and waste by half would avoid 1.5 gigatons of carbon dioxide equivalent emissions per year by 2050, an amount greater than the current energy-related and industry-related emissions of Japan (Searchinger et al. 2019). In light of these impacts, reducing food loss and waste can generate a triple win. It can help feed more people. It can increase savings for farmers, businesses, and households. And it can reduce the food system's pressure on the environment and help mitigate climate change.

A Historic Opportunity

In September 2015, a historic window of opportunity opened to elevate the issue of food loss and waste reduction on the global agenda. At the United Nations General Assembly, countries of the world formally adopted a set of 17 SDGs as part of the 2030 Agenda for Sustainable Development: global goals to end poverty and hunger, protect the planet, and ensure prosperity for all populations and generations (UN 2017). SDG 12 seeks to "ensure sustainable consumption and production patterns." The third target under this goal (SDG 12.3) calls for halving per capita global food waste at the retail and consumer

levels and reducing food losses along production and supply chains (including postharvest losses) by 2030. Many countries and initiatives, including Champions 12.3, are interpreting this target to mean that all food loss and waste across the food supply chain should be reduced by 50 percent.

This ambitious yet achievable target has the potential to embed the reduction of food loss and waste firmly in public and private-sector strategies around the world for the first time. Moreover, national action on food loss and waste can help countries meet their commitments to the Paris Agreement on climate change. It is truly a global target; solutions may differ between developed and developing countries, but every country, company, and individual has a role to play.

A Road Map to Assess Progress

It has been seven years since the launch of the SDGs. So how much progress has been made in relation to SDG 12.3? Is the world on track, or is the world behind?

In the 2017 edition of this progress report (Lipinski et al. 2017), the authors introduced a "road map" of milestones (grouped into three-year segments) based on Champions 12.3's "Target-Measure-Act" approach (Box 1). This road map is designed to track global progress by governments and businesses toward achieving SDG 12.3 and assesses where progress is sufficient or insufficient relative to Target-Measure-Act. For more information on how the milestones were developed, see the section titled "Going Forward: A Road Map and Assessment" in the 2017 progress report.

Table 1 shows our assessment of where the world is in relation to achieving Target 12.3 after seven years of progress. We use the following color-coded indicators:

Green. There is sufficient progress to suggest that the sector is on track to meet or exceed the milestone within the time period.

Yellow. There is some progress toward meeting the milestone, but it is below the pace needed to meet the milestone within the time period.

Red. There is little progress toward meeting the milestone, or previous progress is backsliding.

These indicators should be taken solely as an assessment of progress to date. We will indicate in future progress reports when a milestone has been achieved, even if retroactively. Moreover, our assessment is based on publicly available information; thus, there may be developments toward meeting Target 12.3 of which we are unaware, although we strove to be as complete as possible in our search (Box 2).

BOX 1. Why Target-Measure-Act?

The Target-Measure-Act approach to reducing food loss and waste is based on the simple steps wherein a country or company sets a food loss and waste reduction target, measures its food loss and waste, and acts to reduce the hot spots of food loss and waste.

- Target. Targets set ambition, and ambition motivates action. Therefore, as a first step toward reducing food loss and waste, governments and companies should set reduction targets aligned with SDG 12.3.
- Measure. The adage "What gets measured gets managed" holds true for food loss and waste as well. Quantifying food loss and waste within borders, operations, or food supply chains can help decision-makers better understand how much, where, and why food is being lost or wasted. This information is the foundation for developing and prioritizing reduction strategies. In addition, measurement is necessary if entities are to know whether they are on track to meet SDG 12.3; they need to quantify a base-year amount of food loss and waste and monitor change over time.
- Act. Setting targets and measuring food loss and waste are important. But what ultimately matters is action. Therefore, governments and companies need to follow through on implementation. Flanagan et al. (2019) provide recommendations on several actions that actors in the food supply chain, from farmers to consumers, can take to reduce food loss and waste.

Source: Lipinski et al. 2016.

TABLE 1. **Road Map to Achieving SDG Target 12.3**

		2016–2018	2019–2021
TARGET	GOVERNMENTS	Countries with **40%** of the global population have set specific FLW[a] reduction targets aligned with Target 12.3.	Countries with **>95%** of the global population have set specific FLW reduction targets aligned with Target 12.3.
	COMPANIES	**60%** of the world's 50 largest food companies[b] by revenue (spanning manufacturing, production, processing, retail, and food service sectors) have set specific FLW reduction targets aligned with Target 12.3.	**>95%** of the world's 50 largest food companies have set specific FLW reduction targets aligned with Target 12.3.
		Among those setting targets, **half** are working with their suppliers to set their own targets.	Among those setting targets, **all** are working with their suppliers to set their own targets.
MEASURE	GOVERNMENTS	Countries with **20%** of the global population have quantified base-year FLW and have started reporting on FLW.	Countries with **40%** of the global population have quantified base-year FLW and have started reporting on FLW.
	COMPANIES	**20%** of the world's 50 largest food companies have quantified base-year FLW and have started measuring and reporting on FLW.	**40%** of the world's 50 largest food companies have quantified base-year FLW and have started measuring and reporting on FLW.
		Among those measuring and reporting, **half** are engaged with their suppliers to quantify the latter's FLW.	Among those measuring and reporting, **half** are engaged with their suppliers to quantify the latter's FLW.
ACT	GOVERNMENTS	Countries with **20%** of the global population are actively working at scale to reduce FLW.[c]	Countries with **40%** of the global population are actively working at scale to reduce FLW.
			First country halves its rate of FLW.
	COMPANIES	**10%** of the world's 50 largest food companies have active FLW reduction programs.	**20%** of world's 50 largest food companies have active FLW reduction programs.
		Among those taking action, **half** are engaged with their suppliers to reduce the latter's FLW.	Among those taking action, **half** are engaged with their suppliers to reduce the latter's FLW.
		The **first** global company halves FLW in its own operations.	The **first** global company halves FLW in its own operations and its supply chain.
OVERALL PROGRESS[d]		**5% reduction** in FLW achieved globally	**10% reduction** in FLW achieved globally

Green. There is sufficient progress to suggest that the sector is on track to meet or exceed the milestone within the time period.

Yellow. There is some progress toward meeting the milestone, but it is below the pace needed to meet the milestone within the time period.

Red. There is little progress toward meeting the milestone, or previous progress is backsliding.

2022–2024	2025–2027	2028-2030
Countries with **60%** of the global population have quantified base-year FLW and have started reporting on FLW.	Countries with **>95%** of the global population have quantified base-year FLW and have started reporting on FLW.	
60% of the world's 50 largest food companies have quantified base-year FLW and have started measuring and reporting on FLW. Among those measuring and reporting, **all** are working with their suppliers to reduce the latter's FLW.	**>95%** of the world's 50 largest food companies have quantified base-year FLW and have started measuring and reporting on FLW. Among those measuring and reporting, **all** are working with their suppliers to reduce the latter's FLW.	
Countries with **60%** of the global population are actively working at scale to reduce FLW. **10** countries halve their rate of FLW.	Countries with **>95%** of the global population are actively working at scale to reduce FLW. **50** countries halve their rate of FLW.	
40% of the world's 50 largest food companies have active FLW reduction programs. Among those taking action, **half** are engaged with their suppliers to reduce the latter's FLW.	**60%** of the world's 50 largest food companies have active FLW reduction programs. Among those taking action, **half** are engaged with their suppliers to reduce the latter's FLW.	**>95%** of the world's 50 largest food companies have active FLW reduction programs. Among those taking action, **half** are engaged with their suppliers to reduce the latter's FLW.
20% reduction in FLW achieved globally	**30% reduction** in FLW achieved globally	**50% reduction** in FLW achieved globally

Notes:

[a] FLW = food loss and waste.

[b] See Food Loss + Waste Protocol. 2017. Home page. https://flwprotocol.org/.

[c] Evidence of working at scale could include the presence of nationwide voluntary agreements between government agencies and businesses, passage of public policies aimed at reducing FLW, increased investment in FLW reduction, consumer campaigns, and so on.

[d] Currently, there is no globally agreed-upon base-year FLW quantification. Thus, it is not possible to measure overall progress against SDG Target 12.3 until the base-year FLW levels have been quantified.

BOX 2. **Data Sources for This Report**

Examples of progress to date were found through a literature review, expert consultation, and Internet searches in the English language. Sources included reports by governments, nongovernmental organizations, and businesses as well as media and journal articles. Data gathered by the Food and Agriculture Organization of the United Nations (FAO) for the Food Loss Index and by the United Nations Environment Program (UNEP) for the Food Waste Index were especially valuable for assessing what measurement has taken place to date. Examples of progress also were gathered by requesting information from a group of over 100 associates who support members of Champions 12.3 and Friends of Champions 12.3 coalitions.

Because restricting searches to the English language may have affected the geographic spread of examples, specific effort was made to gather input from experts working in non-English-speaking countries. Likewise, special effort was made to gather input from low- and middle-income countries because these regions tend to be underrepresented in data uncovered by the literature review. Despite all these efforts, the examples highlighted in this report are not exhaustive. The developments profiled as being among the most significant within the previous year were a result of this research.

2022 ASSESSMENT

After the first set of milestones on the Target 12.3 Road Map concluded in 2018, we found that much inspiring activity was occurring to reduce food loss and waste by both countries and companies, but progress was ultimately slower than what is needed (as can be seen in Table 1).

Overall, this general trend continues for the milestone period of 2019-21. Some countries and companies continue to set strong examples of how to apply Target-Measure-Act to achieve SDG 12.3, but not yet at a scale that puts the global community on track to meet the 50 percent reduction goal.

Target

Governments

By the end of 2021, countries and regional blocs representing roughly 55 percent of the global population had set specific targets in line with SDG 12.3. Those countries and blocs include the African Union, Argentina, Australia, China, European Union, Indonesia, Japan, Malaysia, South Africa, the United Arab Emirates, the United Kingdom, the United States, and Vietnam.

However, many countries may not have adopted a separate target in addition to the SDGs, seeing the SDGs as an official target that does not require a separate national target. Some cities and regions with large populations have set targets as well, but not enough to make a significant impact on this milestone. Therefore, for the 2019–21 milestone goal of "Countries with >95 percent of the global population have set specific food loss and waste reduction targets aligned with Target 12.3," we must give this milestone a **red** assessment.

Companies

By the end of 2021, 39 of the world's 50 largest food companies (by revenue) had a food loss and waste reduction target in place. More specifically, all of the retailers within this group and almost all of the manufacturers have adopted a target in line with SDG 12.3. Among the top 50, companies focused on production and distribution were less likely to have adopted a target, with just over half of the companies in this sector having done so. This means that 78 percent of the top 50 companies have adopted a target, which falls short of the 2019-21 milestone goal of "More than 95 percent of the world's 50 largest food companies have set specific FLW reduction targets aligned with Target 12.3." However, just nine more companies would need to adopt targets in line with SDG 12.3 in order to exceed 95 percent, so we give this milestone a **yellow** assessment.

Although some companies are engaging with suppliers, not all companies (among the world's 50 largest) that have set targets themselves are actively engaging with their suppliers. By the end of 2021, the authors found that only a small subset of these companies (about one in four) is engaging directly with suppliers, primarily those companies in the retail stage of the supply chain. Therefore, for the 2019-21 milestone goal of "Among those setting targets, all are working with their suppliers to set their own targets," we give this milestone a **red** assessment, since ~25 percent falls well short of the entirety of the group.

Measure

Governments

As of the end of 2021, just a handful of countries measured their food loss and/or waste throughout the entire human food supply chain, including Argentina, Australia, Canada, Colombia, Denmark, Israel, Italy, Japan, Finland, Mexico, the Netherlands, New Zealand, Norway, Saudi Arabia, Slovenia, Spain, Sweden, the United Kingdom, and the United States.[1] This group constitutes about 12 percent of the global population, which is well short of the 2019-21 milestone of "Countries with 40 percent of the global population have quantified base-year FLW and have started reporting on FLW." For this milestone, we give a **red** assessment.

However, there is reason to believe that measurement at the country level will improve over time, as new tools become available to countries. The Food Loss Index, developed by the FAO, estimates food losses occurring within a country from farm gate up to (but not including) food retail (FAO 2018). The complementary Food Waste Index, developed by UNEP, estimates food waste occurring from the retail stage of the food supply chain through the household consumption stage (UNEP 2021).

Additionally, in 2019, the European Commission adopted a common methodology for EU countries to measure food loss and waste. The first monitoring exercise carried out for 2020 will be published in autumn 2022. (European Commission n.d.). Also, the ISO has assembled a working group for the purposes of "standardization of food loss and waste, providing a framework for food organizations throughout the food chain, to work actively and effectively with measuring and reduction of food loss and waste" (ISO 2021). In light of these developments, it is possible that additional countries will begin reporting in the near future.

Companies

At the end of 2021, 28 of the world's 50 largest food companies were measuring their food loss and waste, 19 of which also report their food loss and waste inventories publicly. This represents 38 percent of the world's largest food companies that are measuring *and* reporting. This falls slightly short of the 2019-21 milestone of 40 percent, but given that many more companies are measuring internally as well, we give this milestone a **green** assessment. In fact, if those remaining companies chose to begin reporting publicly, the private sector would nearly already meet the 2022-24 milestone of 60 percent measuring and reporting.

Of those 19 companies who are reporting their food loss and waste inventories publicly, 10 of them are also working with their suppliers. Therefore, we give the 2019–21 milestone, "Among those measuring and reporting, half are engaged with their suppliers to quantify the latter's FLW," a **green** assessment as well. This engagement is in large part thanks to initiatives like the Courtauld Commitment, the Consumer Goods Forum Food Waste Coalition, 10x20x30, and the Pacific Coast Collaborative, all of which have encouraged companies to engage their suppliers in their food loss and waste journey. This success suggests that this approach of engaging suppliers is worth expanding into other geographies, as well as further up the supply chain toward the production stages.

Act

Governments

In the 2019 edition of this assessment, the authors found that countries representing 15 percent of the world's population were acting at scale on food loss and waste (Flanagan et al. 2019). Since then, a number of countries have begun acting at scale on food loss and waste, most notably China (see Box 3 for additional examples of country-level action). As of the publication of this report, we assess that countries representing 35 percent of the world's population are now acting at scale to address food loss and waste within their borders. This falls slightly short of the 2019-21 milestone, which set a target of 40 percent for this goal. We give this milestone a **yellow** assessment, but the increase in additional action since 2019 indicates a positive progression in this regard.

A new milestone target for 2019–21 is that the "first country halves its rate of food loss and waste." This goal has not yet been achieved by any country that is publicly reporting its food loss and waste. The United Kingdom has come closest, with a 27 percent reduction in food loss and waste per capita (excluding inedible parts) over the course of a decade of measurement and action. It is possible that other countries have achieved larger reductions, but the lack of countries measuring and reporting at a national level hinders the tracking of food loss and waste reduction. Thus, we give this milestone a **red** assessment.

BOX 3. **Examples of Country-Level Action (Non-Exhaustive)**

Several countries and regional blocs have taken steps toward reducing food loss and waste in recent years:

Australia – Launched in October 2021, the Australian Food Pact is a voluntary agreement that brings together organizations across the food supply chain to reduce their food loss and waste. Underpinned by Australia's National Food Waste Strategy and the National Waste Policy Action Plan, the initiative focuses on food waste prevention, food reuse and donation, and food chain transformation and innovation.

China – In 2021, China's Standing Committee of the National People's Congress enacted a wide-ranging law aimed at reducing food waste at the food service and consumer levels. The law calls for fines for excessive food preparation and consumption and also contains a mandate for offices, schools, and food delivery companies to reduce waste within their operations and cafeterias Also, in 2022 the National Development and Reform Committee published the Action Plan on Food Loss and Waste Reduction, aimed at reducing food loss and waste throughout the entire food supply chain.

European Union – Several EU countries have adopted national laws and/or implemented voluntary agreements to address food loss and waste that are often part of national strategies or food waste prevention programs. The European Commission has also released guidance for obligatory reporting of food waste levels by member states and, in 2021, amended EU food hygiene legislation in order to facilitate food donation while guaranteeing its safety for consumers. The commission is also working on legislative proposals to revise EU date labeling rules by the end of 2022 and to set EU-level binding targets for food waste reduction by the end of 2023.

New Zealand – The New Zealand Ministry for the Environment has begun implementing national programs to help households prevent and reduce food waste, is supporting the development of a voluntary commitment for food businesses, and is undertaking research and monitoring of attitudes and behaviors around food waste.

Turkey – A national campaign in Turkey aimed at food loss and waste reduction found that after one year of awareness-raising around food loss and waste, households saved around $80 million due to reducing food loss and waste. The results also showed a 20 percent increase in awareness around date labeling and a 40 decrease in over preparation and overconsumption of food.

United Kingdom - In 2021, the UK launched its first Food Waste Action Week campaign aimed at raising awareness of and reducing food waste in the UK. The campaign was supported by businesses and seen by 1 in 10 adults in the UK. Nearly 50 percent of them said they had or would do something differently as a result of seeing the campaign. Also in 2021, the organization WRAP reported 251 kt of food waste worth £365 million had been saved from waste and that, as a result of collaborative action by businesses, 106,000 tonnes of surplus food had been donated.

Companies

By the end of 2021, 29 of the world's largest 50 food companies had active programs for food loss and waste reduction. This 58 percent greatly exceeds the 2019-21 milestone of "Twenty percent of the world's 50 largest food companies have active FLW reduction programs," so we give this milestone a **green** assessment. Additionally, many companies outside of the top 50 have begun taking major action, in large part due to the growth of public-private partnerships aimed at tackling food waste, as well as initiatives aimed at taking action across the supply chain.

Just over a third of companies with active food waste reduction programs are engaging with their suppliers to reduce the latter's food loss and waste as of 2021. We therefore give the 2019–21 milestone that, "Among those taking action, half are engaged with their suppliers to reduce the latter's FLW," a **yellow** assessment. As with the Target and Measure milestone, retailers are the most active in engaging their suppliers at scale. In order to meet this milestone going forward, more companies should engage with initiatives such as the CGF Coalition of Action and 10x20x30 to extend their actions up the supply chain to involve their suppliers.

A new milestone for 2019-21 is that the first global food company halves its rate of food loss and waste. In September 2022, Ingka Group, IKEA's largest retailer, announced that its IKEA stores had collectively reduced food waste by 54 percent. Tesco has also reported a 45 percent food loss and waste reduction since beginning reporting in 2016-17 and is now aiming to achieve a 50 percent reduction from that baseline by 2025, five years faster than its original 2030 target (Tesco 2022). Other companies, such as Ahold Delhaize, the Kellogg Company, and Grupo Bimbo, have also reported impressive reductions. Therefore, we give this milestone a **green** assessment for the current period.

IN CLOSING

Just eight years remain to achieve the SDGs. More companies and countries are taking action since our last full-scale assessment in 2019, and in some cases, the world is on track to achieve SDG 12.3. However, in many areas, especially around target-setting and measurement, progress is still insufficient compared to our road map. Action is the most important aspect of the "Target-Measure-Act" approach, but without measurement, it is impossible to know if action is sufficient. Governments also continue to lag behind businesses in addressing SDG 12.3.

However, the progress shown by some governments and companies makes it clear that SDG 12.3 *can* be achieved, and that results can occur in a relatively quick time frame. And there are encouraging developments in other sectors. Start-ups focusing on food loss and waste are growing in number, and consumer consciousness around food loss and waste is at an all-time high (Capgemini Research 2022).

But at this near-halfway point between the adoption of the SDGs in 2015 and the target date of 2030, it is clear that time is running out to achieve SDG 12.3 and realize the benefits of food loss and waste reduction for people and the planet.

ENDNOTES

1 Other countries have measured segments of the supply chain, but not the entire chain, and therefore are not included in this list.

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All tons are metric tons unless otherwise stated.

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