Dynamic Interactivity Project

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SUSTAINABLE DEVELOPMENT GOALS
1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS

Ng Wen Jun

6 CLEAN WATER AND SANITATION

Research

Problems

663 million still use unimproved water sources

2.4 billion are without improved sanitation

2 billion worldwide affected by water stress

Integrated Water Resources Management plans in **every region** of the world

5.2 billion people used a "safely managed" drinking water service in 2015

2.9 billion people used a "safely managed" sanitation service in 2015

892 million people still practised open defecation in 2015

More than 2 billion people are affected by water stress

Facts

Today, **1 in 9 people** lack access to safe water; **1 in 3 people** lack access to a toilet. More people have a mobile phone than a toilet.

Research

Shark

70+

More than 70 shark species are at risk of extinction.

-80%

Shark fin consumption has fallen by more than 80% in China.

93%

Of Chinese residents surveyed by WildAid, 93% had not consumed shark fin in the previous 6 years.

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Research

90% population decline of Eastern Pacific leatherbacks over the last 30 years

Sea Turtle

Tens of Thousands of sea turtles are lost each year to overharvesting and illegal trade

4,950 turtles are caught each year as bycatch by Indonesian longline vessels alone

BYCATCH

- The incidental capture of non-target species when fishing.

ILLEGAL TRADE AND DIRECT CONSUMPTION

- Used for meat, eggs, shell, leather, curios.

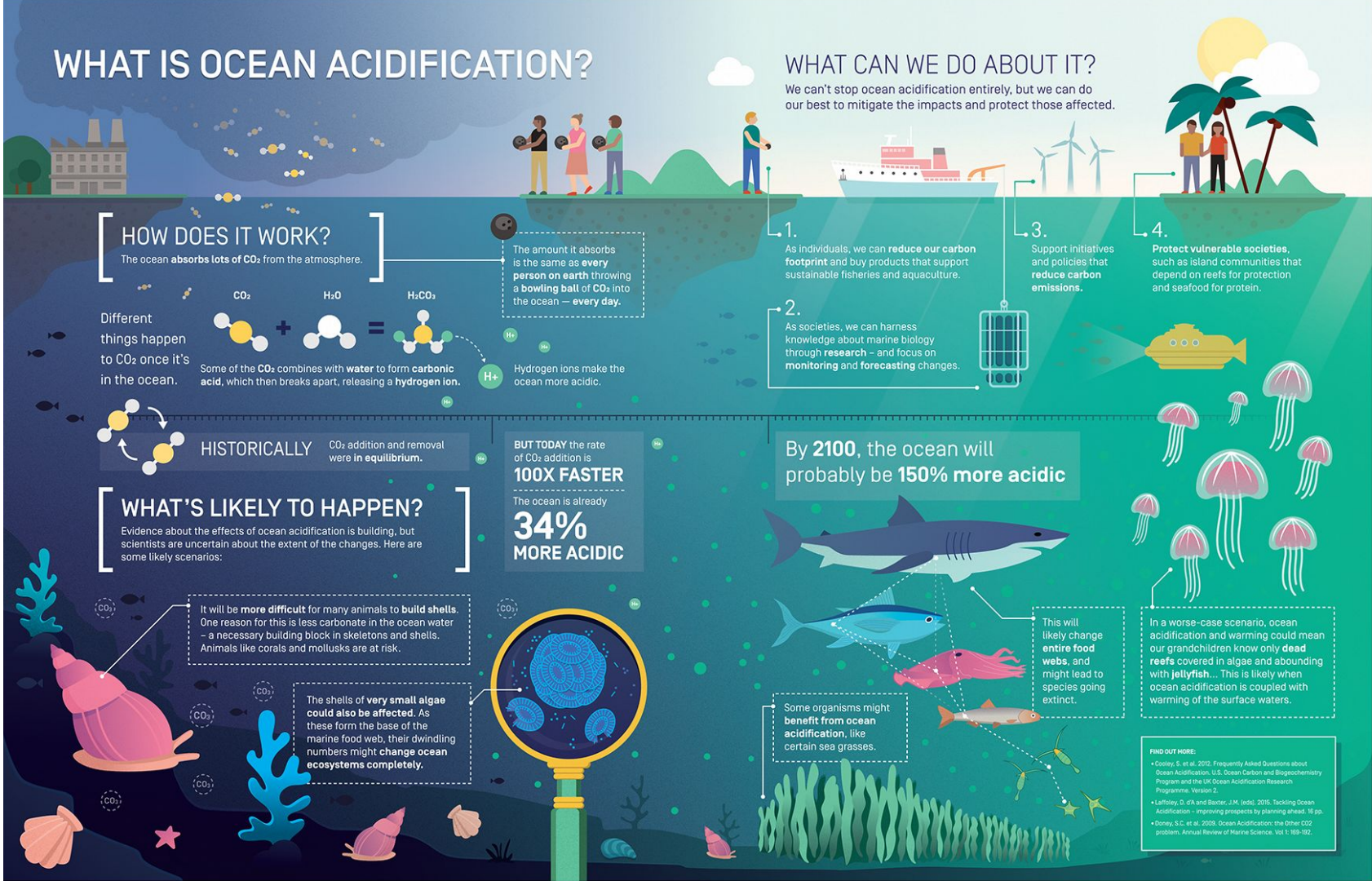
HABITAT LOSS

- Uncontrolled coastal development destroys or disturbs nesting beaches.

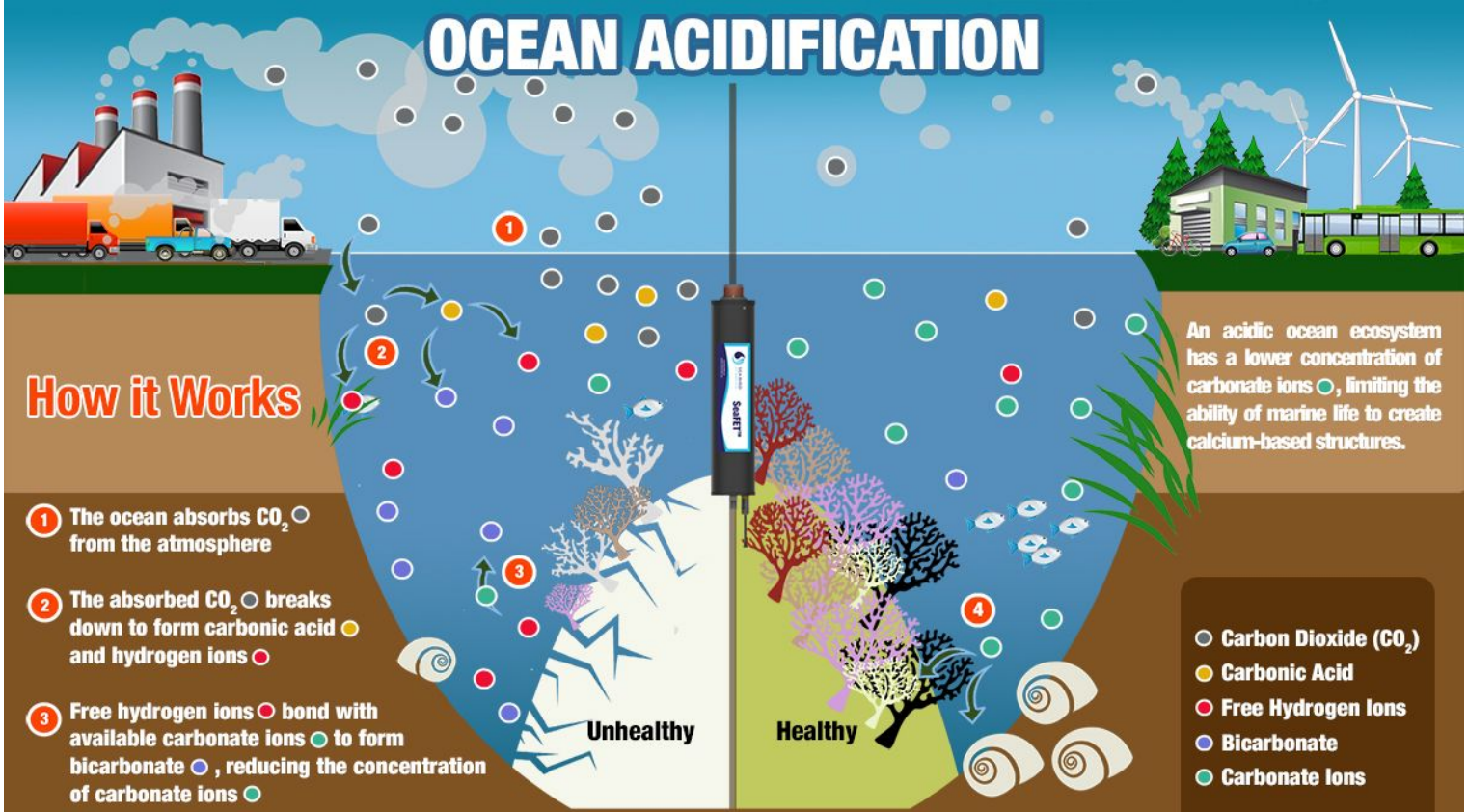
CLIMATE CHANGE

- Global warming could skew sex ratios, resulting in more females.

Ocean Acidification



OCEAN ACIDIFICATION



How it Works

1. The ocean absorbs CO_2 from the atmosphere
2. The absorbed CO_2 breaks down to form carbonic acid and hydrogen ions
3. Free hydrogen ions bond with available carbonate ions to form bicarbonate, reducing the concentration of carbonate ions
4. Carbonate ions are required by marine life to build and maintain calcium-based structures such as shells and coral

An acidic ocean ecosystem has a lower concentration of carbonate ions, limiting the ability of marine life to create calcium-based structures.

- Carbon Dioxide (CO_2)
- Carbonic Acid
- Free Hydrogen Ions
- Bicarbonate
- Carbonate Ions

Increased atmospheric CO_2 limits growth in the oceans

SEA-BIRD SCIENTIFIC
sea-birdscientific.com

Sustainable Development Goal **#14**

Life Below Water

2.6 billion people rely on seafood as their main source of protein.

#GlobalGoals

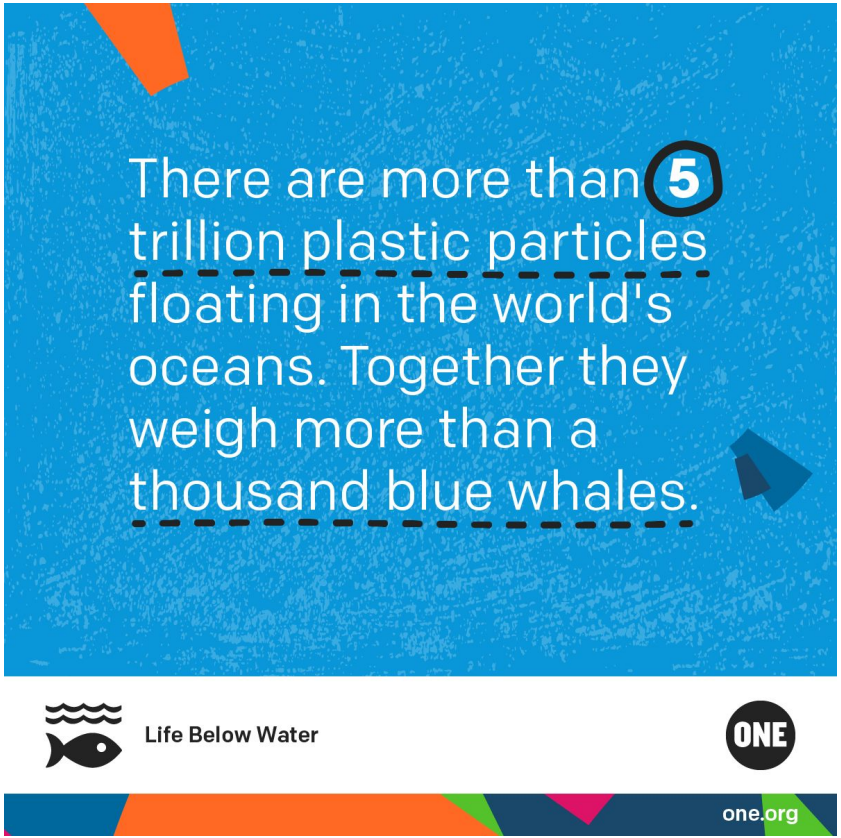
Learn how you can help at ***GlobalGiving.org/SDG***

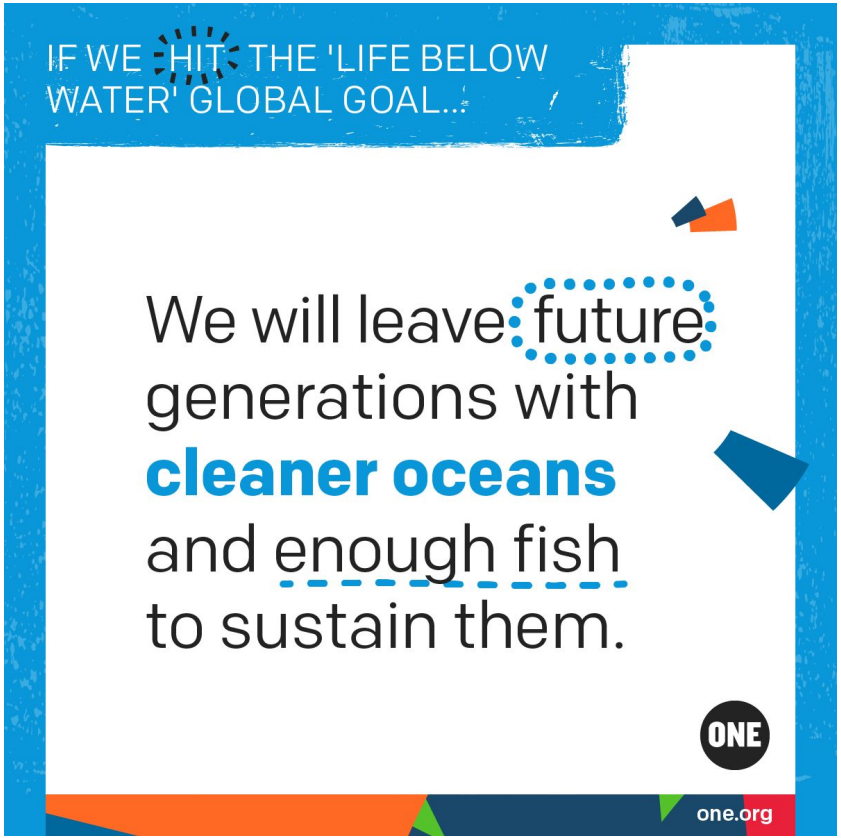
Facts


OVER
30% OF MARINE HABITATS
HAVE NOW BEEN DESTROYED
Global Goals Visual Content Partner
gettyimages
THE GLOBAL GOALS
For Sustainable Development


Bon Appétit
Christophe Godin
GOAL 14
#GlobalGoals

Facts


There are more than 5 trillion plastic particles floating in the world's oceans. Together they weigh more than a thousand blue whales.
Life Below Water
ONE
one.org


IF WE HIT THE 'LIFE BELOW WATER' GLOBAL GOAL...
We will leave future generations with cleaner oceans and enough fish to sustain them.
ONE
one.org

Nikk Chew

Research

Sustainable Development Goal **#1**

No Poverty

Extreme poverty means living on less than **$1.25 a day.**

#GlobalGoals

Learn how you can help at ***GlobalGiving.org/SDG***

830 million people live below the International Extreme Poverty Line of $1.90 a day

Numbers of people living in extreme poverty drop by more than half between

1990	2015
1.9 billion	836 million

Research

Nearly 22,000 children die each day due to living in poverty.

According to an Oxfam report, if the world's 100 richest people pooled their collective earnings in 2012, they could have ended extreme world poverty four times over.

Facts

Those children could have survived via simple affordable intervention, such as clean drinking water or vaccinations.

Research

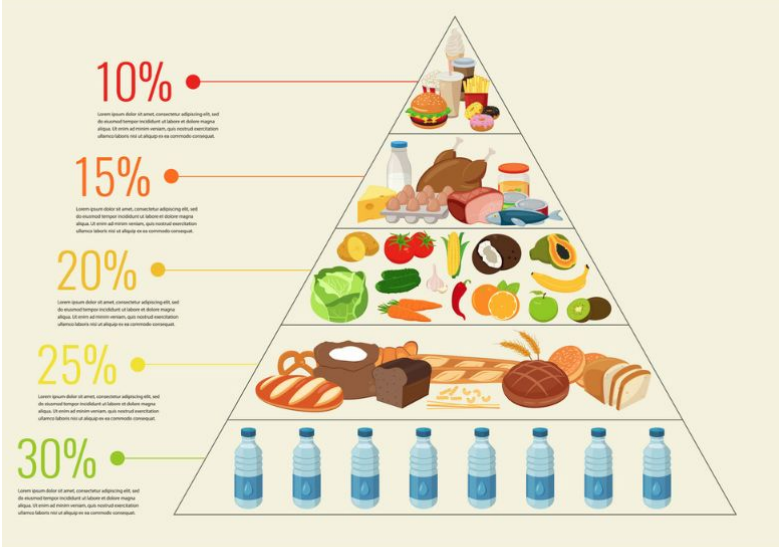
Hunger is the leading cause of death in the world. Our planet has provided us with tremendous resources, but unequal access and inefficient handling leaves millions of people malnourished.

In a world where we produce enough food to feed everyone, **815 million people – one in nine – still go to bed on an empty stomach each night**. Even more – one in three – suffer from some form of malnutrition.

2 ZERO HUNGER

Research

The **first 1,000 days** of a child's life, from pregnancy through age two, are critical. A proper diet in this period can protect children from the mental and physical stunting that can result from malnutrition.



Phon Wei Xing

Goal 12 - Responsible Consumption & Production

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. Its implementation helps to achieve overall development plans, reduce future economic, environmental and social costs, strengthen economic competitiveness and reduce poverty.

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.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Food

1.3 billion tonnes of food wasted every year, almost 1 billion people go undernourished and another 1 billion hungry.

Overconsumption of food is detrimental to our health and the environment.
2 billion people globally are overweight or obese.

Land degradation, declining soil fertility, unsustainable water use, overfishing and marine environment degradation are all lessening the ability of the natural resource base to supply food.

The food sector accounts for around 30% of the world's total energy consumption and accounts for around 22% of total Greenhouse Gas emissions.

Water

Less than 3% of the world's water is fresh (drinkable), of which 2.5% is frozen in the Antarctica, Arctic and glaciers. Humanity must therefore rely on 0.5% for all of man's ecosystems 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.

Energy

Despite technological advances that have promoted energy efficiency gains, energy use in OECD countries will continue to grow another 35% by 2020. Commercial and residential energy use is the second most rapidly growing area of global energy use after transport.

In 2002 the motor vehicle stock in OECD countries was 550 million vehicles (75% of which were personal cars). A 32% increase in vehicle ownership is expected by 2020. At the same time, motor vehicle kilometres are projected to increase by 40% and global air travel is projected to triple in the same period.

Households consume 29% of global energy and consequently contribute to 21% of resultant CO2 emissions.

One-fifth of the world's final energy consumption in 2013 was from renewables.

http://maurotoselli.com/files/SDGSketch.pdf

References

Interactive media wall -

https://www.youtube.com/watch?v=RG5Fi-eCLbc

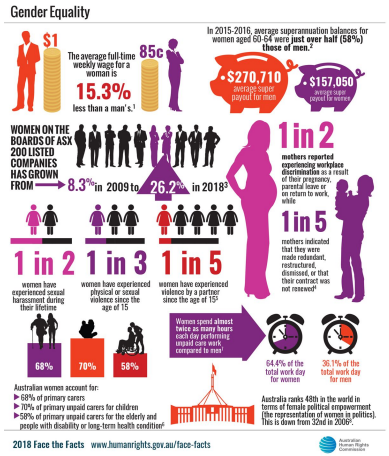
Floating Words -
https://www.youtube.com/watch?v=TgQqXR_HBbM&app=desktop

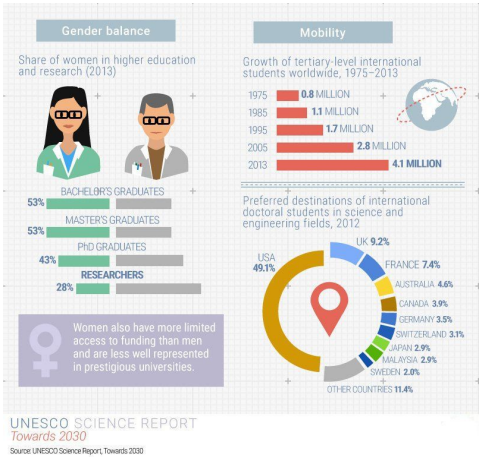
Howe Xin Yu

5 GENDER EQUALITY

Facts

- Economic empowerment
- Leadership and political participation
- Peace and security
- Humanitarian action
- Ending violence against women
- HIV and AIDS





Facts

- Economic empowerment

More women than men work in **vulnerable, low-paid, or undervalued jobs**. As of 2013, 49.1 per cent of the world's working women were in vulnerable employment, often unprotected by labour legislation, compared to 46.9 per cent of men.

Almost 90 per cent of 143 economies studied have at least one legal difference **restricting women's economic opportunities**. Of those, 79 economies have laws that restrict the types of jobs that women can do.

A study using data from 219 countries from 1970 to 2009 found that, for every one additional year of education for women of reproductive age, child mortality decreased by 9.5 per cent.

Facts

- Leadership and political participation

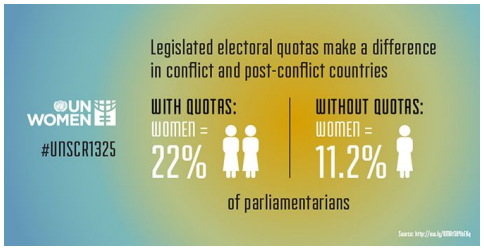
Women face several obstacles to participating in political life. Structural barriers through **discriminatory laws and institutions still limit women's options to run for office**. Capacity gaps mean women are **less** likely than men to have the **education, contacts and resources needed to become effective leaders.**

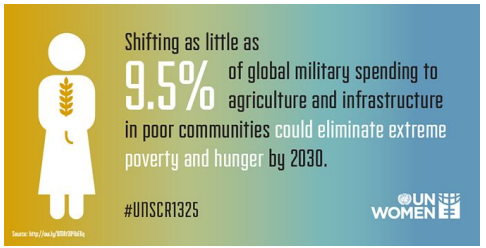
From the local to the global level, **women's leadership and political participation are restricted**. Women are **underrepresented as voters, as well as in leading positions**, whether in elected office, the civil service, the private sector or academia.

5 GENDER EQUALITY

Facts

- Peace and security





Facts

- Humanitarian action

Approximately 35 per cent of women worldwide have **experienced physical or sexual violence, and gender-based violence increases in conflict** settings. More than **70 per cent** of women have experienced gender-based violence in some crisis settings.

Facts

- Ending violence against women

It is estimated that **35 per cent of women worldwide have experienced either physical and/or sexual intimate partner violence or sexual violence by a non-partner at some point in their lives.**

Women who have been physically or sexually abused by their partners are more than twice as likely to have an abortion, almost twice as likely to **experience depression**, and in some regions, 1.5 times more likely to acquire HIV, as compared to women who have not experienced partner violence

Around **120 million girls worldwide (slightly more than 1 in 10) have experienced forced intercourse or other forced sexual acts** at some point in their lives. By far the most common perpetrators of **sexual violence against girls are current or former husbands, partners or boyfriends**

Facts

- HIV and AIDS

In 2015, of the total estimated **1.9 million new HIV infections among adults (15 and older) globally, 900,000 or 47 per cent were among women**

Globally, only 3 in every 10 adolescent girls and young women aged 15-24 years have comprehensive and accurate knowledge about HIV. **The lack of information on HIV prevention and the power to use this information in sexual relationships, including in the context of marriage, undermines women's ability to negotiate condom use and engage in safer sex practices**

Women living with HIV are more likely to **experience violence, including violations of their sexual and reproductive rights**. Involuntary and coerced sterilization and forced abortion among women living with HIV has been reported in at least 14 countries worldwide.

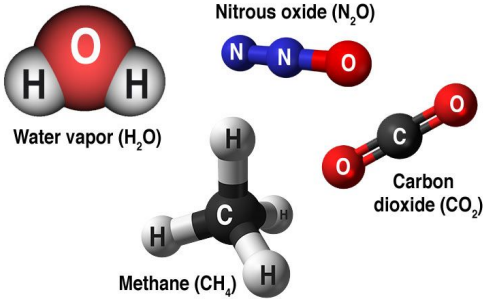
13 CLIMATE ACTION

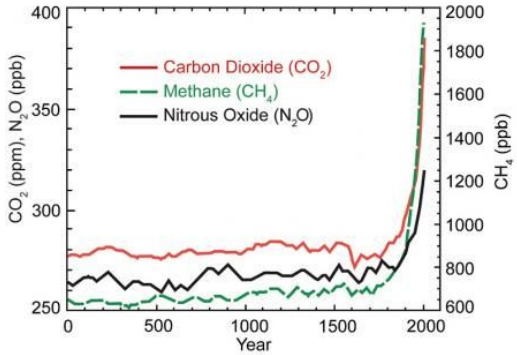
Causes

Most climate scientists agree the **main cause** of the current global warming trend is **human expansion of the "greenhouse effect"**[1] — warming that results when the atmosphere traps heat radiating from Earth toward space

Certain gases in the atmosphere **block heat from escaping**. Long-lived gases that remain semi-permanently in the atmosphere and **do not respond physically or chemically to changes in temperature** are described as **"forcing"** climate change.

Gases contribute greenhouse effect:





Causes

Water vapor. The most abundant greenhouse gas, but importantly, it acts as a feedback to the climate. Water vapor **increases as the Earth's atmosphere warms**, but so does the possibility of clouds and precipitation, making these some of the most important feedback mechanisms to the greenhouse effect

Carbon dioxide (CO2). A minor but very important component of the atmosphere, carbon dioxide is released through natural processes such as respiration and volcano eruptions and through human activities such as deforestation, land use changes, and burning fossil fuels. **Humans have increased atmospheric CO_2 concentration by more than a third since the Industrial Revolution began**. This is the **most important long-lived "forcing" of climate change**.

Causes

Methane. A hydrocarbon gas produced both through natural sources and human activities, including the **decomposition of wastes in landfills, agriculture, and especially rice cultivation, as well as ruminant digestion and manure management associated with domestic livestock**. On a molecule-for-molecule basis, **methane is a far more active greenhouse gas than carbon dioxide**, but also one which is much less abundant in the atmosphere.

Nitrous oxide. A powerful greenhouse gas produced by **soil cultivation practices, especially the use of commercial and organic fertilizers, fossil fuel combustion, nitric acid production, and biomass burning**

Chlorofluorocarbons (CFCs). Synthetic compounds entirely of **industrial origin** used in a number of applications, but now **largely regulated in production and release to the atmosphere by international agreement for their ability to contribute to destruction of the ozone layer**. They are also greenhouse gases.

13 CLIMATE ACTION

WWF CORAL TRIANGLE

CLIMATE CHANGE
IN THE CORAL TRIANGLE

Change has been a constant feature of our planet, and over long periods of time, corals and the reefs have slowly adapted to these changes. Today, what makes our situation so perilous is that the rate of climate change has accelerated. Current rates may be as much as 100-1,000 faster than anything the planet has experienced over the past one million years.

Atmospheric concentrations of CO_2 are 37% higher than they have been at any time during the last 650,000 years

1-4°C — Expected temperature increase of the sea in the Coral Triangle by 2100 — WWF

2°C — Temperature increase above which most corals will be eliminated — WWF

ONE WORLD, TWO FUTURES

In one future, the international community continues down the current track towards catastrophic climate change. The biological treasures of the Coral Triangle are destroyed while poverty increases, food security fails and economies suffer.

In the other future, the build-up of greenhouse gases is brought under control, and Coral Triangle nations also invest in solutions that reduce other environmental stresses.

WHY THERE IS HOPE

Natural advantage
High levels of biodiversity, coupled with fast rates of growth and recovery, put many Coral Triangle ecosystems in a favorable position to be resilient to climate change.

Political will
The leaders of the 6 countries of the Coral Triangle have made adaptation to climate change one of the top priorities for the region through the Coral Triangle Initiative.

Knowledge of solutions
Establishing and managing effective marine protected areas, reducing coastal destruction, and supporting local people's involvement in sustainable management have all been proven to reduce stress on nature. These solutions also build the resilience of ecosystems and local communities.

Acidified oceans
As greater amounts of carbon dioxide dissolve into the sea, corals are less able to build and maintain reefs - with dramatic consequences for reefs' rich marine life.

Severe weather
Already in the pathway of typhoons and cyclones, the Philippines and the Solomon Islands are likely to experience variations in the intensity and severity of these weather events as a result of climate change.

Low productivity
There could be a 80% decline in the ability of the Coral Triangle's coastal environment to provide food for people by 2100 if effective action is not taken taken on climate change.

WWF/University of Queensland

Sea level rise
The Coral Triangle may experience a sea level rise of 30-60 cm by 2100.

UN IPCC

People who rely on the sea for a living are feeling the impacts of climate change

Fisher Chris Kong from Kudat, Malaysia, has seen his catch dwindle every year because of shifts in the monsoon winds, cutting short his fishing season.

Credits: Catalyze Sustainability Communications

The Coral Triangle - the nursery of the seas - is the most diverse marine region on the planet, covering some 6 million km² of ocean across 6 countries in the Asia-Pacific region. This ecological wonder is home to 76% of the world's reef-building coral species and 6 out the 7 known species of marine turtles.

Impacts

- Loss of sea ice
- Accelerated sea level rise and longer
- More intense heat waves
- Hurricanes will become stronger and more intense
- Changes in precipitation patterns
- Frost-free season and growing seasons will lengthen