



# 12 RESPONSIBLE CONSUMPTION AND PRODUCTION



## MODERATORS

**Matthew Bishop and Jessica Long**

**November 2020**

The 17 Rooms initiative is convened by the Brookings Institution and The Rockefeller Foundation to stimulate near-term cooperative actions to advance the 17 Sustainable Development Goals (SDGs). This document summarizes insights and actions that emerged from the working group discussions in Room 12 during the 17 Rooms 2020 flagship process. The text was independently prepared by the Room's Moderators and participants, in response to the common question asked of all Rooms in 2020: "In light of recent crises linked to COVID-19, systemic racism, and other urgent challenges, what are 1 to 3 actionable priorities over the coming 12-18 months that address near term needs while also making a decisive contribution to protecting or advancing your Goal's 2030 results? What actions can members of your Room take to advance these priorities?" Corresponding documents prepared by all the other Rooms are available [here](#), alongside a synthesis report prepared by the 17 Rooms secretariat.

According to the UN, sustainable consumption and production is about promoting resource and energy efficiency, sustainable infrastructure, and providing access to basic services, green and decent jobs and a better quality of life for all.

## Situation

If the global population reaches 9.6 billion by 2050, the equivalent of [almost 3 planets](#) will be required to sustain current lifestyles. The patterns that need to change are outlined across the 8 targets on efficient use of natural resources, halving global food waste, sound management of chemicals, reducing waste, and encouraging the private sector to integrate sustainable practices across their value chain (refer to sidebar).

### SDG 12 HIGH PRIORITY TARGETS

[12.2](#) By 2030, achieve sustainable management and efficient use of natural resources  
[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  
[12.5](#) By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse  
[12.a](#) Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production

Today, 1/3 of food produced – [or 1.3 billion tons](#) – for human consumption each year is wasted; households directly consume [29 percent of global energy](#) and contribute [21 percent of CO2 emissions](#); energy use is projected to grow by another [35 percent in OECD countries by 2030](#); and [more than 1 billion people](#) still do not have access to fresh water.

## Complication

*Unsustainable resource use, dysfunctional/abusive supply chains, minimal use of renewables, insufficient reuse/recycling, fragmented waste treatment, inadequate ESG emphasis by investors, and other funders of activity, are among the trends that impede progress on SDG 12.*

- Less than 0.5 percent fresh water is available of 3 percent total ([which is frozen](#)).
- Less than 1 percent clothing is recycled – costs \$100 billion in materials – [annually](#).
- 95 percent of plastic packaging value is lost – costs \$80-120 billion – [annually](#).
- Only 20 percent of world energy consumption [comes from renewables](#).
- Global food waste costs [\\$940 billion in economic losses annually](#).

## Status

- Worldwide material consumption reached 92.1B tons ([+254 percent since 1970](#)).

### Is this progress?

- Material footprint – the quantity of material extraction required to meet consumption per capita increased from [8 tons in 1990 to 12 tons in 2015](#).
- Policy frameworks are growing: [71 countries and the EU have 303 instruments to regulate sustainable consumption and production](#).
- Average compliance rate on Montreal Protocol, Basel, Rotterdam and Stockholm Conventions is [approximately 70 percent](#).
- UNEP serves as the 10YFP Secretariat and funds SDG 12 implementation in developing countries and countries with [economies in transition](#).
- Over [\\$100 trillion](#) is now invested by money managers that have signed UN Principles of Responsible Investment, but implementation is too often superficial.

## COVID-19 Impact (non-exhaustive)

- COVID-19 impact on consumption patterns have led to supply/demand and supply chain challenges leading to piling up of waste as suppliers dispose overstocked inventories.

- Waste recycling has also been affected due to COVID-19, with [at least 50 curb-side recycling programs reported to be suspended across the U.S.](#)

- Health concerns from COVID-19 have scaled the consumption of single-use items.
- Quarantine policies in most countries have led to changes in consumption patterns. Increased demand for online home delivery of consumer goods will lead to increase in the organic and inorganic waste generated by the households.
- Increased pressure on investors and business to demonstrate commitment to society/stakeholders other than shareholders.

## Recommendations for 2020-2021:

**Overall Recommendation/Hypothesis:** We need to leverage the increased government funding (stimulus/bailout conditions), investments and policies/regulations associated with COVID-19 (e.g. through stimulus packages, conditionality) to “build back better” systems of sustainable production and consumption.

**Focus Area:** Focusing on mobilizing coalitions and recommending government policies that encourage investment in cross-sector partnerships, innovation and minimum standards around **waste** (broadly defined), specifically:

- 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.
- 12.5 - By 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse.

We outline here a global approach, with a focus on piloting circular economies in cities and regions:

### **Waste is an economic, environmental and societal problem.**

- Global food waste costs \$940 billion in economic losses annually. 95 percent of plastic packaging value is lost – costs \$80-120 billion annually.
- Unmanaged waste is polluting our streams, oceans, food systems and is impacting air quality, land stability.
- Women, children and those living in poverty are disproportionately disadvantaged by wasteful and exploitative practices.

**Cities and regional ecosystems are an ideal focus for driving the linear to circular transition**, as they are the growing center of human population, economic growth and use of scarce resources.

- More than [80 percent of global GDP](#) is generated in cities
- More than [two-thirds](#) of the world’s energy is consumed in cities, accounting for over 70 percent of global CO2 emissions
- Cities generated [1.3 billion tons](#) of solid waste per year in 2012, which is forecast on current trends to rise to [2.2 billion tons by 2025](#).
- Material consumption by the world’s cities will grow from 40 billion tons in 2010 to about [90 billion tons by 2050](#).

### **Practical Challenge**

Addressing three main challenges associated with waste (both at time of production and at end of use) that are critical to progress Goal 12:

- 1) **Lack of standards** (e.g. waste hierarchy) and requirements (e.g. percent recycled content) around major categories of waste such as plastics, rubber, electronics, etc. including impact measurement.
- 2) **Insufficient infrastructure** to prevent waste (e.g. in food supply chain) and divert from landfill (e.g. recycling facilities).
- 3) **Insufficient incentives** for investors, businesses, and consumers to focus on reducing wasteful behavior.

### **Desired steps forward in 2021**

Cities (and regions) of all sizes and geography need help transitioning from linear to circular, driving toward responsible consumption and production.

We need to **leverage the increased government funding** (stimulus/bailout conditions), investments and policies/regulations associated with COVID-19 (e.g. through stimulus packages, conditionality) to “**build back better**” systems of sustainable production and consumption.

Several organizations (PACE, OECD, Circle Economy, EMF, etc.) have already developed **tools, frameworks, standards, policies, case studies**, etc. around circular cities. We need to get more cities to start their circular journey by leveraging leading practices.

We propose the creation of a “Circular Cities and Regions Accelerator” program focused on:

- **Spreading global best practices and helping make them locally relevant** (i.e. identifying key waste streams and externalities, relevant policies, potential interventions and incentives, etc.)
- **Bringing together local partners** (e.g. govts, financial institutions, non-profits, local businesses, etc.) to create, own and implement circular practices.
- **Advancing funding and other non-financial resources** to specifically support the adoption of circularity/SDG12 across cities.

## Goal

Over the next 12-24 months, we would like **100 cities to accelerate progress on their circular objectives** (could be at different stages, i.e. strategy, planning, implementation, measurement, etc.) to progress SDG12.

Potential cities include Denver, Lagos, Phoenix, SLC, Seattle, Portland, Amsterdam, Philadelphia, Nairobi, etc. Cities in OECD, C40, WEF

## Immediate next steps

- Strategy and planning (6-8 weeks) – develop the Circular Cities and Regions Accelerator concept, including:
  - theory of change
  - potential partners
  - potential funding sources
  - existing resources/assets
  - key metrics/indicators of success
  - key considerations, e.g. gender and racial equality, mix of urban/rural, human rights
- Cities and partnerships (8-10 weeks)
  - Identify and secure potential partners (private sector, non-profits, donors, knowledge partners, academia, etc.)
  - Secure 2-3 cities (ideally including at least one in a developing country and one in a developed country) for participation in the initial accelerator
  - Develop initial terms and agreements for piloting the Accelerator
- Pilot Circular Cities and Regions Accelerator (6-12 months)
  - Develop city/regional concepts and plans
  - Form local coalitions and confirm funding
  - Develop city/region-specific playbook, leveraging existing or new assets (e.g. OECD, Circle-Economy, EMF, etc.)
  - Provide support to develop strategy and roadmaps/plans
  - Provide support to execute playbook and roadmaps

## SDG Interconnections



Removing fossil fuel subsidies creates fiscal space to redirect resources to addressing poverty, education and healthcare. Coupled with the successful delivery of 12.a would target poverty in target countries such as Nigeria.

---



[20 percent](#) of the world's 50 largest food companies have waste reduction programs. Successfully creating the food loss and food waste index (SDG 12.3) would lower food waste and tackle hunger and nutrition in high-impact zones.

---



Circular principles applied to water recycling, reuse and efficiency increase the quality and accessibility of clear water. Additionally, enhancing materials reuse reduces overall water consumption progressing SDG 6.

---



The growth of renewables stimulates clean energy use, decoupling energy consumption from resource use. Additionally, new sharing models could reduce energy demands and progress SDG 11 along with SDG 12.

---



Increasing research and development – especially across developing economies pursuant to target 12.a – will enable to large-scale innovations required to rotate to sustainable production and consumption technologies.

---



Households consume 29 percent of global energy and the construction industry is one of the largest GHG emitters. Sustainable and resilient infrastructure can conserve energy consumption and reduce emissions.

---



Resource efficiency reduces overall GHG emissions. Circular models of production and consumption that advances secondary materials – instead of virgin materials – often require less energy (especially energy for extraction)

---



Sustainable production will lead to reduced land and water pollution, which currently leads to deforestation and biodiversity loss that impacts marine life.

---



Supply chain labor practices and movements in conflict zones; good governance around waste streams and movement of prohibited items

---



Cross-sector partnerships and financing will be required to accelerate and scale circular innovations

---

## SDG 12 Reference Sheet

Target	Indicators	Progress
<b>12.1</b> Implement the 10-Year framework of programs on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries	12.1.1 Number of countries with sustainable consumption and production (SCP) national action plans or SCP mainstreamed as a priority or a target into national policies	71 countries plus the EU have participated in reporting. A prototype survey was conducted in 2015 and 82 countries had policy instruments supporting shift to sustainable consumption and production. Handled by 10YFP secretariat
<b>12.2</b> By 2030, achieve sustainable management and efficient use of natural resources	12.2.1 Material footprint, material footprint per capita, and material footprint per GDP	The global material footprint rose from <a href="#">43 billion metric tons in 1990 to 54 billion in 2000 to 93 billion in 2017 – 113 percent increase since 1990</a> . Without action it is projected to grow to 190 billion metric tons by 2060.
	12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP	Domestic materials footprint has also increased <a href="#">from 8.1 metric tons of natural resources used per individual in 1990 to 12.2 metric tons in 2017</a> . High income countries are 13x higher than low-income countries (2 metric tons pp)
<b>12.3</b> 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	12.3.1 (a) Food loss index and (b) food waste index	FAO and UNEP lead 12.3 and the indexes continue to be refined. Government targets need to enhance: countries with more than 30 percent global population do not have targets.
<b>12.4</b> By 2020, achieve 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 to minimize their adverse impacts on human health and the environment	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	185 parties to the Basel Conventions; 180 parties to the Rotterdam Convention; 156 parties to the Stockholm Convention; 197 parties to the Focal points for Montreal Protocol and; 35 parties to the Minamata Convention. Next reporting cycle in 2020.
	12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment	The methodology for 12.4.2 completed in July 2019. The Data Assessment tool will be released to NSOs to conduct self-assessments.
<b>12.5</b> By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	12.5.1 National recycling rate, tons of material recycled	No official data. The Task Force on Waste Statistics is developing methodology.
<b>12.6</b> Encourage companies, especially large and trans-national companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle	12.6.1 Number of companies publishing sustainability reports	<a href="#">93 percent</a> of the world's largest companies are now reporting on sustainability.
<b>12.7</b> Promote public procurement practices that are sustainable, in accordance with national policies and priorities	12.7.1 Number of countries implementing sustainable public procurement policies and action plans	This is a policy-related indicator; 90 countries have been identified as focal points and the data collection survey will be conducted in 2019.
<b>12.8</b> By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	12.8.1 Extent to which (i) global citizenship education and (ii) education for sustainable development (including climate change education) are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment	UNESCO uses its quadrennial reporting mechanism to collect data and report on 12.8. The latest round was conducted in 2016 and responses from <a href="#">82 countries</a> were identified as having suitable data for calculation. The collection will be conducted every 4 years.
<b>12.a</b> Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production	12.a.1 Amount of support to developing countries on research and development for sustainable consumption and production and environmentally sound technologies	No official data about support to developing countries for sustainable R&D. Low and middle income countries tend to spend about half the amount on <a href="#">R&amp;D expenditure as a share of GDP</a> as high income countries.
<b>12.b</b> Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products	12.b.1 Number of sustainable tourism strategies or policies and implemented action plans with agreed monitoring and evaluation tools	UN World Tourism Organisation (WTO) reports on 12.b. An international questionnaire by WTO will collect tourism statistics to feed into its dataset. The methodology is under review.
<b>12.c</b> 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	12.c.1 Amount of fossil-fuel subsidies per unit of GDP (production and consumption) and as a proportion of total national expenditure on fossil fuels	An initial baseline data assessment of data availability demonstrates that <a href="#">99 countries have existing data</a> which can be used to estimate fossil fuels direct transfer, and many have information on tax revenue forgone. The initial reporting started in 2018. Data on direct transfers and tax revenue foregone expected to be put in place by 2020.