

MODULE 1
SUSTAINABLE AGRO-LIVESTOCK FARM AND ANIMAL WELFARE:
METHOD, TECHNIQUE, AND EXPERIENCES

UNIT 1
Agricultural multifunctionality and sustainable farm

FOOD AND AGRICULTURE RELATED TO
SUSTAINABLE DEVELOPMENT GOALS
(SDGs)

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LESSON 1

SLIDE 1

Hi, I'm Giordano Stella, a temporary research assistant at the Department of agricultural, food, and environmental sciences Perugia University.

- In this lesson, I will introduce you to the Sustainable Development Objectives, and in particular, we will focus on the state of the art of the agri-food ones. And in particular, I will summarize the data presented in the FAO Report "Tracking progress on the 2021 SDG indicators relating to food and agriculture: a report on indicators under the care of FAO".

SLIDE 2

-The Sustainable Development Goals (SDGs) are a series of 17 interconnected goals, defined by the United Nations as a strategy "to achieve a better and more sustainable future for all". The SDGs were set up in 2015 by the [United Nations General Assembly](#) (UN-GA) and are intended to be achieved by the year 2030. They are included in an [UN-GA Resolution](#) called the **2030 Agenda**, and so they are colloquially known as **Agenda 2030**.

-The Sustainable Development Goals aim to address a wide range of issues related to economic and social development, including poverty, hunger, the right to health and education, access to water and energy, employment, inclusive and sustainable economic growth, climate change, and environmental protection, urbanization, production and consumption patterns, social and gender equality, justice and peace.

-The 17 SDGs are: (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 Inequality, (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.



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SLIDE 3

-Due to the importance of agriculture, somehow all of these goals are related to it, but we will focus on 8 of them which are directly connected to food and agriculture: (1) No Poverty, (2) Zero Hunger, (5) Gender Equality, (6) Clean Water and Sanitation, (10) Reduced Inequality, (12) Responsible Consumption and Production, (14) Life Below Water, (15) Life On Land

As you probably know, each goal is divided into more indicators so that we will see only the indicators important for food and agriculture.

Let's have a look at the first goals.



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Food and agriculture-related SDG indicators



SLIDE 4

-The first food and agriculture related SDG is the second one: No Poverty

-Even before the COVID-19 pandemic, due also to climate change, progress towards ending poverty in all its forms had slowed, and the world was not on track to end extreme poverty by 2030. Before the pandemic, extreme global poverty had fallen from 10.1 percent in 2015 to 8.4 percent in 2019, which is equivalent to 643 million people living on less than USD 1.90 a day. The COVID-19 pandemic is set to increase the number of poor in 2021 by between 119 and 124 million people, causing the extreme poverty rate to rise for the first time in a generation, from 8.4 percent in 2019 to between 9.1 and 9.4 percent in 2020 based on nowcasts.

-Although many new social protection measures were introduced in 2020, 4 billion people worldwide are still left without any social protection, the majority of whom are poor and vulnerable.

-Proactive risk reduction is imperative in joint efforts to design a sustainable future, preventing potentially hazardous events from devolving into full-blown disasters. Nowhere is this more evident than in agriculture, which underpins the livelihoods of over 2.5 billion people worldwide and provides nourishment for all 7.9 billion people on the planet.

-Adequate rights to economic resources and access to basic services for the most vulnerable members of society are necessary for ensuring progress towards reducing poverty and financial insecurity. Despite the critical role of agriculture in supporting rural livelihoods, the security of tenure rights is far from universal, especially in developing countries.



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SLIDE 5

-The first indicator we will analyze is the **SDG INDICATOR 1.4.2** Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure

-Land is a key asset for poverty reduction, yet systemic discrimination has tended to reproduce prevailing inequalities in land access, ownership, and control between men and women. Therefore, the governance of tenure is a crucial element in determining if and how people, communities, and others acquire rights to use and control land and natural resources. Indicator 1.4.2 measures disparities in tenure security among the adult population, disaggregated by sex and type of tenure, assessed through “legally recognized documentation” and “perception of tenure security”.

-The proportion of women with legally recognized documentation of their tenure rights to land is significantly lower than the average for the adult population in most surveyed countries. The available data suggest that the proportion of women with legally recognized documentation of their land tenure rights is significantly below the average for the adult population in most countries, except Malawi, Uganda, Togo, the United Republic of Tanzania, and Rwanda. As you can understand, this finding emphasizes the importance of developing policies guarantying women’s and girls’ equal rights to land ownership and/or control, respectively.

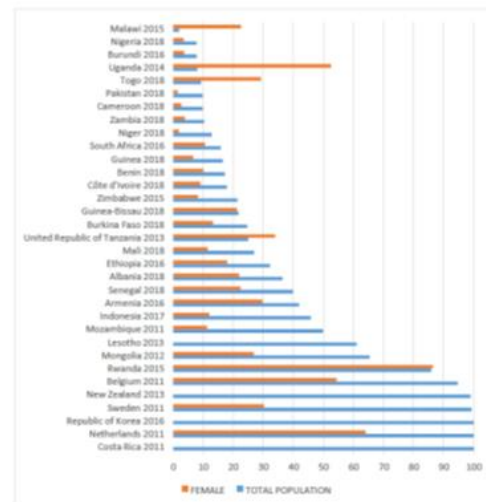


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SDG INDICATOR 1.4.2 Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure



SOURCE: UNSD Global Database, World Bank and UN Habitat data, last accessed 6 June 2021

SLIDE 6

-The second indicator of the first goal we analyze is the **SDG INDICATOR 1.5.2** Direct economic loss attributed to disasters in relation to the global gross domestic product (GDP).

-The adverse impacts of disasters on societies and economies pose a major obstacle to poverty and hunger-reduction. The effects of the COVID-19 pandemic are slowing down economic growth and development trajectories.

-Based on the latest reports of the UN Office for Disaster Risk Reduction, from 35 countries in 2020, direct economic losses attributed to disasters amounted to USD 7.6 billion, of which agricultural losses constituted USD 3.7 billion. Wide variations exist in disaster loss data across time and regions since large-scale catastrophic events greatly influence them.

-Although 2020 losses are relatively smaller than the levels observed in the quinquennium 2015–2019, where total losses amounted to over USD 343 billion, agricultural loss continues to constitute a significant proportion of the total economic loss, as evidenced from data from countries that report both types of losses. The significance of this share underscores agriculture's importance for the economic development of many countries across the globe, its innate interactions with the environment, and its direct reliance on natural resources. Urgent and ambitious action is needed to build more resilient agricultural systems, which are currently bearing the brunt of economic losses due to disasters.

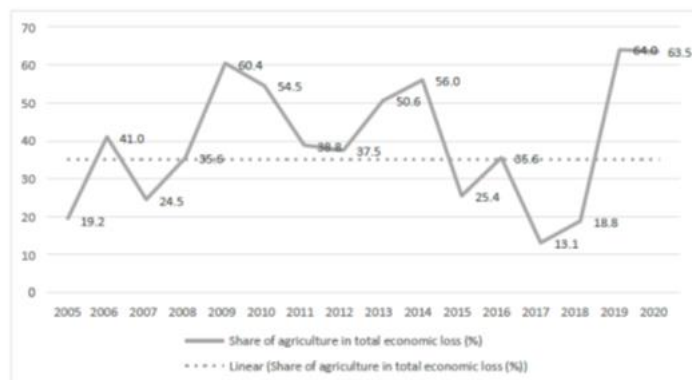


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SDG INDICATOR 1.5.2 Direct economic
loss attributed to disasters in relation
to global gross domestic product
(GDP)



SOURCE: United Nations Office for Disaster Risk Reduction, 2021.

SLIDE 7

-The second food and agriculture goal is the second one: Zero Hunger

-Just before the onset of the COVID-19 pandemic, close to 700 million people were going hungry, and some 2 billion people were suffering from moderate or severe food insecurity—figures that have been rising gradually since 2014. The crisis has further compounded the threats to global food security and nutrition. Disrupted food supply chains and economic slowdowns have affected food systems worldwide and threatened people’s access to food. In fact, the pandemic may have pushed an additional over 83-132 million people into chronic hunger in 2020, making the target of ending hunger even more challenging to achieve.

-COVID-19 is expected to exacerbate all forms of malnutrition, particularly in children, due to a loss of household income, a lack of available and affordable nutritious food, reduced physical activity, and disruptions in essential nutrition services. Urgent short-term actions are needed to avert the increase in world hunger; simultaneously, a transformation of food systems is required to achieve a healthy and sustainable food future for all.



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SLIDE 8

-The first indicator of the Zero Hunger goal we will analyze is the SDG INDICATOR 2.1.1 Prevalence of undernourishment (PoU).

-After remaining virtually unchanged for five years, the prevalence of undernourishment increased from 8.4 in 2019 to around 9.9 percent in 2020, heightening the challenge of achieving the Zero Hunger target by 2030. Mainly 768 million people in the world faced hunger in 2020, around 118 million more than in 2019.

-Hunger increased in every region of the world from 2015 to 2020 except Eastern Asia and South-eastern Asia, with sharp increases in sub-Saharan Africa and Latin America, and the Caribbean from 2019 to 2020. The prevalence of undernourishment in sub-Saharan Africa was estimated to be 24.1 percent of the population in 2020, corresponding to nearly 264.2 million undernourished people, up 4.7 percentage points since 2015 – 3.5 percentage points from 2019 to 2020 alone. This is more than double that of Western Asia and Northern Africa (11.3 percent) and is the highest among all regions.

-More than 40 percent of undernourished people in the world live in Central Asia and Southern Asia – an estimated 308 million people in 2020. It is the region with the second-highest prevalence of undernourishment (15.3 percent) after sub-Saharan Africa.

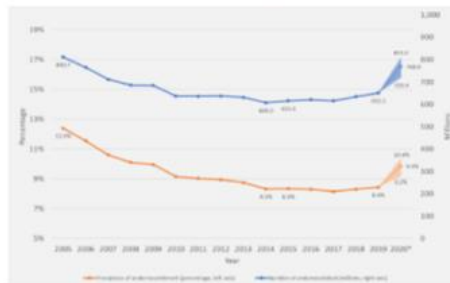
-In Latin America and the Caribbean, the prevalence of undernourishment was 9.1 percent in 2020, below the global prevalence of 9.9 percent, which still translates into almost 60 million undernourished people. The number of undernourished people increased by more than 23 million between 2015 and 2020 – nearly 14 million from 2019 to 2020 alone.



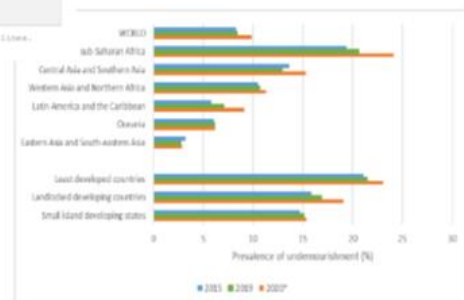
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SDG INDICATOR 2.1.1
Prevalence of undernourishment (PoU)



WFP. "Prevalence of undernourishment (PoU) in the world, 2005-2020". <https://www.wfp.org/publications/undernourishment>. Accessed 10/10/2021.



SLIDE 9

-Another important indicator of the second goal is **SDG INDICATOR 2.1.2** Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)

-It is estimated that nearly one in three people in the world did not have access to adequate food in 2020 – an increase of 320 million people in just one year, from 2.05 to 2.37 billion.

-SDG indicator 2.1.2 – the prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES) – is used to monitor progress toward ensuring access to adequate food for all.

-Although obtained using very different data and methods, they are expected to correlate with the PoU across regions closely.

-Since FAO first started collecting FIES data in 2014, moderate or severe food insecurity at the global level has been slowly on the rise, from 22.6 percent in 2014 to 26.6 percent in 2019. Then in 2020, the year the COVID-19 pandemic spread across the globe, it rose nearly as much as in the previous five years combined, to 30.4 percent. Thus, almost one in three people in the world did not have access to adequate food in 2020 – an increase of 320 million people in just one year, from 2.05 to 2.37 billion.

-Nearly 40 percent of those people – 11.9 percent of the global population, or almost 928 million – faced food insecurity at severe levels, indicating they had run out of food and, at worst, gone a day without eating.

-The highest levels of moderate or severe food insecurity in 2020 were registered in sub-Saharan Africa (66.2 percent of the population), followed by Central Asia and Southern Asia (42.8 percent), and Latin America and the Caribbean (40.8 percent).



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INDICATOR 2.1.2
Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)

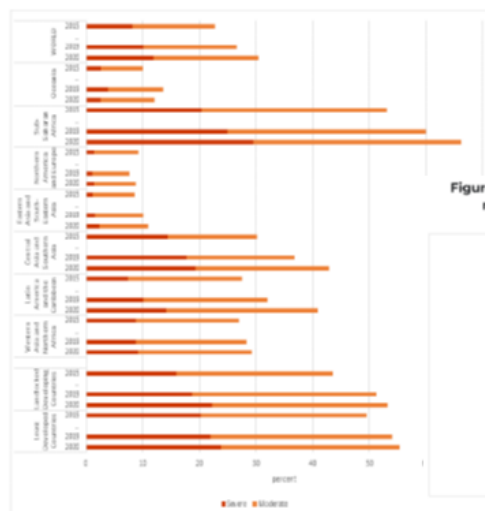


Figure 8: Regional distribution of the population affected by moderate or severe food insecurity, 2020 (millions)



SLIDE 10

-The third indicator we focus on is SDG INDICATOR 2.3.1, Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size.

-The productivity of small-scale producers is systematically lower, on average, than for larger food producers

-Across developing regions, indicator 2.3.1, which measures average labor productivity of small-scale food producers, can range from around 3 USD a day in countries such as Burkina Faso, Nigeria, United Republic of Tanzania, and Uganda, to 13.5 USD as in Mali in 2017. In developed countries, the productivity of small-scale food producers ranges from 45 USD a day in Hungary (2016) to 142 USD a day in Austria (2016).

-In all developing countries, small-scale producers have lower productivity than larger-scale producers. Countries with the largest differences in average productivity between small-scale producers and other producers include India and Malawi. By contrast, Uganda in the past years has been progressively closing the gap between small-scale producers and other producers.

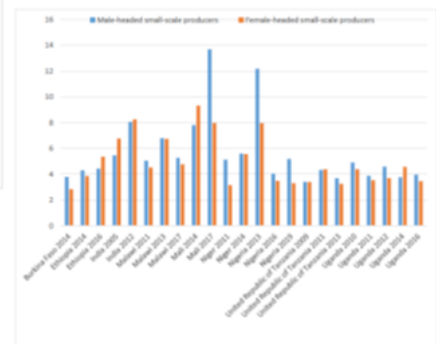
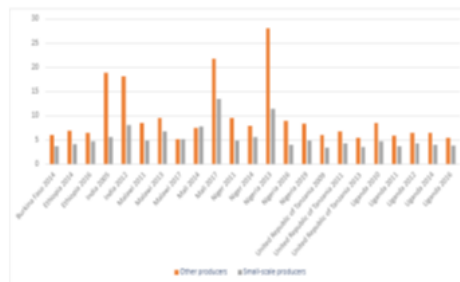
-In developing countries, sex-disaggregated data for the productivity of small-scale food producers do not reveal any particular pattern, suggesting that in many countries, the productivity of women small-scale food producers is on par or even exceeds the productivity of men small-scale producers. By contrast, the same is not the case in the EU, where men small-scale food producers systematically achieve higher productivity compared to women, with only one exception.



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SDG INDICATOR 2.3.2
Average income of small-scale food producers, by sex and indigenous status



SLIDE 11

-The fourth indicator we focus on is SDG INDICATOR 2.5.1.A “Number of plant genetic resources for food and agriculture secured in medium-or long-term conservation facilities”.

-Plant genetic resources underpin the world’s food security and nutrition, as well as the livelihoods of millions of farmers. They play a key role in adapting crops to changing environments and the sustainable intensification of agricultural production.

-Global holdings of plant genetic resources for food and agriculture in 2020 showed no significant changes over the previous year. The growth rate of the global holdings has decreased in the past ten years, reaching its lowest level in 2020. The first year of the COVID-19 pandemic has likely accelerated this negative trend by affecting genebanks’ operations, including new germplasm collecting and acquisition activities.

-Overall, diversity of crop wild relatives, wild food plants, and neglected and underutilized crop species continue to be under-represented in ex-situ collections. This is of particular concern given the increasing pressure faced by these plant species in both natural and agricultural environments.

-At the end of 2020, 5.7 million accessions of plant genetic resources for food and agriculture were reportedly conserved under medium or long-term conditions in 831 genebanks by 114 countries and 17 regional and international research centers, about a 0.2 percent increase on the previous year.

-Net increases in genebank holdings with the highest relative increase (+22 percent) were observed in Oceania excluding Australia and New Zealand, followed by sub-Saharan Africa (+1.8 percent), Northern Africa (+1.3 percent), and Southern Asia (+1.1 percent).

-Net decreases in genebank holdings, greater than one percent, occurred in seven countries, three in Europe (-11.4, -3.7, and -1.7 percent), two in Western Asia (-38 and -2.7 percent), and one each in South-eastern Asia (-12.1 percent) and South America (-3.5 percent). Losses were ascribed to identifying and eliminating duplicates in Europe and insufficient human and financial resources in the remaining regions.



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SDG INDICATOR 2.5.1.A
Number of plant genetic resources for food and agriculture secured in medium-or long-term conservation facilities

Figure 16: Number of accessions of plant genetic resources secured in medium- or long-term conservation facilities in the world, 1995-2020

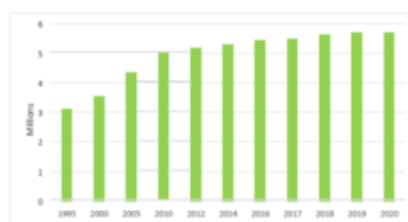
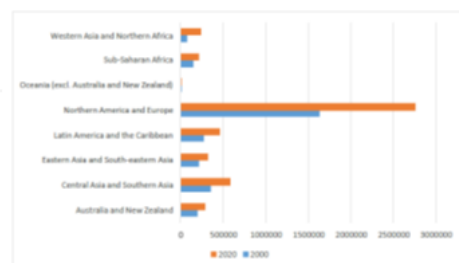


Figure 17: Plant genetic resources accessions stored ex situ (number)



SLIDE 12

-The fifth indicator we focus on is SDG INDICATOR 2.5.1.B “Number of animal genetic resources for food and agriculture secured in medium-or long-term conservation facilities”.

-In addition to plant genetic resources, animal genetic resources are equally vital for food security and livelihoods, allowing the adaptation of livestock to evolve environmental conditions and thus bolstering the resilience of food systems in the face of climate change

-A good way to measure the conservation of animal genetic resources for food and agriculture is by counting the number of local livestock breeds (i.e., breeds occurring in only one country) with sufficient material stored in genebanks to allow them to be reconstituted in case of extinction.

-Between 2010 and 2021, the number of local breeds with sufficient material stored in genebanks increased from 10 to 203. This may appear like a significant increase, yet it represents a fraction of the approximately 7 700 breeds reported globally and is still a far cry from the SDG target calling on the international community to halt the loss of animal genetic resources for food and agriculture.

-Out of a world total of 7 700 registered local breeds (including extinct ones), 8.7 percent are reported with some genetic material stored, out of which 2.7 percent are reported with sufficient material stored to allow them to be reconstituted.



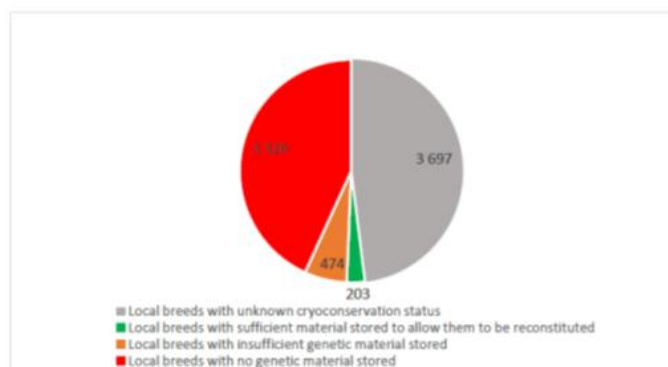
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SDG INDICATOR 2.5.1.B
Number of animal genetic resources for food and agriculture secured in medium-or long-term conservation facilities

Figure 19: Proportions of local breeds (including extinct ones) with sufficient, insufficient and no genetic material stored, 2020



SLIDE 13

-The sixth indicator we focus on is SDG INDICATOR 2.5.2 “Proportion of local breeds classified as being at risk of extinction.”

-Genetic diversity in live animal breeds is important to agriculture and food production. It enables livestock to be raised in various environments and provides a wide range of products and services (food, fibers, manure, draught power, etc.).

-While SDG indicator 2.5.1.b revealed that only a minute fraction of the local livestock breeds have sufficient material stored in case of extinction, SDG indicator 2.5.2 provides a measure of the actual risk of extinction for each living local livestock breed.

-The fact that animal genetic resources are not being adequately conserved in medium- and long-term conservation facilities is particularly problematic since, according to the latest country reports, an alarming proportion of local breeds are at risk of extinction.

-Of the limited number of surveyed local livestock breeds, 74 percent are deemed at risk of extinction due to the number of living animals in a population falling below certain thresholds. In contrast, the risk status of 61 percent of local breeds across the world remains unknown.

-Results between regions differ. Among breeds with known risk status: 84 percent are considered to be at risk in Europe, 42 percent are considered at risk in South America, and 66 percent are considered at risk in Southern Africa.

-Due to the scarce information reported, results for other regions are considered to be not representative.



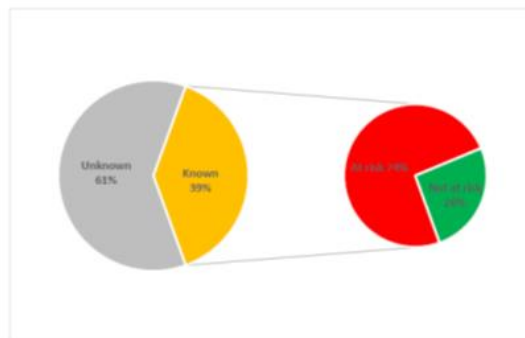
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SDG INDICATOR 2.5.2
Proportion of local breeds classified as being at risk of extinction

Figure 20: Proportion of local livestock breeds around the world by risk status, 2020



SLIDE 14

-The seventh indicator we focus on is SDG INDICATOR 2.A.1 Agriculture orientation index for government expenditure

-Improved access to new agricultural technologies, credit services, and information resources for farmers enhances agricultural productivity and incomes, contributing to inclusive economic growth and reduction in poverty, especially in the more economically vulnerable rural areas. Public investment in agriculture plays a critical role in providing agricultural workers with these inputs and also in attracting private investment.

-The agriculture orientation index (AOI) for government expenditure – which compares government expenditure for agriculture, fishing, and forestry and the sector’s contribution to GDP - registered a modest increase at the global level between 2001 and 2019 - from 0.52 to 0.53. This results from a slight parallel increase in the value-added share of agriculture, fishing, and forestry and an even more significant increase of public expenditure dedicated to these sectors.

-Notable increases in the regional AOI were reported for Eastern and South-eastern Asia, from 0.64 to 1.06 between 2001 and 2019, primarily driven by China. However, other regions such as sub-Saharan Africa reported a decline of AOI from 0.17 to 0.13 between 2001 and 2019. A similar decrease in AOI was observed in Oceania, Europe, and Northern America, during the same period.

-Between 2001 and 2019, sub-regions that reported notable increases in AOI include the Caribbean (from 0.39 to 0.93), Central America (from 0.28 to 0.34), Central Asia (0.27 to 0.48), and Eastern Asia (from 0.73 to 1.21). The sub-regions of Europe (from 0.50 to 0.38) and Northern America (1.02 to 0.63) showed a declining trend in AOI.

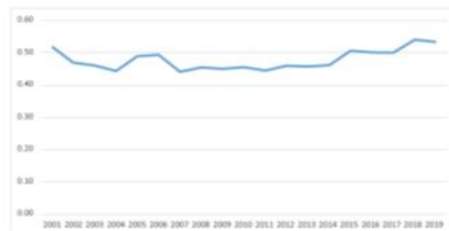


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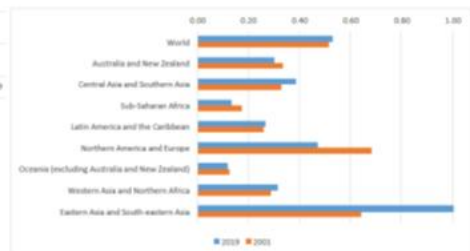
SDG INDICATOR 2.A.1
Agriculture orientation index for government expenditure

Figure 22: Agricultural orientation index: Share of Government Expenditure in Agriculture in relation to Agriculture share of GDP, 2000-2019



SOURCE: FAO, 2021a.

Figure 23: Agricultural orientation index by SDG sub-regions



SLIDE 15

-The eighth indicator we focus on is SDG INDICATOR 2.C.1 Indicator of food price anomalies

-At the global level, the share of countries afflicted by high food prices, which had been relatively stable since 2016, rose sharply from 16 percent in 2019 to 47 in 2020, mainly attributed to trends in international markets. International prices of food items soared in the second half of 2020, more than offsetting declines in the first five months of the year, supported by the increase in international demand for cereals, vegetable oils, sugar, and dairy products with the easing of the COVID-19 related restrictive measures in some countries. Upward price pressure also derived from domestic market factors. In some countries, prices of key food items soared due to massive buying and hoarding amid the first wave of the COVID-19 pandemic, when restrictive measures related to the pandemic were introduced.

-In 2020, the proportion of countries experiencing abnormally and moderately high food prices were highest in Central and Southern Asia (67 percent) and lowest in Eastern and South-eastern Asia (33 percent). In Latin America and the Caribbean, the share of countries afflicted by high prices rose year on year by 31 percentage points, reversing the declines in previous years. In Central, Southern, and Western Asia and North Africa, the market disruptions amid the COVID-19 pandemic further compounded pre-existing conditions, including reduced domestic availability of staple food and currency depreciations in some countries. In Oceania, price indices are only available for a handful of countries, making it difficult to draw conclusions about food price volatility at the regional level.

-Here ends the first lesson about the “Food and agriculture related SDGs”, see you at the next!



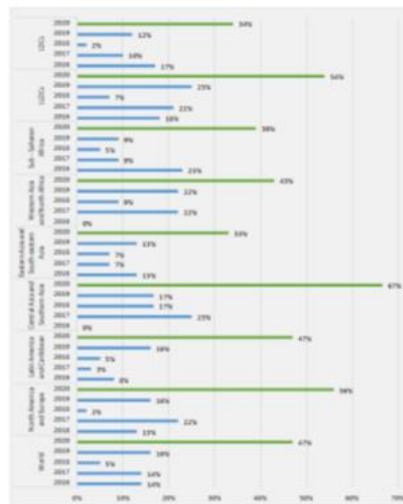
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SDG INDICATOR 2.C.1
Indicator of food price anomalies

Figure 25: Proportion of countries by region affected by high or moderately high food prices in (2016-2020)



LESSON 2

SLIDE 16

-Welcome to the second lesson about food and agriculture related SDGs



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**MODULE 1 SUSTAINABLE AGRO-LIVESTOCK FARM AND ANIMAL WELFARE:
METHOD, TECHNIQUE, AND EXPERIENCES**

UNIT 1

Agricultural multifunctionality and sustainable farm

THE FOOD AND AGRICULTURE RELATED SUSTAINABLE DEVELOPMENT GOALS

Lesson 2

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SLIDE 17

-Let's see the next SDGs and indicators

-The third food and agriculture related SDG is the fifth one: Gender Equality

-The socio-economic impacts of COVID-19 have resulted in significant setbacks to progress made in recent years about gender equality: violence against women and girls has intensified; child marriage, on the decline in recent years, is expected to increase; increased care work at home is affecting women disproportionately. The pandemic has highlighted the need to act swiftly to address existing gender inequality that remains pervasive globally. Women have played a critical role in response to COVID-19 as frontline health providers, care providers, managers and leaders of the response and recovery efforts. Yet, they remain under-represented in critical leadership positions, and their rights and priorities are often not explicitly addressed in response and recovery measures. The crisis presents an opportunity to re-shape systems, laws, policies, and institutions to advance gender equality.

-International commitments to advance gender equality have brought about improvements in some areas in recent years: child marriage and female genital mutilation have declined in recent years, and women's political representation is continuing a slow upward trend.

-However, the vision of full gender equality across economic, social, and political dimensions remains far from fulfilled. This is the case for ownership and/or secure tenure rights over agricultural land, which can be critical for determining access to credit and financial services. Although women make up a substantial share of the agricultural labour force in developing countries, relatively fewer women than men have ownership and/or legally secure tenure rights over agricultural land. Substantial progress is still needed in both legal frameworks and their implementation to realize women's land rights.



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SLIDE 18

The first indicator of the Gender Equality Goal is the SDG INDICATOR 5.A.1: “Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure.”

Relatively fewer women than men have ownership and/or secure tenure rights over agricultural land.

The land is one of the most important assets for supporting agricultural production and providing food security and nutrition. Evidence suggests that owning or bearing land rights reduces women’s reliance on male partners and relatives and increases their bargaining power in the economy and within households. It also improves women’s chances of accessing extension services and credit and encourages them to undertake and expand their investments and join producer organizations. These benefits would not be restricted to women, though; studies suggest that if women had equal access to land, poverty and food insecurity would be significantly reduced worldwide.

However, that vision is far from realized: data shows that in most countries, less than 50 percent of women in the agricultural population have ownership and/or secure tenure rights over agricultural land, and in 29 out of 33 countries assessed, relatively fewer women have such rights compared to their male counterparts. Indeed, in 13 out of these 33 countries, the share of women in agriculture having ownership and/or secure tenure rights over land is less than half compared to men. In addition, the percentage of men among landowners exceeds the rate of women in 28 out of 33 countries assessed. Therefore, although it is not always the case that male landowners outnumber women, this is by far the most prevalent situation.



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SDG INDICATOR 5.A.1
Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure

Figure 26: Share of women and men in the adult agricultural population with ownership or secure rights over agricultural land

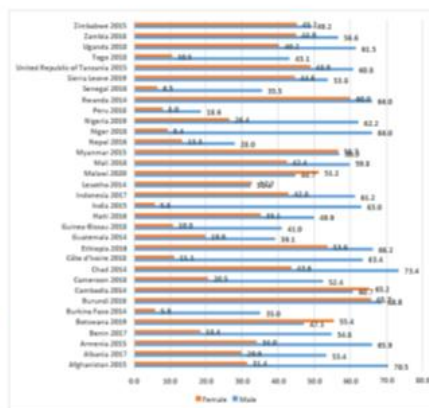


Figure 27: Share of women among owners or right holders



SLIDE 20

-The fourth food and agriculture related SDG is the sixth one: Clean water and sanitation

-Billions of people worldwide still live without safely managed drinking water, sanitation, and hygiene services. COVID-19 has brought to fore the critical importance of access to safe water and hygiene in protecting human health and containing the spread of the pandemic. Furthermore, water is also essential in reducing poverty and food security, ensuring peace and human rights, and improving ecosystems. Over the last century, global water use has increased at more than twice the population growth rate. In addition to water stress, countries are facing growing challenges linked to water pollution, degraded water-related ecosystems, water scarcity caused by climate change. The world is not on track to achieve SDG 6. A dramatic acceleration in current rates of progress and integrated and holistic approaches to water management is needed.



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SLIDE 21

-The first indicator of the Clean water and sanitation goal we focus on is the SDG INDICATOR 6.4.1 Change in water-use efficiency over time

-Improving water use efficiency is a key measure that can contribute to reducing overall water stress in a country, provided that it also leads to a parallel reduction of water withdrawals. Increasing water-use efficiency over time means using less water to produce the same amount of output, effectively decoupling economic growth from water-use across the main water-using sectors.

-Across the world, water use efficiency rose from 17.28 USD/m³ in 2015 to 19.01 USD/m³ in 2018 worldwide, a 10 percent efficiency increase. Estimates for water use efficiency range from as little as 0.2 USD/m³ for countries whose economies depend largely on agriculture to 1 096 USD/m³ in highly industrialized, service-based economies that are less dependent on natural resources. Most countries (two-thirds) have a water use efficiency between 5 and 100 USD/m³.

-Regionally, water use efficiency in 2018 ranges from 2.5 USD/m³ in Central Asia to 62.34 USD/m³ in Oceania, highlighting again the huge differences existing across the world.

-Agriculture tends to have a much lower water use efficiency compared to other productive sectors, meaning that a country's economic structure usually greatly affects its overall water use efficiency. Therefore, increasing agricultural water productivity is a key intervention for improving water use efficiency, particularly in agricultural-reliant countries. The agriculture sector has seen an 8 percent increase in its water use efficiency since 2015. Other important measures include reducing water losses by tackling leakages in municipal distribution networks and optimizing industrial and energy cooling processes.



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SDG INDICATOR 6.4.1
Change in water-use efficiency over time

Figure 29: Global water use efficiency, 2015-2018 (USD per m³)

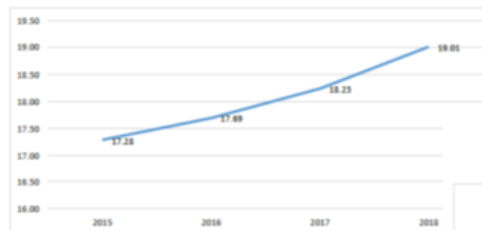


Figure 30: Water use efficiency by region in 2015 and 2018 (USD/m³)



SLIDE 22

-The second indicator of the Clean water and sanitation goal we focus on is the SDG INDICATOR 6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources

-Water stress remains alarmingly high in many regions, threatening progress towards sustainable development

-Water stress is one of the most serious current threats to sustainable development. High water stress – the withdrawal of too much fresh water from natural sources compared to the freshwater available – can have devastating consequences for the environment and hinder or even reverse economic and social development. The resulting water scarcity, which tends to disproportionately affect the most vulnerable people, could displace an estimated 700 million people by 2030.

-Globally, water stress remains at a safe 18.4 percent, rising slightly from 18.2 percent in 2015. However, the world average masks huge regional variations. For instance, Central and Southern Asia and Northern Africa all registered very high water stress, over 70 percent, and experienced an upward surge in water stress between 2015 and 2018. Eastern and Western Asia follow with water stress levels between 45 and 60 percent, with the latter registering an increasing water stress level since 2015.

-For this reason, the gradually increasing trend of global water stress over the past 20 years reflects increasing pressure in several areas of the world, which decreases in other areas of the world that are not able to compensate.

-By contrast, the water stress in some regions such as sub-Saharan Africa and Central and South America is low enough to provide some countries with scope for sustainably increasing water use, provided that adequate precautions are taken. In regions affected by high water stress, urgent and concrete measures are required to save water and increase water use efficiency.



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SDG INDICATOR 6.4.2
Level of water stress: freshwater withdrawal as a proportion of available freshwater resources

Figure 32: World water stress: freshwater withdrawal as a proportion of available freshwater resources, after taking into account environmental flow requirements, 2000–2018

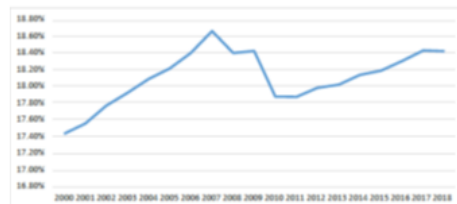
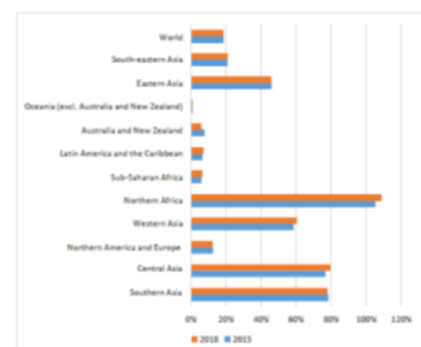


Figure 33: Level of water stress by region in 2015 and 2018 (%)



SLIDE 23

-The fifth food and agriculture related SDG is the tenth one: Reduced Inequalities

-Inequality in its many forms is a significant global challenge, although progress has been made towards reducing relative income inequality in some countries. However, the COVID-19 crisis has exacerbated systemic inequality. It has disproportionately affected the poorest and most vulnerable people and countries. It is projected to push back the poorest countries a full ten years on their SDG progress in this dimension.

The 2030 Agenda for Sustainable Development recognizes that international trade is one of the key drivers for economic growth. The benefits of this growth should be inclusive and contribute to poverty and inequality reduction worldwide. Hence, there are several trade-related SDG targets across various Goals, which seek to remove different barriers and limit undesirable consequences from trade.



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SLIDE 24

- The indicator of the Reduced Inequalities goal we focus on is the **SDG INDICATOR 10.A.1** Proportion of tariff lines applied to imports from Least Developed Countries (LDCs) and developing countries with zero-tariff

-Duty-free access for developing and Least Developed Countries (LDCs) exports in international markets has improved in recent years, particularly for agricultural products, while the overall growth of exports from LDCs remains worryingly low.

-Target 10.A.1 of the Agenda 2030 seeks to improve market access conditions for exports from developing and LDCs by giving them special and differential treatment following the WTO agreements. SDG indicator 10.a.1 is calculated as the average share of duty-free national tariff lines, effectively allowing us to observe how many developing countries and LDCs will have free access to developed countries' markets.

-As shown in Figure 34, developing countries and LDCs receive either full or nearly full duty-free and quota-free access in most international markets. Between 2015 and 2019, the proportion of products exported by LDCs, developing regions, and Small Island Developing States that could enter international markets free of duty increased from 63.8 to 66.3 percent, from 49.3 to 52.2 percent, and from 59.4 to 67.2 percent, respectively. Correspondingly, in the same period, the share of agricultural products exported by LDCs, developing regions, and Small Island Developing States that could enter the international market duty-free increased from 69 to 75.1 percent, 50.7 to 53.9 percent from 60.4 to 69.2 percent respectively.



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SDG INDICATOR 10.A.1
Proportion of tariff lines applied to imports from Least Developed Countries (LDCs) and developing countries with zero-tariff

Figure 34: Proportion imports from Least Developed Countries (LDCs) and developing countries with zero-tariff in international markets



Figure 35: Export subsidies budgetary outlays (USD million), 1995-2018



SLIDE 25

-The sixth food and agriculture related SDG is the twelfth one: **Responsible consumption and production**

-Consumption and production dynamics underpin the growth of the global economy, yet their trends and current patterns are compromising sustainable development. For decades, scientists have been laying out how humanity is driving the three planetary crises: the climate crisis, the biodiversity crisis, and the pollution crisis, all linked to unsustainable production and consumption.

-Our relentless extraction of resources from the Earth is having a devastating impact on the natural world. Changes in consumption and production patterns can help promote the decoupling of economic growth and human well-being from resource use and environmental impacts. It can also trigger the transformations envisaged by global commitments on biodiversity, climate, and sustainable development at large. COVID-19 provides a window of opportunity to explore more inclusive and equitable development models underpinned by sustainable consumption and production to build a more sustainable and resilient recovery.



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SLIDE 26

The indicator of the **Responsible consumption and production** goal we focus on is the **SDG INDICATOR 12.3.1. A Food loss index. Status assessment: Not possible due to absence of numerical yardstick in target**

-Reducing food loss and waste is critical to improving the food security situation of vulnerable groups and decreasing the environmental footprint of food production activities. Achieving this target has the potential to contribute to several dimensions of the 2030 Agenda, such as eradicating food insecurity and hunger, improving sustainable water management, addressing climate change, and improving the sustainability of both marine and terrestrial ecosystems.

-Although limited data is available, it is estimated that globally around 14 percent of the world’s food is lost from production before reaching the retail level. These estimates vary across regions, going from as high as 20.7 percent in Central Asia and Southern Asia to 8.9 and 5.8 percent in Oceania and Australia and New Zealand, respectively. Estimates also vary across commodity groups and different stages of the food supply chain. Countries need to identify priority commodities and the subsequent steps where high losses occur in order to apply targeted intervention. Considerable reduction of food loss is possible by identifying these critical loss points and taking appropriate countermeasures.



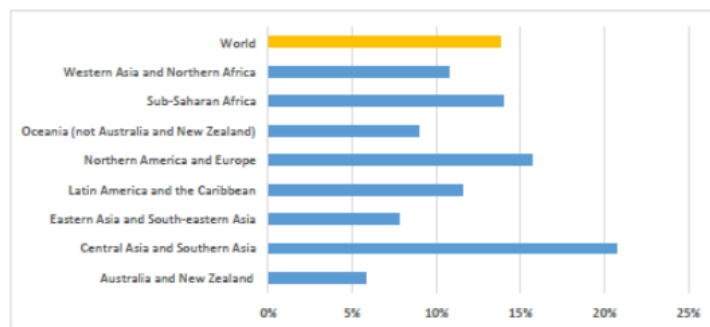
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SDG INDICATOR 12.3.1.A
Food loss index

Figure 36: Percentage of food loss by region, 2016



SLIDE 27

-The seventh food and agriculture related SDG is the fourteenth one: **Life below water**

-Marine resources from oceans and seas account for more than three-quarters of world trade and provide livelihoods for more than six billion people. Oceans are also the world's largest ecosystem, home to nearly a million known species. However, this vast resource is under continual threat from pollution, warming, and acidification that are disrupting marine ecosystems and the communities they support. These changes have long-term repercussions that require urgently scaling up protection of marine environments, investment in ocean science and support for small-scale fishery communities, and the sustainable management of the oceans.

-Despite some efforts in conserving oceans, decades of irresponsible exploitation have led to an alarming level of degradation. The sustainability of global fishery resources continues to decline, though at a reduced rate, and while many countries have made progress in combatting illegal, unreported, and unregulated fishing, a more concerted effort is needed. Increased support for small-scale fishers will be critical in light of the coronavirus pandemic to allow them to continue earning a livelihood and nourishing local communities.



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SLIDE 28

We focus on the first indicator of the Life below water goal is the **SDG INDICATOR 14.4.1 Proportion of fish stocks within biologically sustainable levels**.

-The sustainability of global fishery resources continues to decline, dropping from 90 percent in 1974 to 65.8 percent in 2017. Fish stocks within biologically sustainable levels contributed 78.7 percent of the global marine fish landings in 2017, remaining relatively stable at around 80 million tonnes since 1995. Despite the continuous deterioration, the rate of decline has slowed down in the most recent period.

-The global trend masks great variations in the proportion of sustainable fish stocks between different regions. In 2017, the Mediterranean and the Black Sea continued to have the highest percentage of stocks fished at unsustainable levels (62.5 percent), followed by the Southeast Pacific (54.5 percent) and Southwest Atlantic (53.3 percent). By contrast, the Eastern Central Pacific, Southwest Pacific, Northeast Pacific, and Western Central Pacific had the lowest proportion (13–22 percent) of stocks fished at biologically unsustainable levels.



The Food and Agriculture related Sustainable Development Goals

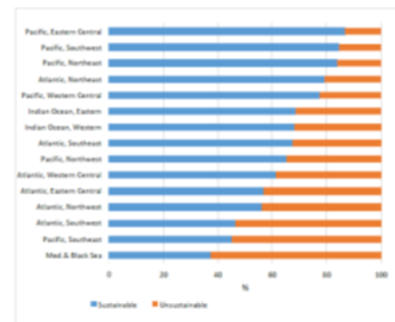


SDG INDICATOR 14.4.1
Proportion of fish stocks within biologically sustainable levels

Figure 37: SDG indicator 14.4.1 Proportion of fish stocks within biologically sustainable levels across the world



Figure 38: Fish stock sustainability status across major fishing areas



SLIDE 29

-The second indicator of the **Life below water** goal we focus on is **SDG INDICATOR 14.6.1** Degree of implementation of international instruments aiming to combat Illegal, unreported, and unregulated (IUU) fishing

-IUU fishing is one of the greatest threats to aquatic ecosystems and the fishers and populations who rely on these resources for their nutrition and livelihoods. It undermines national and regional efforts to manage fisheries sustainably as well as endeavors to conserve marine biodiversity.

-The key to ending IUU fishing once and for all is through cooperation, transparency, and compliance. Cooperation between all actors to strengthen individual efforts and foster interlinkages is required. This begins at the national level with inter-institutional cooperation, right through to the collaboration between different States, intergovernmental organizations, and NGOs working towards this common goal. Transparency is needed, with States sharing information on the identity and compliance history of fishing vessels with relevant actors as well as information to enable the traceability of fish products throughout the value chain. Finally, compliance is needed within the comprehensive international framework covering all steps from the sea to the plate. This includes a strong legislative framework, monitoring, control, and surveillance (MCS) capacity, together with effective enforcement capacity, which are essential to the proper implementation of international instruments aiming to combat IUU fishing.

-Between 2018 and 2020, the average degree of implementation of international instruments to combat IUU fishing has improved across the world. A composite measure of the degree of implementation of the five principal instruments, the world score for SDG indicator 14.6.1 rose from 3/5 to 4/5 over this period. Based on their reporting for SDG indicator 14.6.1, States have thus made good progress overall in carrying out the recommended measures to combat IUU fishing, with close to 75 percent scoring highly in their degree of implementation of relevant international instruments in 2020 compared to 70 percent in 2018.



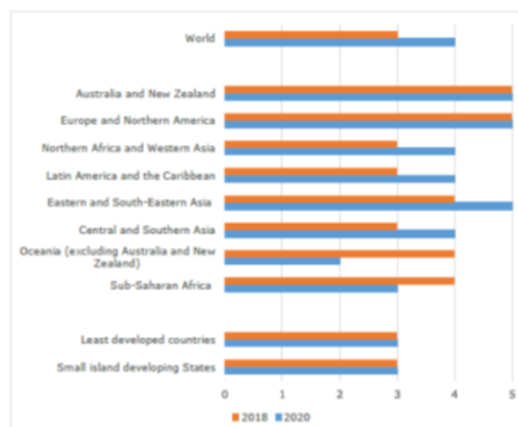
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SDG INDICATOR 14.6.1
Degree of implementation of international instruments aiming to combat Illegal, unreported and unregulated (IUU) fishing

Figure 41: Progress in degree of implementation of IUU instruments, 2018-2020



SLIDE 30

-The third indicator of the **Life below water** goal we focus on is **SDG INDICATOR 14.7.1** Sustainable fisheries as a proportion of GDP in Small Island Developing States (SIDS), Least Developed Countries (LDCs), and all countries

-*Sustainable fisheries have supported communities' livelihoods and food security* for millennia, playing an essential role in local economies and food security. Today sustainable fisheries account for approximately 0.1 percent of global GDP, while in certain regions and LDCs, they contribute more than 0.5 percent. The sustainable management of fish stocks remains critical for ensuring that fisheries continue to generate economic growth and support equitable development, meeting the needs of today without compromising the ability of future generations to do the same.

-Fish is now able to feed more people than ever before, providing livelihoods for millions worldwide while alleviating hunger and malnutrition. The global appetite for fish has driven production from 20 million tons in 1950 to about 179 million tons in 2018. As fisheries and aquaculture have expanded, so too have the economic dividends from the sector and its contribution to sustained economic growth. At a global level, the value-added of this sector has increased consistently, by several percentage points year on year. This has led to a positive trend in the contribution of sustainable fisheries in regions such as sub-Saharan Africa, where it rose as a proportion of GDP from 0.25 percent in 2011 to 0.46 percent in 2017.

-These economic dividends can only be sustained through prudent management of fish stocks that avoid overexploitation and depletion. The decline in fish stock within biologically sustainable levels continues, albeit at a slower rate, highlighting the need for improved regulations and effective monitoring. The declining sustainability of several stocks in the Pacific Ocean has led to a worsening overall trend for regions such as South-Eastern Asia, where sustainable fisheries fell from 0.76 percent of GDP in 2011 to 0.57 percent in 2017.



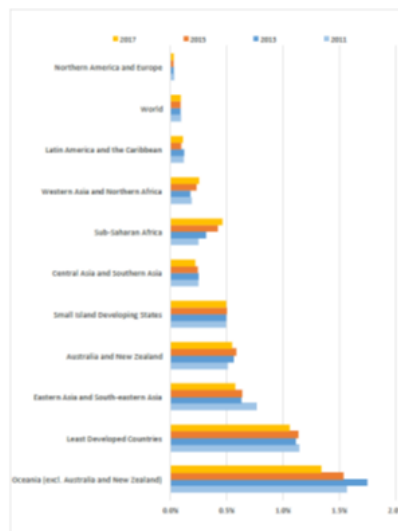
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SDG INDICATOR 14.7.1
Sustainable fisheries as a proportion of GDP in Small Island Developing States (SIDS), Least Developed Countries (LDCs) and all countries

Figure 44: Sustainable Fisheries as a percentage of GDP



SLIDE 31

The fourth indicator of the **Life below water** goal we focus on is **SDG INDICATOR 14.B.1** Degree of application of a legal/regulatory/ policy/institutional framework which recognizes and protects access rights for small-scale fisheries.

-As the world looks to the 2022 FAO report “International Year of Artisanal Fisheries and Aquaculture”, countries’ commitment to providing access for small-scale artisanal fishers to marine resources and markets is gaining traction. Small-scale fishers, who account for more than half of total capture production in developing countries, continue to be among the most marginalized food producers, beckoning the international community to take action.

-At the same time, these small-scale food producers fulfill a vital role to nourish those depending on the sector and local communities in the current crisis. It is more important than ever for countries to support small-scale fishers as key contributors to sustainable food systems. Such action can be informed by adopting specific initiatives to implement the internationally agreed [Voluntary Guidelines for Securing Small-Scale Sustainable Fisheries in the Context of Food Security and Poverty Eradication \(FAO, 2015\)](#), an internationally agreed instrument that promotes improved small-scale fisheries governance, including in value chains, post-harvest operations and trade, and which includes a dedicated chapter on Disaster Risks and Climate Change.

-Since 2015, most regions have expanded the adoption of regulatory frameworks supporting small-scale fisheries and promoting participatory decision-making processes, including SIDS, where up to 70 percent of the people working in the fisheries sector are involved in small-scale fisheries. The average global score for SDG indicator 14.b.1 - a composite score of implementation of legal/regulatory/policy/institutional frameworks which recognize and protect access rights for small-scale fisheries - has moved from 3/5 in 2018 to 4/5 in 2020. At the regional level, Northern Africa and Western Asia reflect this leap. At the same time, Central and Southern Asia and Latin America, and the Caribbean reduced their regional score from 3/5 to 2/5 and from 4/5 to 3/5, respectively, highlighting that efforts need to be redoubled and that there is no room for complacency. The other regions remained stable at a score of 4/5.



The Food and Agriculture related Sustainable Development Goals



SDG INDICATOR 14.B.1
Degree of application of a legal/regulatory/ policy/institutional framework which recognizes and protects access rights for small-scale fisheries

Figure 46: Progress in degree of implementation of international instruments to promote and protect small-scale fisheries, 2018–2020



SLIDE 32

-The last food and agriculture related SDG is the fifteenth one: **Life on land**

-Deforestation and forest degradation continue biodiversity loss, and the ongoing degradation of ecosystems is having profound consequences for human wellbeing and survival. The world fell short on 2020 targets to halt biodiversity loss. Forest area coverage continues to decline, albeit slower than previous decades, and countless species remain threatened with extinction. While great efforts are being made on expanding sustainable forest management, increasing coverage of key biodiversity areas, and signing up to legislation and treaties to protect biodiversity and ecosystems, the international community will need to scale up efforts to protect terrestrial ecosystems to “put the health of the planet at the center of all our plans and policies”.



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SLIDE 33

The first indicator of the **Life on the land** goal we focus on is the **SDG INDICATOR 15.1.1 Forest area as a proportion of total land area**.

-The proportion of forest area of the world’s land area has gradually decreased from 31.9 percent in 2000 (4.2 billion hectares) to 31.5 percent in 2010, then down to 31.2 percent (4.1 billion ha) in 2020. Forest area losses amounted to almost 100 million hectares in the past two decades. However, the loss rate has slightly slowed down within the past ten years. These global trends result from divergent dynamics of the regions:

- Asia, as well as Europe and Northern America, showed an overall increase in forest area from 2000 to 2020, due to afforestation and landscape restoration efforts, as well as a natural expansion of forests in those regions. The expansion of forest area, however, slowed down from 2010 to 2020 compared to the period 2000–2010.
- On the other hand, large forest area losses were observed in the past twenty years in Latin America and the Caribbean, as well as in sub-Saharan Africa, mainly due to the conversion of forest land for agricultural use for crops and grazing. In Latin America and the Caribbean, the forest losses decreased in 2010–2020 compared to the previous decade, while an increase was observed in sub-Saharan Africa.

Forests play an important role in livelihoods and the well-being of the rural and urban population. They notably contribute to regulating the water cycle, mitigating climate change, while they are also home to most of the world’s terrestrial biodiversity. Loss of forests contributes to global warming and has negative effects, in particular, on the livelihoods of the poorest people, on interrelated land uses such as agriculture, as well as on wildlife and other environmental services.



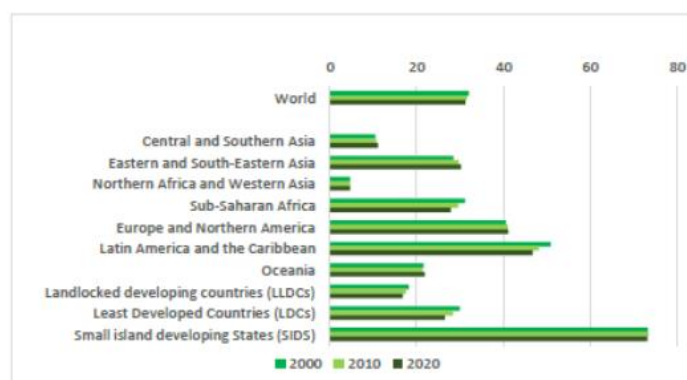
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SDG INDICATOR 15.1.1
Forest area as a proportion of total land area

Figure 49: SDG indicator 15.1.1 - Forest area as proportion of total land area (percent)



SLIDE 34

-The second indicator of the **Life on land** goal we focus on is the **SDG INDICATOR 15.1.1 Forest area as a proportion of total land area**.

-Indicator 15.2.1 shows evident progress towards sustainable management of the world’s forest. Most sub-indicators indicate notable positive trends if we compare the period 2010–2020 to the period 2000–2010, demonstrating successful efforts to conserve and sustainably use the forests.

-Globally, the following sub-indicators have increased in most regions:

- the area of forest under certification
- the proportion of forest area in a protected area and under long-term management plans
- the aboveground forest biomass per hectare

-The only exception from this trend is the forest area change rate, which shows a slight decrease in the rate of forest loss at the global level and remains an issue of concern. *Global Forest Resources Assessment 2020* (FAO, 2021e) data reveal that the loss of forest in Africa and South-eastern Asia increased in the most recent decade compared to the previous decade. Forest loss is still high also in Latin America and the Caribbean, but it is slowing down. In these regions, forest conversion to large-scale cropping (particularly in Latin America and South-eastern Asia), grazing, and subsistence agriculture (Africa) are the main drivers of forest loss.

-Global and regional efforts to sustain forest ecosystems as well as their social, economic, and environmental functions should be pursued with particular emphasis on the tropics and developing countries.



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SDG INDICATOR 15.2.1
Progress towards sustainable forest management

15.2.1. Dashboard for SDG sub-indicators

SDG Region	Forest area annual net change rate	Above-ground biomass stock in forest (t/ha)	Proportion of forest area within legally established protected areas	Proportion of forest area under a long-term forest management plan	Forest area certified
World	Green	Green	Green	Green	Green
Central and Southern Asia	Green	Green	Green	Green	Green
Central Asia	Green	Green	Green	Green	Green
Southern Asia	Green	Green	Green	Green	Green
Eastern and South-Eastern Asia	Green	Green	Green	Green	Green
Eastern Asia	Green	Green	Green	Green	Green
South-Eastern Asia	Green	Green	Green	Green	Green
Northern Africa and Western Asia	Red	Green	Green	Green	Green
Northern Africa	Red	Green	Green	Green	Green
Western Asia	Red	Green	Green	Green	Green
Sub-Saharan Africa	Red	Green	Green	Green	Green
Europe and Northern America	Green	Green	Green	Green	Green
Europe	Green	Green	Green	Green	Green
Northern America	Green	Green	Green	Green	Green
Latin America and the Caribbean	Green	Green	Green	Green	Green
Oceania	Green	Green	Green	Green	Green
Oceania (excl. Australia and New Zealand)	Green	Green	Green	Green	Green

SDG Region	Forest area annual net change rate	Above-ground biomass stock in forest (t/ha)	Proportion of forest area within legally established protected areas	Proportion of forest area under a long-term forest management plan	Forest area certified
World	Green	Green	Green	Green	Green
Australia and New Zealand	Green	Green	Green	Green	Green
Landlocked developing countries (LLDCs)	Red	Green	Green	Green	Green
Least Developed Countries (LDCs)	Red	Green	Green	Green	Green
Small island developing States (SIDS)	Red	Green	Green	Green	Green

Legend: Green = Positive change, Yellow = Neutral change, Red = Negative change

SLIDE 35

-The third indicator of the **Life on land** goal we focus on is the **SDG INDICATOR 15.4.2 Mountain Green Cover Index**

-Mountains cover about 22 percent of the earth's land area and are home to some 915 million people. They host more than 85 percent of the world's species of amphibians, birds, and mammals. In addition, they provide vital resources, such as clean water, to a significant proportion of the global population.

-However, mountain ecosystems are especially vulnerable to climate change, threatening their ability to continue providing ecosystem services. This is particularly alarming when mountain peoples are already among the world's most food insecure, with about one in three mountain dwellers facing the threat of food insecurity.

-The green coverage of mountains can provide information about their state of health and, therefore, about their capacity to fulfill their ecosystem roles. New data based on satellite imagery at a 300 meters resolution reveals that about 73 percent of the world's mountains are covered in green vegetation (forests, grasslands, wetlands, and croplands).

- Oceania is the region with the highest proportion of green mountain cover, at more than 95 percent.
- Western Asia and Northern Africa have the lowest cover, at approximately 55 percent.
- Sub-Saharan Africa has a mountain cover of 92 percent, followed by Eastern and Southern Asia at 85 percent and Latin America and the Caribbean at 81 percent.
- Northern America and Europe and Central and Southern Asia have 65 and 67 percent green mountain covers.

-In the first figure, there is a graphical representation of the global mountain cover disaggregated by land cover type and elevation to facilitate a more detailed understanding of global mountain cover patterns.

- Forest: At the lowest elevation, forests are the predominant land cover type, covering over 50 percent of the area. However, the share of forest cover steadily drops with higher elevation, becoming almost negligible above 4 500 meters.
- Grassland and otherland: The proportion of mountain area covered by grassland and other lands (including ice cover, glaciers, and barren land) generally increases with elevation, with grassland becoming the predominant land cover type above 3 500 meters.
- Cropland: Across elevation ranges, cropland is most expanded between 1 500 and 2 500 meters, probably reflecting the fact that mountains at lower elevation are also defined by a higher slope and local elevation range (LER), which may not provide a suitable landscape for growing crops. Above 2 500 meters, crop coverage of mountains also steadily decreases.
- Settlement and wetland: The share of mountain cover of settlements and wetland is negligible at all elevation ranges, although it also tends to decrease with higher altitudes.

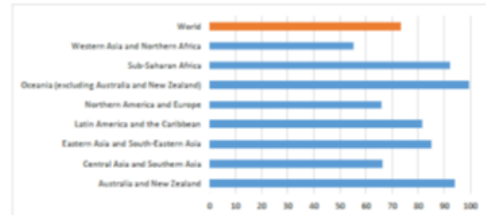


SDG INDICATOR 15.4.2
Mountain Green Cover Index

Figure 51: Global mountain cover, disaggregated by elevation and land cover type



Figure 52: Mountain green cover index by region, 2018



SLIDE 36

-The last indicator of the **Life on land** goal we focus on is **SDG INDICATOR 15.6.1 Number of countries that have adopted legislative, administrative, and policy frameworks to ensure fair and equitable sharing of benefits**

-The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization entered into force on 12 October 2014 as a supplementary agreement to the Convention on Biological Diversity to further advance the third objective of the Convention. The Protocol is still at the early stages of its implementation. Nevertheless, many Parties to the Nagoya Protocol as well as non-Parties have made considerable progress in putting in place access and benefit-sharing (ABS) frameworks.

-As of 1 February 2021, 128 countries and the European Union have ratified the Protocol, and 67 countries and the European Union have adopted ABS frameworks and published related information in the ABS Clearing-House. So far, 22 countries have published 2,110 internationally recognized compliance certificates, and six countries have published 44 checkpoint communiqués. The Secretariat of the Convention on Biological Diversity is engaging with countries to facilitate this process.

-The Treaty on Plant Genetic Resources for Food and Agriculture facilitates access to plant genetic material for farmers and plant breeders to develop new crop varieties to adapt agricultural production to changing environments, with the aim to enhance global food security. The exchange of plant material provides the opportunity for sharing monetary and non-monetary benefits arising from the use of such material with farmers in developing countries, which constitutes an important incentive for them to continue further conserving and sustainably using plant genetic material.

-With this last slide, we finish our deepening of the food and agriculture-related SDGs.



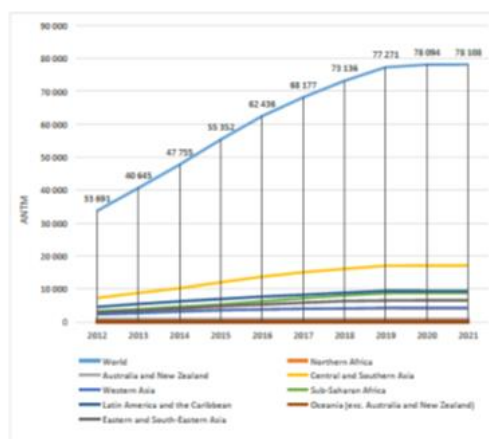
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SDG INDICATOR 15.6.1
Number of countries that have adopted legislative, administrative, and policy frameworks to ensure fair and equitable sharing of benefits

Figure 54: Number of Standard Material Transfer Agreements (SMTAs) transferring plant genetic resources for food and agriculture in the world, 2012-2021





1. FAO (2021). *Guidance on core indicators for agrifood systems. Measuring the private sector's contribution to the Sustainable Development Goals*. Food and Agriculture Organization of the United Nations, Rome.
2. FAO (2021). *Tracking progress on food and agriculture-related SDG indicators 2021. A report on the indicators under FAO custodianship*. Food and Agriculture Organization of the United Nations, Rome.