



# SDG 12: CONSUMPTION



*Marketing*  
Gate

End extreme poverty. Fight inequality and injustice. Fix climate change. Whoa. The Global Goals are important, world-changing objectives that will require cooperation among governments, international organizations and world leaders. It seems impossible that the average person can make an impact. Should you just give up?

**No! Change starts with you!**

On 1 January 2016, the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development — adopted by world leaders in September 2015 at an historic UN Summit — officially came into force.



## Goal 12: Facts and figures

- Each year, an estimated one third of all food produced – equivalent to 1.3 billion tones worth around \$1 trillion – ends up rotting in the bins of consumers and retailers, or spoiling due to poor transportation and harvesting practices.
- If people worldwide switched to energy efficient light bulbs the world would save US\$120 billion annually.
- Should the global population reach 9.6 billion by 2050, the equivalent of almost three planets could be required to provide the natural resources needed to sustain current lifestyles.

### Water

- Less than 3 per cent of the world's water is fresh (drinkable), of which 2.5 per cent is frozen in the Antarctica, Arctic and glaciers. Humanity must therefore rely on 0.5 per cent for all of man's ecosystem's and fresh water needs.
- Man is polluting water faster than nature can recycle and purify water in rivers and lakes.
- More than 1 billion people still do not have access to fresh water.
- Excessive use of water contributes to the global water stress.
- Water is free from nature but the infrastructure needed to deliver it is expensive.



## GOAL 12: Targets

- 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;
- 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;
- By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse;
- Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle;
- Promote public procurement practices that are sustainable, in accordance with national policies and priorities;
- By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature;
- Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production;
- Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products;
- 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.

# OUR FOOD AND AGRICULTURE IN NUMBERS

(DATA REFER TO THE MOST RECENT YEAR AND TO THE WORLD, UNLESS OTHERWISE SPECIFIED.)

POULTRY BIRDS  
MAKE UP OVER

**80%**

OF ALL LIVESTOCK

**20**  
AROUND  
BILLION CHICKENS  
IN THE WORLD

**1.4**  
BILLION  
CATTLE  
IN THE WORLD

CATTLE AND  
BUFFALOES  
MAKE UP 6%  
OF ALL LIVESTOCK

**156**  
MILLION  
TONNES  
OF FISH PRODUCED

AQUACULTURE  
PROVIDES

**48%**

OF FISH FOR HUMAN FOOD

**56%**  
OF CHICKENS  
LIVE IN ASIA

**7**  
BILLION  
EGGS LAID

THERE ARE OVER

**1**  
BILLION  
SHEEP IN THE WORLD

SHEEP AND GOATS  
MAKE UP 7%  
OF THE WORLD'S LIVESTOCK

**4.4** MILLION  
FISHING VESSELS  
IN THE WORLD

**60%**  
OF FISH TRADE  
ORIGINATES FROM  
DEVELOPING COUNTRIES

AGRICULTURE  
EMITS 5  
BILLION TONNES OF  
**CO<sub>2</sub>**  
EVERY YEAR

AGRICULTURE  
AND FORESTRY  
ACCOUNT FOR  
**2%** OF TOTAL  
ENERGY USED

**80%**  
OF WORLD  
CULTIVATED AREA  
IS RAINFED

ANNUAL  
WATER  
WITHDRAWAL MORE THAN  
**3,800** KM<sup>3</sup>/YEAR

**12%**  
OF THE WORLD'S LAND AREA  
USED FOR CROP  
PRODUCTION

**38%**  
OF THE WORLD'S LAND USED  
FOR AGRICULTURE

**37**  
MILLION HECTARES UNDER  
ORGANIC  
AGRICULTURAL  
MANAGEMENT WORLDWIDE

FUEL  
WOOD  
SUPPLIES **10%**  
OF GLOBAL ENERGY NEEDS

**70%**  
OF WORLD WATER  
WITHDRAWAL IS USED  
FOR AGRICULTURE

**2.5%**  
OF THE WORLD'S  
WATER IS  
FRESHWATER

**22%** OF TOTAL AREA  
HARVESTED USED FOR  
COARSE GRAINS

VEGETABLES  
COVER **1%** OF  
THE WORLD'S TOTAL  
AGRICULTURAL AREA

**340** MILLION  
FEWER  
UNDERNOURISHED  
BY 2015 TO MEET  
WORLD FOOD  
SUMMIT TARGET

PREVALENCE OF  
UNDERNOURISHMENT  
DECREASED  
**17%**  
SINCE 1990-92

**30%**  
OF LAND AREA  
COVERED BY  
FORESTS

ANNUAL  
FOREST  
LOSS OF  
**0.11%**

GLOBAL EXPORTS OF COFFEE,  
TEA, COCA AND SPICES  
ALMOST TRIPLED  
BETWEEN 2000-2010

IN 2013 GLOBAL FOOD  
IMPORT BILL IS SET TO REACH  
**1.09** TRILLION US\$

MORE THAN  
**840**  
MILLION  
PEOPLE ARE  
UNDERNOURISHED

FISH PROVIDES  
**17%**  
OF ANIMAL PROTEIN  
INTAKE PER PERSON

**400** MILLION TONNES  
OF PAPER  
CONSUMED ANNUALLY

**50%** OF PAPER  
PRODUCED ANNUALLY  
IS RECYCLED

WORLD  
IMPORTS OF  
WHEAT  
AMOUNT TO  
**147**  
MILLION TONNES

WORLD PRODUCTION VALUE  
OF AGRICULTURE  
**3,269.457**  
MILLION US\$

**RICE**  
IS THE PRIMARY STAPLE  
FOR OVER **1/2**  
THE WORLD'S POPULATION

**147** HG  
AVERAGE ANNUAL  
FOOD SUPPLY  
PER PERSON

**368**  
MILLION TONNES  
OF POTATOES  
WERE GROWN

**69**  
MILLION TONNES  
OF ORANGES  
WERE HARVESTED

**1 in 3**  
PEOPLE WORK  
IN AGRICULTURE  
WORLDWIDE

SMALLHOLDERS  
PRODUCE  
**80%**  
OF FOOD CONSUMED  
IN DEVELOPING COUNTRIES

MEAT  
AVAILABILITY IS  
**42** KG  
PER CAPITA PER YEAR

**23.5** KG  
SUGAR AND  
SWEETENERS  
CONSUMED PER  
PERSON PER YEAR

**107**  
MILLION TONNES  
OF BANANAS  
WERE HARVESTED

**2.5**  
BILLION TONNES  
OF CEREALS  
PRODUCED

**60%**  
OF CHILD  
LABOURERS WORK  
IN AGRICULTURE

**49.5%**  
OF THE WORLD  
LIVE IN RURAL  
AREAS



# ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

## BEFORE COVID-19

THE WORLD CONTINUES TO USE NATURAL RESOURCES **UNSUSTAINABLY**



GLOBAL MATERIAL FOOTPRINT  
73.2 BILLION TONS



GLOBAL MATERIAL FOOTPRINT  
85.9 BILLION TONS



ELECTRONIC WASTE GREW BY **38%**



BUT LESS THAN **20%** IS RECYCLED  
(2010-2019)

## COVID-19 IMPLICATIONS

THE PANDEMIC OFFERS AN OPPORTUNITY TO **DEVELOP RECOVERY PLANS** THAT BUILD A MORE SUSTAINABLE FUTURE



FROM 2017 TO 2019, 79 COUNTRIES AND THE EUROPEAN UNION REPORTED AT LEAST ONE POLICY TO PROMOTE SUSTAINABLE CONSUMPTION AND PRODUCTION



RIISING FOSSIL FUEL SUBSIDIES ARE CONTRIBUTING TO THE CLIMATE CRISIS

\$318 BILLION  
(2015)

\$427 BILLION  
(2018)



HARVESTING



TRANSPORT



STORAGE



PROCESSING

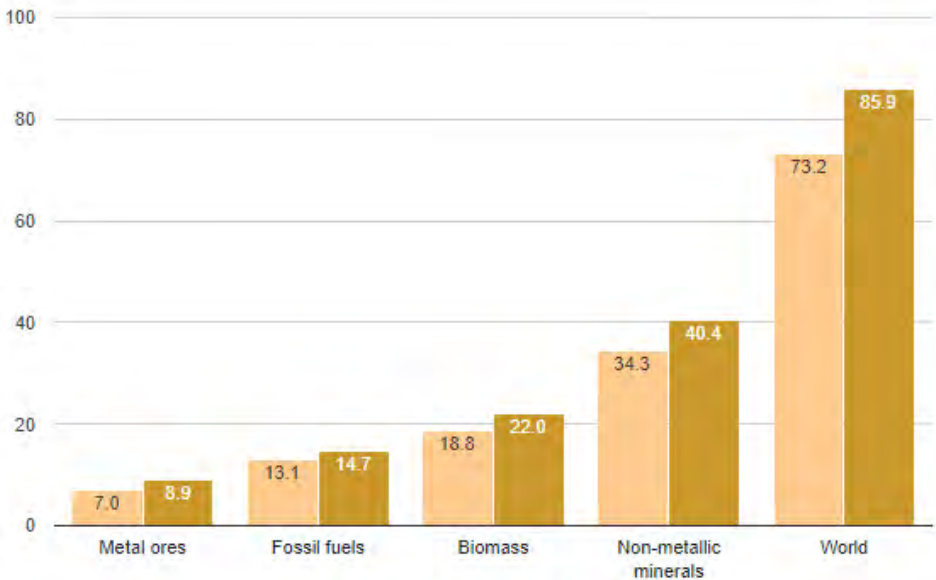
**13.8%**

OF FOOD IS LOST IN SUPPLY CHAINS (2016)

The world's reliance on natural resources has continued to accelerate over the last two decades. One measurement of this reliance is the material footprint: the amount of primary materials required to meet basic needs for food, clothing, water, shelter, infrastructure and other aspects of life.

It is an indicator of the pressure put on the environment to support economic growth and to satisfy the material needs of people.

*Material footprint by type of material, 2010 and 2017 (billions of metric tons)*



The global material footprint grew from 73.2 billion metric tons in 2010 to 85.9 billion metric tons in 2017, a 17.4 per cent increase. The footprint expanded for all types of materials, but especially for non-metallic minerals (which accounted for almost half of the global footprint), pointing to growth in the areas of infrastructure and construction. In 2015, the material footprint per capita in high-income countries was over 10 times larger than in low-income countries.

Urgent action is needed to decrease our reliance on raw materials and increase recycling and “circular economy” approaches to reduce environmental pressure and impact

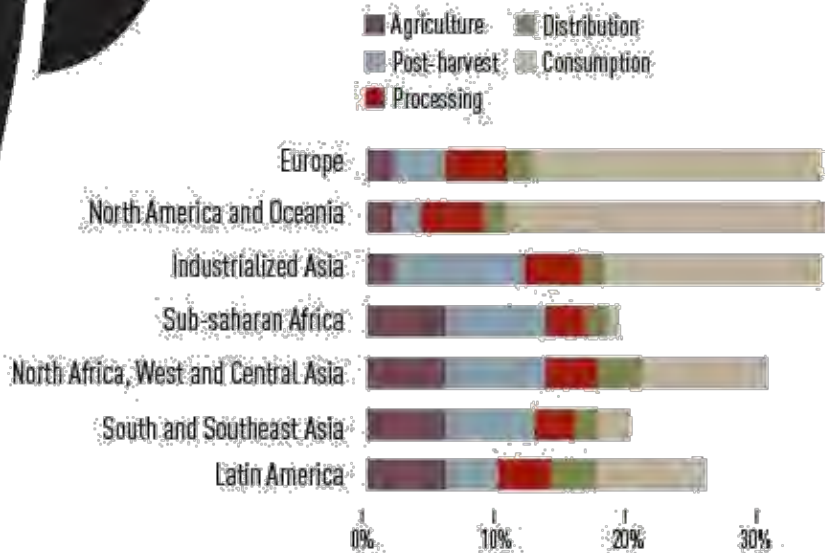


# 30% CEREALS FOOD LOSSES

In industrialized countries, consumers throw away 286 million tonnes of cereal products.



763 billion boxes of pasta







Co-funded by the  
Erasmus+ Programme  
of the European Union



The global population

**COULD GROW TO AROUND  
8.5 BILLION IN 2030**

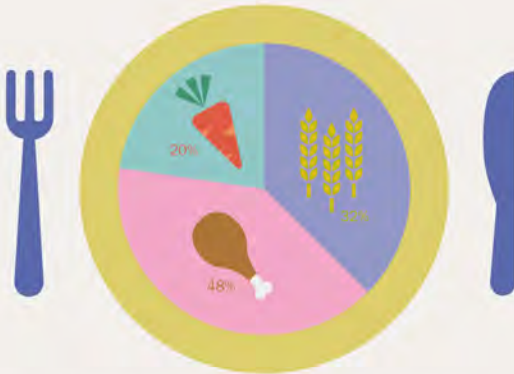
9.7 billion in 2050!

SDG 12: CONSUMPTION

**YouABLE**

# WHAT WE ARE EATING

*In both industrialized and developing countries unacceptable quantities of food are wasted but for entirely different reasons.*



A balanced diet should be comprised of from 30% flour to 60 % vegetable 10 % meat Above a diagram of what we are actually eating



The mass density or density of a material is defined as its mass per unit volume



Bulk density is a property of powders, granules and other solids, particularly used in reference to mineral components



Specific gravity is the ratio of the density (mass of a unit volume) of a substance to the density

INFOODS handles hundreds of requests each year from users wishing to obtain copies of these food composition.

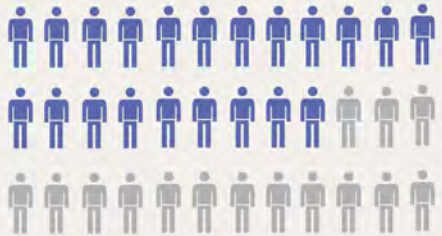
## GLOBAL ANALYSIS OF FOOD

Global compendium of scrutinized analytical data (without any additional estimations, imputation or calculation of missing values) for commonly consumed foods.



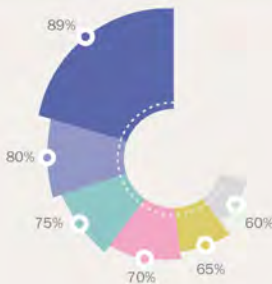
## FOOD IS A HUMAN RIGHT

The right to food is a human right derived from the International Covenant on Economic, recognizing the "right to an adequate standard of living, including adequate food"



21/36

15/36



## FOOD SAFETY AND FOOD SECURITY

- Most food has its origin in plants. Some food is obtained directly from different plants
- Animals are used as food either directly or indirectly by the products they produce
- Most food has always been obtained through agriculture
- Generally regarded as the most pleasant taste, sweetness is almost always caused by a type of sugar
- Sourness is caused by the taste of acids, such as vinegar in alcoholic beverages
- Saltiness is the taste of alkali metal ions such as sodium and potassium

WHILE 1 IN 9 PEOPLE ARE HUNGRY,



1/3 OF ALL FOOD PRODUCED IS WASTED



# FOOD LOSS & WASTE FROM FARM TO FORK

Taking steps to avoid food loss and waste at each stage of the value chain can help reduce greenhouse gas emissions and tackle global hunger

FOOD LOSS AND WASTE COSTS THE GLOBAL ECONOMY

\$1 TRILLION ANNUALLY



## 2 HANDLING

UP TO 50% OF FRESH FRUITS AND VEGETABLES ARE LOST BETWEEN THE FARM AND THE MARKET IN DEVELOPING COUNTRIES

## 4 CONSUMER

A EUROPEAN OR NORTH AMERICAN CONSUMER WASTES ALMOST 100kg OF FOOD ANNUALLY

## 1 FARM LEVEL

FOOD LOSS REDUCES SMALLHOLDER FARMER INCOMES BY AT LEAST 15% EVERY YEAR

10-20% OF AFRICA'S GRAIN IS LOST AFTER HARVEST — ENOUGH TO FEED 48 MILLION PEOPLE

## 3 RETAIL

DATE LABELS ARE OFTEN CONFUSING — RESULTING IN CONSUMERS THROWING AWAY FOOD THAT IS STILL SAFE TO EAT

## 5 LANDFILL

ROTTING FOOD PRODUCES METHANE, A GAS 25 TIMES MORE POTENT THAN CARBON DIOXIDE, THAT CONTRIBUTES TO CLIMATE CHANGE

## WHAT CAN WE DO?

- EDUCATE CONSUMERS ABOUT THE IMPACTS OF FOOD LOSS AND WASTE
- URGE GOVERNMENTS TO PRIORITIZE FOOD LOSS AND WASTE IN THEIR COMMITMENTS TO ADDRESS FOOD SECURITY AND CLIMATE CHANGE
- SET REDUCTION TARGETS, TAKE ACTION, AND MEASURE PROGRESS

CHAMPIONS 12.3

GLOBAL CITIZEN.



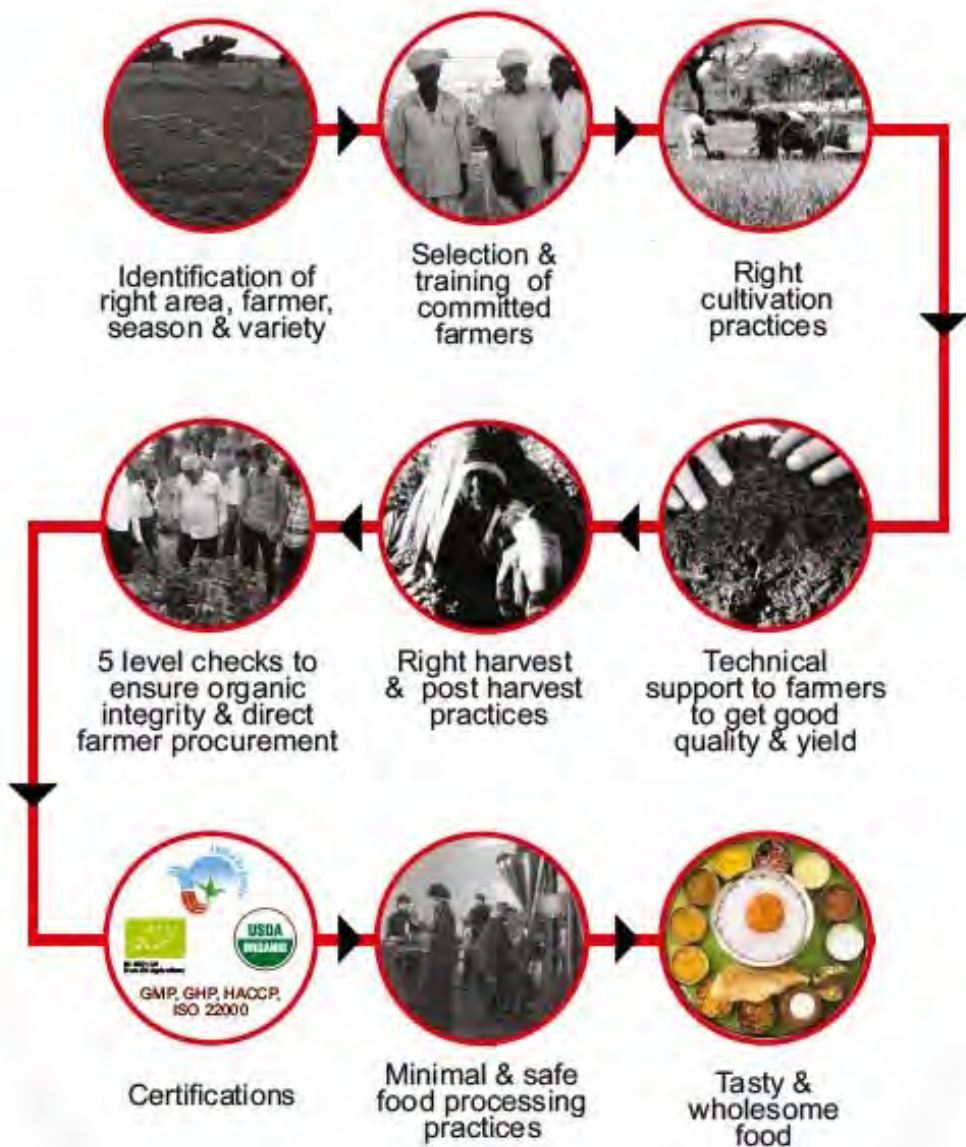
Food and Agriculture Organization of the United Nations



WORLD RESOURCES INSTITUTE

# Farm to fork approach

To maintain the organic integrity



# STRAWS, STIRRERS AND CUTLERY - DO YOU REALLY NEED IT?

1%

OF IDENTIFIABLE  
PLASTIC LITTER  
IN EUROPEAN  
FRESHWATER  
ENVIRONMENTS



4.7 BILLION  
STRAWS

316 MILLION  
DRINKS STIRRERS



AND

16.5  
BILLION

SINGLE-USE  
CUTLERY  
ITEMS



ARE USED EACH  
YEAR IN THE UK

The  
**BIGGEST CHANGE**  
YOU CAN MAKE IS TO

If everyone  
in the UK  
did this, it  
would save

222  
tonnes

of plastic from entering the  
environment each year

USE REUSABLE  
CUTLERY WHEN  
GETTING TAKEAWAY  
FOOD OR DRINK



Your food may  
taste nicer eaten  
with real cutlery!



Carry your  
own if you  
eat out  
regularly



## OTHER WAYS TO MAKE A CHANGE...

### REFUSE STIRRERS

use a  
reusable  
teaspoon  
instead



### REFUSE STRAWS

unless needed  
for medical/  
accessibility  
reasons. Or use  
paper ones.

### Tip for parents!

If your children  
demand a straw,

GET A REUSABLE  
WATER BOTTLE  
WITH ONE  
BUILT IN

so you'll always  
have one handy

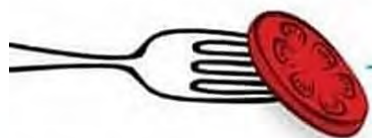
WOODEN CUTLERY

OR STIRRERS

- the best  
alternative  
to reusable,  
and can be  
composted



# FOOD FACTS



Tomatoes are actually a fruit, not a vegetable.

An average strawberry has around 200 seeds.



Kiwi contains twice as much vitamin c as an orange.

A half-cup of figs has as much calcium as a half-cup of milk.



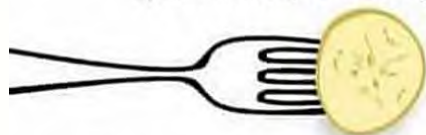
Lemons can kill bacteria-as they have high acid content which makes them suitable for cleaning.

Oranges contain antioxidants that help fight the free radicals that damage and age our skin.



Blackberry juice was used to dye cloth navy blue and indigo.

You can speed up the ripening of a pineapple by standing it upside down (on the leafy end).



A banana is not a fruit in reality, it is an herb!

Mangoes are the most favorite and number one fruit in the world.



BEFORE  
YOU BUY IT  
ASK  
**“DO I REALLY  
NEED THIS?”**

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**Y** **u** **ABLE**