Food and Agriculture Organization of the United Nations

SUSTAINABLE DEVELOPMENT GOALS

FAO AND THE SDGs

Indicators - Measuring up to the 2030 Agenda for Sustainable Development

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KENYA

Farmer transplanting rice in a field as part of a farmer field school pilot project. ©FAO/A. Vitale

Cover photo: PHILIPPINES - A boy plays with sprinkled water coming from a faucet installed in the middle of a rice field. ©FAO/Linton

“THE PROPOSAL OF FAO AS ‘CUSTODIAN’ FOR 21 INDICATORS IS TESTIMONY TO FAO’S STRONG COMPETENCES IN MONITORING, AND TO THE CENTRALITY OF FOOD AND AGRICULTURE TO THE WHOLE 2030 AGENDA”

FAO Director-General
José Graziano da Silva

INTRODUCTION

The SDGs are the first Member State-led global development push in history, laying out specific objectives for countries to meet by a given timeframe with achievements monitored periodically to measure progress.

On 25 September 2015, the 193 Member States of the United Nations adopted the 2030 Agenda for Sustainable Development – including 17 Sustainable Development Goals (SDGs) and 169 targets. It commits the international community to end poverty and hunger and achieve sustainable development in all three dimensions (social, economic and environmental) over the next 15 years (2016-2030).

Succeeding the Millennium Development Goals (MDGs), the 2030 Agenda represents a real transformation in viewing and doing development, a global vision of prosperity for people and the planet that aspires to involve everybody and 'leave no one behind'. Defined and fully-owned by countries after the broadest global multistakeholder consultation in history, the SDGs are universal – as relevant to developed as they are to developing nations, interlinked and indivisible – no one goal is separate from the others, and call for comprehensive and participatory approaches.

The SDGs are now the main reference for development policies and programmes at national level. Each country is reviewing the 17 goals to determine how they can be translated into feasible but ambitious development plans, and how they can commit national efforts to produce real change – based on their own priorities, needs, stage of development, capacities, resources, strategies, partnerships and means of implementation.

Data is a key driver of transformation across all sectors, enabling governments to achieve national policy objectives. A global indicator framework for the SDGs represents the final act in the making of the 2030 Agenda.

THE SDGs ARE NOW THE MAIN REFERENCE FOR DEVELOPMENT POLICIES AND PROGRAMMES AT NATIONAL LEVEL

A MEASURE OF ACHIEVEMENT

A significant factor in the success of the SDGs will be new and effective ways of collecting data, monitoring targets and measuring progress. In March 2016, the UN Statistical Commission identified as a "practical starting point" 230 indicators to monitor the SDGs' 169 targets.

These global indicators will help countries measure the progress they are making towards achieving objectives, learn from experiences and understand in which areas to prioritise and allocate resources.

The sheer weight of indicators, however, represents an immense challenge for countries. Four times greater in number than for the MDGs, many indicators are also set to be disaggregated by gender, age, income, geography, occupation and other aspects of social identity to reflect the 2030 Agenda's guiding principle of "leaving no one behind".

While open data presents a multitude of opportunities to track progress, many countries will need support to collect and analyse statistical information in a systematic way and to disseminate it widely.

HIGH-LEVEL POLITICAL FORUM

The 2030 Agenda has set in place a global reporting structure that includes inputs at local, national and regional levels, and culminates in the UN High-Level Political Forum, an annual intergovernmental meeting that provides guidance and recommendations, identifies progress and challenges, and mobilises action to accelerate implementation of the 17 SDGs. Indicators are the foundation of this mutual accountability structure.

SDGs ACCOUNTABILITY STRUCTURE

REPORTING

Collecting and analysing statistical information based on the expanded set of 230 SDG indicators.

MONITORING

Producing reports monitoring progress towards the achievement of SDG targets, as well as commitments and follow-up actions, including policies, investments, budgetary expenditures, programmes and partnerships, in support of Agenda 2030.

FOLLOW-UP AND REVIEW

UN regional and global bodies are expected to analyse and evaluate the UN system reports, supported by specialized intergovernmental bodies of the UN system. A key feature will be sharing national experiences, with all countries expected to participate in voluntary reviews at least twice in the 15-year cycle.

SUPPORTING COUNTRIES

The SDGs depart from the MDGs in that all governments have contributed to their design and are committed to their achievement.

According to the principle of national ownership, countries are chiefly responsible for gathering data. However, international agencies can lend assistance by strengthening national capacities and by ensuring that data are comparable and aggregated at sub-regional, regional and global levels.

FAO is recognized as having a fundamental global role in developing methods and standards for food and agriculture statistics, and in providing technical assistance that can help countries meet the new monitoring challenges.

> The expanded role for FAO in monitoring the SDGs implies much greater involvement of the Organization at country level than was the case with the MDGs.

FAO is proposed 'custodian' UN agency for 21 SDG indicators, across SDGs 2, 5, 6, 12, 14 and 15, and a contributing agency for six more, a significant increase on the four indicators FAO was responsible for in the MDGs.

PROVISIONAL SDG INDICATORS ARE AT DIFFERENT STAGES

TIER	LEVEL OF DEVELOPMENT	UN	FAO (custodian)*
I	Established methodology exists and data already widely available	75	4
II	Methodology established but data not easily available	70	6
III	Internationally agreed methodology not yet developed and data largely unavailable	85	11
ALL		230	21

** FAO custodianship indicators on page 14.*

The contents of this table may be the subject of change as indicators are agreed and modified by countries

THE IMPORTANCE OF ADOPTING GLOBAL INDICATORS

SDG targets are defined in the 2030 Agenda "as aspirational and global, with each government setting its own national targets guided by the global level of ambition but taking into account national circumstances".
Only SDG indicators agreed by UN Member States will be used to assess progress at global level and for review at the UN's High Level Political Forum. Countries adopting SDG indicators will guarantee visibility in global reporting and avoid extra reporting burdens. SDG global indicators can be complemented by additional thematic and national indicators.

TANZANIA

Farmer field school learning session.
©FAO/J. Thomas

WHAT IS A CUSTODIAN AGENCY RESPONSIBLE FOR?

Each global SDG indicator has been assigned a 'custodian' agency by the UN Inter-agency and Expert Group on SDG indicators, a working group of the UN Statistical Commission. The agency is responsible for collecting data from national sources, providing the storyline for the annual global SDG progress report, providing and updating the indicator documentation, working on further methodological development, and contributing to statistical capacity building.

As custodian agency, FAO can:

- Support governments to set national priorities and targets
- Foster strong and coherent institutional and policy environments
- Engage all actors concerned in national policy processes and dialogues, contribute to innovative partnerships
- Support national statistical institutions to produce global and national indicators
- Support governments to report on challenges and results
- Contribute to mobilizing resources in support to national efforts
- Contribute to the global follow-up and review of SDGs

KEY MESSAGES

- **A significant factor in the success of the SDGs will be new and effective ways of collecting data, monitoring targets and measuring progress.** A sound indicator framework will turn the SDGs and their targets into a management tool to help countries track progress, develop policies and allocate resources.

- **The sheer number of SDG indicators, 230, represents an immense challenge for countries.** Four times greater in number than for the MDGs, many indicators are also set to be disaggregated to reflect the 2030 Agenda's guiding principle of "leaving no one behind".

- **FAO is recognized as having a fundamental global role in developing methods and standards for food and agriculture statistics**, and for providing technical assistance that can help countries meet the new monitoring challenges.

- **FAO is proposed 'custodian' UN agency for 21 of the 230 SDG indicators identified by the UN Statistical Commission**, across SDGs 2, 5, 6, 12, 14 and 15, and a contributing agency for six more.

- **As custodian agency, FAO will help to ensure that national data are comparable and aggregated at subregional, regional and global levels.** The data will contribute to annual SDG progress reports that feed into the UN's High Level Political Forum's follow-up and review processes.

- **Only SDG indicators agreed by UN Member States will be used to assess progress at global level** and for review at the High Level Political Forum.

- **Technology is central to the capture of data.** Strengthening its work in gathering and analysing data, FAO is at the forefront of innovations to collect and capture information, striking new partnerships and investing in novel equipment, from earth observation satellites to mobile devices to aerial drones.

- **Going beyond SDG indicators, FAO provides data on and statistical support to some 200 countries.** FAO statistics can be used by both governments to formulate and supervise policy and by farmers in their forward-planning and economic decision-making

- **The broader availability of data to rural actors can have a catalytic effect on achieving zero hunger and bringing about sustainable development.** For example, access to information on growing conditions, weather and markets, will allow some 500 million smallholder farmers to farm more profitably, and use scarce resources efficiently.

- **Data, by itself, is only a starting point to help countries achieve progress.** Effective monitoring can shed greater light but governments must commit to policies that target sustainable development objectives and those left behind. FAO's work in policy support is educated by data.

THE DATA REVOLUTION

Responding to the call of countries, FAO is developing indicators that can be adopted universally and cost-effectively, with potential for data to be disaggregated and reported regularly.

CHAD

Farmers checking the growth of a cassava crop. FAO helps improve food security and the nutritional level of the population.
©FAO/S. Kambou

Bigger and better data have the potential to drive achievement in the battle against poverty and hunger, to help ensure development is balanced and sustainable, and to deliver enhanced knowledge that will allow for integrated interventions in combating climate change.

Together with the ability to review progress, effective monitoring offers countries vital information on which groups of people or areas of the country to focus on. Policymakers need better data to design and roll out food security initiatives, to measure out social safety nets, to determine the level of support to agriculture, and to design and select research and development programmes.

'What gets measured, gets done', but it also gets seen. Open data helps raise awareness of shared objectives, strengthening public participation, ownership and commitment in reaching national targets. In the Information Age, data can help crystallise government direction and catalyse action among different actors.

EMBRACING TECHNOLOGY

From earth observation satellites to mobile technology to drones, FAO is embracing innovation to complement its long history of compiling on-the-ground information.

Technology is transforming the speed and accuracy of data collection, opening doors to torrents of new information and promising to change the very nature of development. These stories describe how FAO is striking new partnerships with the world's leading data specialists to ensure countries have the latest information at their fingertips to shape polices.

FISHING FROM SPACE

FAO is joining forces with leading scientific lights in the "world's first global view" of sustainable fishing practices, offering more than 22 million points of information on shipping vessel activities across the world each day.

Combating illicit (illegal, unreported or unregulated) fishing activity which has contributed to roughly a third of the world's fisheries becoming over-harvested, the Global Fishing Watch combines satellite data with cloud computing technology to track fishing and identify suspicious vessel activity.

When the tool is honed, countries will be able to plug into a live stream of satellite data, making the tracking of ships close enough to real-time for governments to legally act upon. Vessels illegally fishing in marine protected areas could be caught in the digital net along with their catch.

SATELLITE IMAGERY

FAO AND GOOGLE

A major new partnership with Google is at the heart of FAO's efforts to exploit cutting-edge technology to provide countries with essential new evidence to base decisions on and craft policies.

The technology is set to capture at speed vast quantities of new information on agriculture and natural resources in areas right across the 2030 Agenda, from dietary nutrition to forest, green mountain and land cover, pest control to water management, from plant health to crop losses, and locust control to climate change.

Accessing Google's geospatial data archives dating back to 1972, FAO is offering training on the use of FAO software tools such as Open Foris and CollectEarth to national experts who will be able to conduct - in a few hours - mapping and classification exercises that used to take weeks or months.

VIET NAM

Researchers for the National Forest Assessment (NFA) using laser technology devices that measure both tree height and thickness in areas of the forest that are inaccessible. ©FAO

SEEING BOTH THE FOREST AND THE TREES

Satellite imagery cannot replace the local knowledge and expertise – known as "ground truth" - but it can boost the efficiency, quality, transparency, credibility, and above all the timeliness and efficacy of data collection and the validation of existing global mapping products.

SCOPING THE LAND

Helping countries build a picture of land cover change over time, FAO has co-developed with the European Space Agency specific products for land cover, land use and vegetation monitoring at unprecedented resolution and free of cost.

Technology advances in remote sensing that allow for semi-automatic land cover mapping at high resolution, coupled with direct access to huge stocks of satellite data (Google Earth) mean that countries are able to map land cover not only for today but also for days gone by.

EMBRACING TECHNOLOGY

DETECTING DROUGHT IN EAST AFRICA

Mobile technology is now used for early-warning drought surveillance, in gathering data on the amount of water used for irrigation, and to establish a network of basic meteorological stations in remote areas. Employing Nokia Data Gathering, FAO's Regional Emergency Office for East and Central Africa has partnered with Oxfam to monitor water points in pastoralist areas of Kenya and Ethiopia.

▸ DRONES

Checking disaster in the Philippines

Quick, efficient and reliable, data imagery captured by drones – unmanned aerial vehicles – in once out-of-the-way places is fast becoming indispensable in combating climate change, and in minimizing the effects of floods and typhoons on food security.

In the Philippines, one of the world's most affected countries for tropical storms and other disasters, the Government and FAO have started using drones to assess where farmlands are most at risk from natural disasters and to quickly assess damage.

Detailed and data rich maps generated by drone footage help countries assess where agricultural infrastructure projects and service facilities like irrigation or storage facilities could be sited to best serve local farmers.

Drone technology is now being exploited for animal health, to detect disease early on and reduce the automatic slaughtering of herds. Drones identify the nearest grazing livestock to infected ones, patroling against illegal movements of animals off infected farms.

MOBILE PHONES

Getting a handle on animal health

FAO and partners are taking advantage of the enormous uptake of mobile phone technology for uses in reporting animal disease outbreaks, tracking vaccination campaigns and the delivery of veterinary treatments, such as deworming animals. Mobile

THE PHILIPPINES

FAO representatives leading the launching of drones that will support disaster risk reduction efforts in the agriculture sector. ©FAO/J.Directo

phone applications are making 'early warning' a matter of seconds instead of weeks for animal disease outbreaks.

In Kenya, where three out of four people now have a mobile phone, FAO has partnered with the Royal Veterinary College and local NGO Vetaid, to support the pilot testing of a mobile phone application, EpiCollect, to help track animal vaccination and treatment campaigns.

Animal diseases can be quickly detected and isolated when alerts come in digitally. Early warning can prevent the death of tens of thousands of animals, safeguarding livelihoods and food security, and preventing diseases that can sometimes be passed on to humans.

GETTING THE MARKET PRICE

Data management devices are becoming essential to the efficient and transparent functioning of markets. Along with relaying price information quickly and accurately, mobile technology helps bring producers and traders together more frequently. Previously, traders were unlikely to travel to a remote area to purchase animals unless guaranteed they would be able to buy a minimum quantity of goods. Today, sellers can not only relay information on quantity, location and price, but use the devices to bargain.

FAO CUSTODIANSHIP INDICATORS TABLE

	INDICATOR	CUSTODIAN and PARTNERS	TIER
2.1.1	Prevalence of undernourishment	**FAO**	I
2.1.2	Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)	**FAO**	I
2.3.1	Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size	**FAO,** World Bank	III
2.3.2	Average income of small-scale food producers, by sex and indigenous status	**FAO,** World Bank	III
2.4.1	Proportion of agricultural area under productive and sustainable agriculture	**FAO,** UNEP	III
2.5.1	Number of plant and animal genetic resources for food and agriculture secured in medium or long term conservation facilities	**FAO,** UNEP	II
2.5.2	Proportion of local breeds, classified as being at risk, not-atrisk or unknown level of risk of extinction	**FAO,** UNEP	II
2.a.1	The agriculture orientation index for government expenditures	**FAO,** IMF	II
2.c.1	Indicator of (food) price anomalies	**FAO**	III
5.a.1	(a) Percentage of people with ownership or secure rights over agricultural land (out of total agricultural population), by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure	**FAO,** UN-Women, EDGE, World Bank	III
5.a.2	Percentage of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control	**FAO**	III
6.4.1	Change in water use efficiency over time	**FAO on behalf of UN-Water**	III
6.4.2	Level of water stress: freshwater withdrawal as a proportion of available freshwater resources	**FAO on behalf of UN-Water**	II
12.3.1	Global food loss index	**FAO,** UNEP	III
14.4.1	Proportion of fish stocks within biologically sustainable levels	**FAO**	I
14.6.1	Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing	**FAO**	III
14.7.1	Sustainable fisheries as a percentage of GDP in small island developing States, least developed countries and all countries	**FAO** (interim)	III
14.b.1	Progress by countries in adopting and implementing a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries	**FAO**	III
15.1.1	Forest area as a percentage of total land area	**FAO,** UNEP	I
15.2.1	Progress towards sustainable forest management	**FAO**	II
15.4.2	Mountain Green Cover Index	**FAO,** UNEP	II
	FAO AS CONTRIBUTING AGENCY		
1.4.2	Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure	**UN-Habitat,** World Bank, FAO, EDGE, UN-Women, Landesa	III
1.5.2	Direct disaster economic loss in relation to global gross domestic product (GDP)	**UNISDR** FAO, UNEP	II
2.a.2	Total official flows (official development assistance plus other official flows) to the agriculture Sector	**OECD** FAO, WTO	I
14.c.1	Number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in UNCLOS, for the conservation and sustainable use of the oceans and their resources	**UN-DOALOS,** FAO, ILO, IMO, UNEP, ISA	III
15.3.1	Percentage of land that is degraded over total land area	**UNCCD,** FAO, UNEP	III
15.6.1	Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits	**CBD,** FAO, UNEP	III

The contents of this table may be the subject of change as indicators are agreed and modified by countries

BRINGING NUMBERS TO LIFE

12 AREAS OF FAO FOCUS IN MONITORING THE SDGs

Together with strengthening statistical measures for hunger, malnutrition and agriculture, FAO is crafting a set of indicators that capture the sustainable use of natural resources, across multiple SDGs

TOWARDS ZERO HUNGER

SDG INDICATORS
2.1.1 AND **2.1.2**

MEASURING
HUNGER AND FOOD INSECURITY

One of the great objectives of the 2030 Agenda is to end hunger forever. It will be a momentous challenge calling on the energy and commitment of all countries, all development actors and all peoples.

Today, the path to zero hunger is that much clearer thanks to the introduction of a new indicator - the Food Insecurity Experience Scale (FIES) - to complement the Prevalence of Undernourishment (PoU).

Efficient, cost-effective and easy to report, FIES can be included in existing household surveys to assess individuals' experience of food insecurity, with data disaggregated by gender, rural-urban residence and compared across countries. It provides reliable estimates even in countries where the proportion of the population affected by food insecurity is very small.

DID YOU KNOW?

FIES provides estimates of the proportion of the population facing difficulties in accessing food, at different levels of severity, based on data collected through direct interviews. PoU is an estimate of the inadequacy of dietary energy consumption in a population.

PoU can now also be computed at subnational level, thanks to the SDGs' focus on disaggregating data and improved methods to analyse household food consumption data. It offers countries the chance to track progress made in stamping out undernourishment in a consistent way with the past. Governments will be able to use new data that will swiftly be made available to adapt policies and craft new strategies. The indicators will be important in bringing the global hunger figure down from 800 million to zero.

SDG INTERLINKAGES

FIES and PoU can provide data relevant for addressing a great many SDGs : SDGs 1, 8 and 10 (food access); SDGs 12, 13 and 14 (food availability); SDGs 3, 4 and 6 (food utilization); and SDGs 9, 11, 13, 16 and 17 (food stability).

FAO SUPPORT TO COUNTRIES IN MONITORING TARGETS

Indicator 2.1.1. *Prevalence of Undernourishment (Tier I)*

➨ Training at national and regional level on how to compile the statistical model used to estimate the Prevalence of Undernourishment and relevant basic data, as well as on the use of a software tool that can assist countries to calculate the recommended food security indicators.

Indicator 2.1.2. *Percentage of individuals in the population with moderate or severe food insecurity, based on the Food Insecurity Experience Scale (FIES) (Tier I)*

➨ Technical assistance for a module of 8-10 questions employed for national household surveys. This module provides direct measurement of individual and household economic access to food.

Impact

Inexpensive and easy to use. Data speedily available and disaggregated by individual and region. Ideal for evidence-based policymaking to ensure no one and no area is left behind.

Fact

Around 800 million people suffer from hunger, and malnutrition affects almost one in three people on the planet.

ZAMBIA

Children at school. The Social Cash Transfer Programme has helped beneficiary households pay for school food and buy new uniforms for their children.
©FAO/Grifi

COUNTRY ACTION

Africa

SDGs 1 2

Investing in people to eradicate poverty and hunger
Partnering with the United Nations Children's Fund (UNICEF), national research institutions and national governments of seven countries in sub-Saharan Africa, FAO's work in social protection demonstrates the impact national cash transfer programmes can have on ending poverty and hunger. By March 2014, the Child Grant Programme in Lesotho had reached 19 800 households and provided benefits for about 65 000 children across 10 districts. Now, social protection initiatives are being expanded in Lesotho, Zambia, Kenya, Ghana and other African countries. Following rigorous impact assessments, policymakers are increasingly viewing social protection as an investment rather than a cost – an effective measure to combat hunger, reduce poverty and foster rural development. Cash transfers help poor and marginalized families build assets, and generate economically productive activities.

Related Policy: Social protection for food security (CFS) (**www.fao.org/3/a-me422e.pdf**)

EQUITABLE GROWTH

SDG INDICATORS
2.3.1 AND **2.3.2**

MEASURING
THE INCOME AND PRODUCTIVITY OF SMALL-SCALE FOOD PRODUCERS

Small-scale food producers are at the very heart of sustainable development. They are responsible for large shares of agricultural production and sales, despite possessing limited access to advanced production technologies, markets, credits, infrastructure and basic services.

Yet little additional information is available today on who smallholder farmers are, what they earn and how much they produce. Indicators 2.3.1 and 2.3.2 on productivity and incomes are designed to meet that information gap, shedding light on key aspects of the livelihood and the role of smallholders and different groups of rural people, especially women.

Comparable data across time and space can help policymakers design context-specific policies, and to assess the impact of those policies. The information will be vital for governments as they allocate resources to simultaneously drive the nation's economy and free their populations from hunger and poverty.

Impact
A complete breakdown of who smallholders are, what they earn and how much they produce. Vital for government efforts to drive the nation's economy, eliminate hunger and poverty and reduce inequality.

Fact
Of the 570 million farms on the planet, 90 percent are family farms and about 72 percent small farms. Family farms produce most of the world's food but also house the majority of its poor and hungry.

DID YOU KNOW?

FAO is promoting a new methodology for setting up integrated agricultural survey systems at country and subnational levels. The Agricultural Research Information System (AGRIS) project promises extensive use of Computer-Assisted Personal Interviewing techniques to enhance the consistency and quality of data collected.

SDG INTERLINKAGES

A focus on small and family farms can bring a range of welfare improvements, including a reduction in poverty and hunger (SDG1), improvements in health (SDG3), access to quality education (SDG4), women's empowerment (SDG5), access to clean water (SDG6), affordable energy (SDG7), decent working conditions (SDG8), interlinked industrial development and stability of livelihoods (SDG9).

FAO SUPPORT TO COUNTRIES IN MONITORING TARGETS

Indicator 2.3.1. *Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size (Tier III)*
Indicator 2.3.2 *Average income of small-scale food producers, by sex and indigenous status (Tier III)*

➨ Promote activities, in partnership with stakeholders, aimed at reaching agreement with member countries on internationally harmonized criteria for identifying classes of farming, pastoral and forestry enterprise sizes, and on measuring productivity and income of food producers.

➨ Preparation of training materials, including guidelines on how to implement integrated surveys in agriculture, to be used in capacity-building exercises at the regional and sub-regional level.

CHAD

Women selling mangoes along the roadside.
©FAO/S. Kambou

COUNTRY ACTION

Nigeria

SDGs 1 2 5 8 10

Agropreneurs – economic growth through youth and agriculture

Launched in September 2014, the Nigeria Youth Employment in Agriculture Programme focuses on decent employment creation and innovative enterprise development for youth along priority value chains in targeted economic areas. Nigeria's Federal Ministry of Agriculture and Rural Development and FAO are jointly implementing this national flagship programme, which plans to create 750 000 jobs for youth in the agricultural sector over a five-year period. The programme has already provided starter packs for 6 618 young "agropreneurs" in the country (3 893 female and 2 725 male), with young people trained in different value chains – rice, aquaculture, poultry, maize, tomato, wheat, sorghum, apiculture, soya bean and cassava. FAO continues to work hand-in-hand with Nigeria to strengthen its role in the coordination and implementation of specific components of the programme focusing on the creation of an enabling institutional environment.

Related Policy: Decent rural employment (**www.fao.org/3/a-at883e.pdf**)

NOURISH AND NURTURE

SDG INDICATORS
2.4.1

MEASURING
THE SUSTAINABILITY OF AGRICULTURAL PRODUCTION

Few other SDG targets demand the coming together of people and the planet in such an urgent way as promoting sustainable agriculture. Earth is experiencing increasing water and land scarcity, a deteriorating natural resource base and more frequent and severe weather events. There are more mouths to feed than ever before but increasingly less productive land to grow on. Short-sighted, input-intensive agriculture techniques have damaged ecosystems and contributed to a third of the planet's soils becoming degraded.

Measuring the sustainability of agricultural production will provide governments with evidence to help determine which types of production are environmentally as well as socially and economically sustainable, where and how to intensify production and how to extract greater yields with fewer inputs.

DID YOU KNOW?

An estimated 75 percent of crop genetic diversity has been lost in the past century; 17 percent of the world's livestock breeds are classified as being at risk of extinction.

FAO's Common Vision for Sustainable Food and Agriculture captures all three dimensions of sustainability, promoting models that enhance both productivity and sustainability, build resilience to climate change, protect rural livelihoods and reduce greenhouse gas emissions.

The Vision brings together a number of approaches for sustainable crop, livestock, forestry and fisheries that have several elements in common: knowledge-sharing and capacity building, empowerment, good governance and coherence across different agriculture sectors.

SDG INTERLINKAGES

Sustainable agriculture contributes to several other SDGs, including those related to smallholder farmer income (2.3.1), agriculture biodiversity (2.5.1), clean and efficient use of water (SDG 6), sustainable consumption and production (SDG 12), climate change (SDG 13), and the restoration and sustainable use of land (SDG 15).

FAO SUPPORT TO COUNTRIES IN MONITORING TARGETS

Indicator 2.4.1. *Proportion of agricultural area under productive and sustainable agricultural practices (Tier III)*

- Organization of an expert meeting bringing together key stakeholders to advance consensus on methodology.
- Training workshops for senior government officers, and developing training material on how to implement integrated surveys in agriculture, and how to measure the sustainability of agricultural practices with the data collected.

Impact

Evidence on agricultural techniques that are sensitive to climate change, and environmentally, as well as socially and economically, sustainable. Information on intensifying production to create greater yields using fewer inputs.

Fact

Natural resources are diminishing yet food production must rise by 50 percent to nourish a global population projected to rise to around 10 billion in 2050.

VIET NAM

Worker at the Provincial Center for Seeds and Seedlings watering the plants.
©FAO/H. Dinh Nam

COUNTRY ACTION

Worldwide

SDGs 1 2 5 8 13 15 17

Producing more with less
Sustainable crop and livestock production can reduce the need for additional agricultural land and the rate of deforestation while increasing productivity. FAO is promoting a number of productive integrated systems – including mixed cropping, conservation agriculture and agroforestry systems – aimed at producing more food and feed from the same area of land with fewer inputs. The techniques help build resilience to climate change, contributing to mitigation through increased carbon sequestration and boosting ecosystem services such as improved soil fertility and reduced land degradation. The practices are being promoted through extension programmes in Burundi, Mali, Cambodia, Colombia, Kenya and Tanzania. In Mali alone, about 400 Farmer Field Schools have been established benefitting some 10 000 agricultural/agropastoral producers, at least 30 percent of whom are women.

Related Policy: Building a common vision for sustainable food and agriculture (**www.fao.org/3/a-i3941e.pdf**)

THE SPICE OF LIFE

SDG INDICATORS
2.5.1 AND **2.5.2**

MEASURING
THE BIODIVERSITY OF PLANTS AND ANIMALS

Genetic resources are the building blocks of food security, supporting the livelihoods of every person on the planet. Conserving and using a wide range of plant and animal diversity provides adaptability and resilience in the face of climate change, emerging diseases, pressures on feed and water supplies and shifting market demands.

Today, the planet's natural wealth is under threat; its variety poorly tracked. Between 2005 and 2016, livestock breeds classified as being at risk of extinction increased from 15 to 17 percent. A further 58 percent of breeds are classified as being of unknown risk status because no recent population data are available. Three-quarters of crop genetic diversity has been lost since the 1900s

Monitoring the biodiversity of plants and animals will help policymakers identify plant varieties and animal breeds at risk of extinction, and support the development and updating of strategies for the conservation and sustainable use and development of those genetic resources. Inventories of gene bank holdings and breed censuses provide a dynamic measure of the existing plant and animal diversity and its level of preservation.

Impact

Information that will safeguard precious plant and animal varieties and ensure the nation enjoys a diverse and nutritious diet long into the future.

Fact

Just 3 crop species (wheat, rice and maize) represent virtually half of the average daily calories consumed by the world population; and five animal species (cattle, sheep, goats, pigs, chicken) provide almost a third of average daily protein consumed.

DID YOU KNOW?

FAO's Domestic Animal Diversity Information System (DAD-IS) provides a breed-related database, which currently includes around 15 000 national breed populations, corresponding to about 7 000 local and 1 000 transboundary livestock breeds all around the world, including their endangerment status.

SDG INTERLINKAGES

Genetic diversity is important to agriculture productivity as it improves plant and animal adaptation to diverse production systems, the changing climate and new pests and diseases. It is associated with achieving food and nutrition security, reducing poverty by increasing income and productivity of smallholders and farmers, and limiting negative impacts of agriculture and livestock on the environment, SDGs 1, 2, 13, 14 and 15.

FAO SUPPORT TO COUNTRIES IN MONITORING TARGETS

Indicator 2.5.1. *Number of plant and animal genetic resources for food and agriculture secured in either medium or long term conservation facilities (Tier II)*

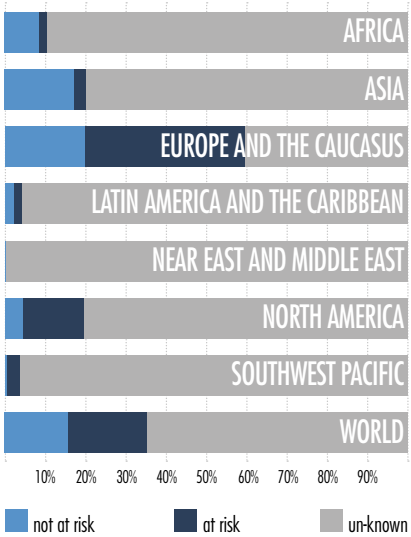
Indicator 2.5.2 *Number/ percentage of local breeds classified as being at-risk, not-at-risk and unknown-levels of risk of extinction (Tier II)*

- A revamp of the DAD-IS database to enable countries to directly report on animal breeds and genetic resources secured in conservation facilities.
- A series of workshops and webinars to train national focal points on the use of tools to report on conserved plant and animal genetic resources.

KYRGYZSTAN

Father and son inspecting quinoa plantations. FAO helps improve livestock productivity in the country. ©FAO/V. Oseledko

Proportion of local breeds, classified as being at risk, not-at risk or unknown level of risk of extinction



COUNTRY ACTION
Central Asia

SDGs 2 13 15

Preserving winter deserts

Kyzylkum and Karakum are the names given to the cold winter deserts systems found in Kazakhstan, Turkmenistan and Uzbekistan.
Hosting a rich diversity of endemic species and providing important ecosystem services for local people, today they are threatened by degradation resulting from excessive fuelwood collection and inappropriate grazing practices.

Together with the Michael Succow Foundation from Germany, FAO has developed the Central Asia Desert Initiative (CADI) to assist the three affected countries, establishing sustainable land management schemes for desert landscapes with the participation of multiple stakeholders, with the overall goal of conserving the biodiversity and ecosystem functions of cold winter deserts.

Related Policy: Guidelines for mainstreaming biodiversity into national policies and plans (The Commission on Genetic Resources for Food and Agriculture). (**www.fao.org/3/a-i5248e.pdf**)

REAP WHAT YOU SOW

SDG INDICATORS
2.a.1

MEASURING
INVESTMENT IN AGRICULTURE

Latest research suggests that the best way of lifting people from hunger and poverty is by investing in the agriculture sector. Increasing the government's role in agriculture can address market failures, provide infrastructure support to agriculture, improve agricultural human capital and provide favourable conditions to access private capital.

Between 2001 and 2013, central governments allocated globally a low (less than 2 percent) and progressively declining share of their expenditure to agriculture. This suggests a public underinvestment in agriculture, particularly given the market failures prevalent in the sector. As a response, regional initiatives like the Maputo Declaration (2003) have been adopted to which signatory countries commit to allocating a portion of government expenditures to agriculture and rural development. Public investments also increase the investment capacity of smallholders and access to finance of micro, small and medium enterprises.

The Agriculture Orientation Index (AOI) is drawn from central government expenditure on agriculture, forestry, fishing and hunting. The AOI shows that agriculture remains publicly under-funded relative to its GDP contribution.

DID YOU KNOW?

Farmers make significant investments in agriculture in developing countries, much greater than governments, donors and private enterprises all combined.

SDG INTERLINKAGES

All SDG2 indicators, as well as SDGs 1, 8, 10 and 13, could benefit from the use and development of this indicator.

FAO SUPPORT TO COUNTRIES IN MONITORING TARGETS

Indicator 2.a.1. *Agriculture Orientation Index for Government Expenditures (Tier II)*

➨ Support in completing a global questionnaire on Government Expenditures in Agriculture (GEA), developed in partnership with the IMF. Training – on-line, in-person and through workshops – to help countries report on their government expenditures in agriculture.

Impact

Government expenditure data gives potential for improved food security, reduced inequalities, inclusive growth and creation of decent jobs.

Fact

GDP growth originating in agriculture is at least twice as effective in reducing poverty as growth generated in non-agriculture sectors.

NEPAL

Harvesting Tea.
©FAO

COUNTRY ACTION

Nepal

SDGs 1 2 5 8 9 10 17

Increasing productivity and competitiveness to achieve food and nutrition security

The single largest contributor (around 34 percent) to Nepal's GDP, agriculture is identified as a priority sector for improving livelihoods, and achieving growth and food nutrition and security. Action is being taken on several fronts to transform agriculture from a predominantly subsistence activity into a competitive commercial sector, boosting productivity and competitiveness through sustainable and profitable investments.

FAO is providing technical assistance to one of the largest projects implemented within the framework of the country's Global Agriculture and Food Security Programme. The project targets communities in 19 food insecure districts, with the aim of increasing crop and livestock productivity and improving the population's nutritional status. Activities include the promotion of a diversified diet and improved feeding and caring practices for pregnant and nursing women and young children. At the same time, FAO is partnering with IFAD, WFP and UN Women in the implementation of a joint programme to accelerate rural women's economic empowerment.

Related Policy: Principles for Responsible Agricultural Investment (**www.fao.org/fileadmin/templates/cfs/Docs1314/rai/CFS_Principles_Oct_2014_EN.pdf**)

STABILITY AND SECURITY

SDG INDICATORS
2.c.1

MEASURING
FOOD PRICE VOLATILITY

The connection between food and national security was brought into sharp focus during the food price crisis of 2007/8. In a globalised world, keeping an eye on food commodity prices and a careful watch for price hikes has never been more important. In many countries, market prices are sometimes the only source of information available to assess the severity of a local shock to either access or availability of food. They are ideal to use as the basis of an early warning indicator.

Feeding into FAO's Global Information and Early Warning System (GIEWS) and its activities of Food Price Monitoring and Analysis (FPMA) at country level, the indicator of food price anomalies offers governments regular price information on a basket of goods. Results are disseminated and analysed through the FPMA website and bulletin on a monthly basis with the aim of providing early warning to countries where there is a potential impact on economic access to key food products as a result of abnormally high food prices. It helps countries ensure appropriate measures can be taken to soften the blow when consumer markets fluctuate.

DID YOU KNOW?

The indicator of Food Price Anomalies can help countries evaluate the success of policy responses in reversing or reducing the volatility of market prices

SDG INTERLINKAGES

Any SDG that aims to increase availability and access to key food products could benefit indirectly. A reduction of food waste (SDG12), for example, could result in lower and less volatile prices.

FAO SUPPORT TO COUNTRIES IN MONITORING TARGETS

Indicator 2.c.1. *Indicator of Food Price Anomalies (IPA) (Tier III)*

- FAO calculates the indicator of food price volatility using country level data, but no country calculates the indicator on its own.
- For training, FAO has now developed a module in the FPMA Tool, which would allow countries to calculate the indicator automatically. Further implementation of the FPMA Tool at the country level will enable reporting on the indicator.

Impact

Gives regular price information on a basket of goods to help ensure appropriate measures can be taken to offset hikes.

Fact

The dramatic increase in world food prices in 2007/2008 led to a global crisis causing political instability and social unrest in both developing and developed nations.

MOROCCO

A family of fishers selling locally grown vegetables. FAO supports fisheries management in the Western and Central Mediterranean.
©FAO/A. Senna

COUNTRY ACTION

Worldwide

SDGs 1 5 8 10 15

Agricultural market information

Detecting current and future trends in international food markets is essential for preventing potential crises. By hosting the Agricultural Market Information System (AMIS), FAO has taken a lead in improving agricultural market information – a key ingredient to avoid future food price crises and excessive volatility.

Launched by the G20 in 2011 as a multi-agency platform of 10 international organizations and entities, AMIS monitors several market drivers, such as energy prices, exchange rates and the commitment of traders in international futures markets in an effort to enhance transparency in international food markets.

Access to the latest data and the most reliable forecasts on agricultural production, trade and utilization is vital to help governments and other stakeholders make well-informed and timely decisions and to facilitate the coordination of policies in times of market uncertainty. Through targeted capacity building projects, AMIS supports countries implement improved data collection methodologies, promote policy dialogue and mutual learning among participating countries.

Related Policy: Price volatility and food security (**www.fao.org/3/a-mb737e.pdf**)

AGENTS OF CHANGE

SDG INDICATORS
5.a.1 AND **5.a.2**

MEASURING
WOMEN'S ACCESS TO AGRICULTURAL LAND OWNERSHIP

Impact
Evidence of the extent of women's disadvantages in ownership of and rights to land, as well as equal legal rights to land ownership. Provides a basis for policy measures aimed at securing equal opportunities and access to rights and resources.

Fact
If women had the same access to resources and opportunities as men, the number of poor and hungry would fall significantly.

Women represent about half of the total agriculture labour force in developing countries but own a much smaller share of land and other assets. Existing evidence shows that women's rights over land are limited in many developing regions, with civil codes often restricting women's access and control over land and properties.

Agricultural land is often the most important asset in rural settings. Key to food and income security, secure land tenure is associated with higher levels of investment and productivity in agriculture, and with higher revenues and greater economic wellbeing.

People without secure land rights tend to be excluded from access to key rural services and a series of benefits like collateral to obtain loans that would enhance their participation into economic life and decision-making.

With data disaggregated, these indicators monitoring land and legal inequalities will enable countries to design and adopt gender-sensitive legal reforms aimed at improving women's economic development and social empowerment.

DID YOU KNOW?

With information on how men and women differ in their legal rights and access to land, FAO's Gender and Land Rights Database includes more than 84 country profiles and incorporates sex disaggregated land-related statistics from national agricultural censuses and household surveys.

SDG INTERLINKAGES

Supporting legal frameworks to improve women's access to land rights will open up opportunities for women producers to access other assets and resources such as credit, markets, extension services and producer organisations. Land indicators can be used to measure progress made towards achieving multiple SDGs 1, 2, 5, 8 and 10 among others.

FAO SUPPORT TO COUNTRIES IN MONITORING TARGETS

Indicator 5.a.1. *a) Percentage of people with ownership or secure rights over agricultural land (out of total agricultural population), by sex and type of tenure; and (b) Share of women among owners or rights-bearers of agricultural land, by type of tenure (Tier III)*

Indicator 5.a.2. *Percentage of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control (Tier III)*

➨ FAO can support countries by providing questionnaires and guidelines. Capacity development activities include e-learning courses on how to collect and analyse the information required, and training of resource people for regional workshops and technical support missions.

BANGLADESH

A livestock beneficiary in an area hit hard by Cyclone Sidr in 2007. A programme was established to protect livelihoods in the cyclone-affected areas and replace lost or damaged assets.
©FAO/M. Zaman

COUNTRY ACTION

Worldwide

SDGs 1 2 5 16

Rural women's economic empowerment for food security
FAO, alongside IFAD, UN Women and WFP, is supporting countries in different regions reach out to some 75 000 rural women and over 400 000 households through the programme Accelerating Progress towards the Economic Empowerment of Rural Women. Women in Ethiopia, Guatemala, Kyrgyzstan, Liberia, Nepal, Niger and Rwanda have been able to increase their incomes and enhance their participation in decision-making at community level. In Guatemala, rural women's groups have not only been able to increase their agricultural production, but also to market their surplus and expand their activities. By selling cooked corn, corn beverages, corn tamales, bean tamales, and more, the groups have been able to generate enough profit to start a tomato plantation project. In Niger, a women's group from the Banizoumbou village became the first to gain legal and secure access to land to cultivate a large vegetable garden. They are managing to feed and provide a livelihood for the entire community.

Related Policy: FAO policy on gender equality (**www.fao.org/docrep/017/i3205e/i3205e.pdf**)

EVERY DROP COUNTS

SDG INDICATORS
6.4.1 AND **6.4.2**

MEASURING
WATER USE EFFICIENCY AND WATER STRESS

How to increase food production using less water is one of the great challenges of our times. Crops and livestock already account for 70 percent of all water withdrawals globally, and up to 95 percent in some developing countries. Water withdrawal for irrigation and livestock will increase as global population growth and economic development drive food demand up.

Competition among a country's main water using sectors, such as agriculture, industry and municipalities, can lead to conflicts and sub-optimal use of resources. The water use efficiency indicator provides information on the efficiency of the economic and social usage of water resources, while the level of water stress indicator helps measure pressure on the available resource. Data produced by these indicators will be vital for policymakers to ensure water resources are still available for future generations and to support ecosystems.

DID YOU KNOW?

Depending on the diet, between 2 000 and 5 000 litres of water are needed to produce the food consumed daily by one person.

SDG INTERLINKAGES

Along with several other targets under SDG6, particularly 6.3, 6.5 and 6.6, important linkages exist with land-related targets of SDG2 and 15, as agricultural systems and land resources relate to both the economic and environmental impacts of water use. Indicators for 6.4 are also tied to SDG8 on sustainable growth, SDG12 on production, and SDG13 on climate change.

FAO SUPPORT TO COUNTRIES IN MONITORING TARGETS

Indicator 6.4.1: *Change in water use efficiency over time (Tier III)*
Indicator 6.4.2: *Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (Tier II)*

- Focus on improving the quality and quantity of data in the AQUASTAT database, developing monitoring tools and methodologies and carrying out a proof-of-concept process in six countries, followed by the development of a baseline survey.
- Quality control of the data produced by countries, taking into account water flows between countries, and strengthening capacities for data collection and processing by preparing training material and organizing both in-country and regional training.

Impact
Deeper knowledge on the efficiency and sustainability of water usage. Vital for ensuring water resources support ecosystems and continue to be available for future generations.

Impact
Two-thirds of the world population could be living in water-stressed countries by 2025 if current consumption patterns continue.

NIGER

Everyday scenes of a pastoralist collecting water. Action Against Desertification is an initiative to promote sustainable land management and restore drylands and degraded lands.
©FAO/G. Napolitano

COUNTRY ACTION

Sahel and West Africa

SDGs 1 2 6 15 16

Satellite data adds new dimension to drought monitoring

Severe food shortages in the Sahel were forecast by many in 2011. But after analysing satellite and agricultural data provided by countries, the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) offered an alternative interpretation. The problem, they said, would not be the amount of food produced but one of access, an inability to buy the food that was available.

CILSS, founded by FAO in the late 1960s, initially covered the nine Sahelian countries. Today, its mandate extends to the West African coastal countries, as the technical arm of the Economic Community of West African States. CILSS has expanded from its initial focus on soil and water conservation to sophisticated information and data-reporting systems. Now based in Burkina Faso with a regional training centre in Niger, CILSS seeks ways to build resilience in the fragile ecosystem that provides livelihoods for millions of pastoralists and farmers.

Related Policy: Water for food security and nutrition (**www.fao.org/3/a-av045e.pdf**)

WASTE NOT, WANT NOT

SDG INDICATORS
12.3.1

MEASURING
FOOD LOSS AND WASTE

Mountains upon mountains of food are lost and wasted each year. Food losses affect both consumers and producers, by raising the price of food and decreasing the amount of food that can be sold. They constitute both a waste of resources (inputs like water and fertilizer) and a threat to the environment in the form of greenhouse gas-producing emissions. Already under tremendous strain from the demands of a rising world population, ecosystems are facing pressure to produce more.

Detecting where food losses occur, this new indicator aims to provide countries with a regular measure of food losses on the journey from farm to household. Governments will be able to use the data to determine policies in food storage, safety, transport and the functioning of food systems.

FAO is now initiating work on methodology for measuring food waste, food discarded at the consumer or retail end.

SDG INTERLINKAGES

The reduction of food losses and waste will impact a number of other SDGs that target either more efficient resource use, reduction of hunger by increasing the availability of food or reduction of greenhouse gas emissions, including SDGs 2, 6, 13 and 17.

FAO SUPPORT TO COUNTRIES IN MONITORING TARGETS

Indicator 12.3.1. *Global Food Loss Index (Tier III)*

- New methodology to ensure measurements on post-harvest losses and food waste are uniform across countries.
- Inclusion of more information on food loss into currently programmed country capacity development missions on food balance sheets.

DID YOU KNOW?

SAVE FOOD, or the FAO Global Initiative on Food Loss and Waste Reduction, works to build capacity development and partnerships for food loss reduction through evidence-based interventions.

Impact

Identifies food losses on the journey from farm to household. Evidence offers basis for improvements in food storage, safety, transport and general functioning of food systems.

Fact

A sizeable chunk of the food we produce is lost or wasted, and with it the corresponding amount of energy consumed in food systems.

PAKISTAN

Porters moving baskets of bananas from a warehouse for sale outside at a food market.
©FAO/F. Naeem

COUNTRY ACTION

Asia

SDGs 1 2 5 7 8 9 12 17

Tackling post-harvest losses
Foods that are rich in micronutrients, such as fruits and vegetables, are vital to people's food and nutrition security. But in many countries, post-harvest losses in these sectors are high, largely as a result of improper handling, transportation and packaging, poor storage and generally weak infrastructure.
In Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, FAO is piloting good post-harvest management practices to improve quality, assure safety and reduce losses in prioritised traditional fruit and vegetable supply chains.
Experts, trainers and value-chain stakeholders are being trained in new practices and technologies, while market surveys are being carried out in priority supply chains to identify major bottlenecks that contribute to losses.

Related Policy: Food losses and waste in the context of sustainable food systems (**www.fao.org/3/a-i3901e.pdf**)

A SEA OF OPPORTUNITY

SDG INDICATORS
14.4.1, 14.6.1, 14.7.1 AND 14.b.1

MEASURING
FISH STOCKS, SUSTAINABLE FISHERIES, ILLEGAL FISHING AND ACCESS RIGHTS FOR SMALL-SCALE FISHERS

Impact

A full picture of marine activity giving countries intelligence on optimum levels of fishing, aquaculture expansion and fair and secure access to living aquatic resources.

Fact

The seas and oceans have the potential to meet the demand of a growing global population for safe and nutritious food.

Fisheries and aquaculture offer ample opportunities to alleviate poverty, hunger and malnutrition, generate economic growth and ensure better use of natural resources. Fish account for about 17 percent of the global population's intake of animal protein, and 57 million people, in 2014, worked in the primary sector of capture fisheries, the vast majority in small-scale fisheries.

Today, overfishing is threatening livelihoods. Almost a third of marine fish stocks were fished at biologically unsustainable levels in 2013. Global estimates indicate that illegal, unreported and unregulated (IUU) fishing weighs in at around 11 to 26 million tonnes each year with a price tag of US$10–23 billion. Unmanaged expansion of aquaculture can cause pollution and habitat degradation.

DID YOU KNOW?

Since the Sustainable Fisheries Act became law in the United States in 1996, overfished stocks decreased from 25 to 16 percent between 2007 and 2015. Rebuilding overfished stocks could more than triple the economic value of many U.S. fisheries.

With information on fish stocks, governance and access to marine resources and markets, countries can gain a fuller picture of activity in their waters. With the added promise of Earth observation technology and surveillance, governments will be empowered to activate port state measures and other controls.

SDG INTERLINKAGES

Along with SDG14 targets, sustainable fisheries and aquaculture contribute to multiple objectives including end poverty (SDG 1), end hunger, achieve food security and improved nutrition (SDG2), and promote sustained, inclusive and sustainable economic growth (SDG 8).

FAO SUPPORT TO COUNTRIES IN MONITORING TARGETS

Indicator 14.4.1 *Proportion of fish stocks within biologically sustainable levels (Tier I)*
Indicator 14.6.1. *Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing (Tier III)*
Indicator 14.7.1 *Sustainable fisheries as a percentage of GDP in small island developing States, least developed countries and all countries (Tier III)*
Indicator 14.b.1 *Progress by countries in the degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries (Tier III)*

- Technical support for improving the capacity of countries to undertake fish stock assessments, including through developing guidelines and manuals and delivering a comprehensive training programme featuring workshops and seminars.
- Assist countries through regional level training programmes in generating and analysing the required data including support in implementing the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (www.fao.org/3/a-i4356e.pdf).

BANGLADESH

Workers unloading the morning's catch at a fish market in southern Bangladesh. FAO works to improve the productivity of crops, livestock and fisheries in the country. ©FAO/M. Zaman

COUNTRY ACTION

Worldwide

SDGs 1 2 8 10 14 13

Strengthening ports against pirate fishers

The first ever binding international treaty focusing specifically on illicit fishing, the FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (PSMA) came into force in June 2016 after a threshold number – 25 countries – signed up.

Parties to the Agreement are obliged to implement a number of measures while managing ports under their control, with the chief objectives being to detect illegal fishing, stop ill-caught fish from being offloaded and sold, and ensure information on unscrupulous vessels is shared globally.

Common IUU fishing activities such as catching protected species, using outlawed types of gear or disregarding catch quotas undermine efforts to responsibly manage marine fisheries, affecting the livelihoods of local fishers and their communities.

The Port State Measures help to avoid the expense of inspections at sea, and are one of the most efficient ways of fighting IUU fishing.

Related Policy: The FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (**www.fao.org/3/a-i5469t.pdf**)

THE MAGIC OF FORESTS

SDG INDICATORS
15.1.1, 15.2.1 AND **15.4.2**

MEASURING
SUSTAINABLE FORESTS AND MOUNTAINS

Forests and mountains make vital contributions to both people and the planet, bolstering livelihoods, providing clean air and water, conserving biodiversity and responding to climate change.

Forests and rangelands act as a source of food, medicine and fuel for more than a billion people, while mountains provide freshwater and ecosystem services vital for human development.

Across the globe, today, natural resources are deteriorating, ecosystems are stressed and biological diversity is being lost. Deforestation, chiefly caused by conversion of forest land to agriculture and livestock areas, is threatening the variety of life on our planet. Land use changes result in a loss of valuable habitats, a decrease in clean water, land degradation, soil erosion and the release of carbon into the atmosphere.

Monitoring forest land, mountain vegetation cover and the share of forests under sustainable management, these indicators give countries a powerful yet simple tool to measure their natural resources, the sustainability of their development strategy and health of their ecosystems.

They allow governments to assess policies to reduce deforestation, plant more forests and restore and rehabilitate degraded land.

Impact

Ensures forests and mountains are efficiently managed, and a better balance struck between conservation and sustainable use of natural resources.

Fact

Forests contain over 80 percent of terrestrial biodiversity; mountains provide 70 percent of the world's freshwater resources for domestic, agricultural and industrial consumption.

DID YOU KNOW?

FAO has been collecting and analysing data on forest resources since 1946. Feeding into the monitoring of several SDG15 targets, the Global Forest Resources Assessment contains information for 234 countries and territories on more than 100 variables related to the extent of forests, their conditions, uses and values.

SDG INTERLINKAGES

As forests play a critical role across the 2030 Agenda from livelihoods to biodiversity to climate, the expansion of forest cover contributes to virtually all other SDGs, notably 1, 2, 6, 7, 9, 10, 11, 13 and 17.

FAO SUPPORT TO COUNTRIES IN MONITORING TARGETS

Indicator 15.1.1. *Forest area as a percentage of total land area (Tier I)*

Indicator 15.2.1. *Progress towards sustainable forest management (Tier II)*

Indicator 15.4.2 *Mountain Green Cover Index (Tier II)*

- Training and technical assistance in developing and strengthening integrated monitoring systems to provide reliable forest, tree resource and land use/change information.
- Training and capacity building workshops, developing guidelines on forest products statistics, and organizing workshops to train researchers in the use of relevant tools like Open Foris Collect Earth.

PERU

Forest nursery.
©FAO/A. Odoul

COUNTRY ACTION

Peru

SDGs 1 2 13 15 16 17

Establishing community forest monitoring

Home to one of the largest, most biodiverse and intact tropical forest areas in the world, Peru has become a pioneer of sustainable forest management. However, many indigenous peoples are concerned that programmes like the National Programme for Forest Conversion for Climate Change Mitigation, which aims to reduce deforestation in the Peruvian Amazon to zero by 2020, are a pretext to privatize their lands.

Following a broad consultation process in 2011, a new forest law was passed giving life to the Veeduria Forestal Comunitaria (VFC), technical units of indigenous communities created to strengthen indigenous peoples' ability to respond to their rights to manage forest resources and generate benefits from the goods and services that forests provide.

The participation of local communities in monitoring forests is recognized as a more efficient model for collecting relevant information and observations about forests, strengthening governance and management and contributing to the zero-deforestation targets.

FAO technical and financial support to the VFC is part of its EU-backed Forest Law Enforcement, Governance and Trade Programme which aims to improve forest governance by promoting the legal consumption and production of timber.

Related Policy: State of the World's Forests (**www.fao.org/publications/sofo/en/**)

A LAND OF PLENTY

SDG INDICATOR
15.3.1

MEASURING
LAND DEGRADATION

Desertification and land degradation are robbing the world of valuable soil on which to grow.

Today, a significant amount of land on the planet is degraded to some degree due to the erosion, salinization, compaction and chemical pollution of soils. Degradation causes reduced land productivity, uncertainty in food security, migration, damage to ecosystems, and ultimately hunger and poverty.

While severe, these challenges are not insurmountable. Bold investments in sustainable land management and restoration can boost food security, improve livelihoods and help people adapt to climate change.

Providing countries with better data to inform decisions and base action upon, this new indicator offers governments vital information on the health of their land. By monitoring land cover change, net productivity and carbon stock, countries will gain a measure of optimal land productivity. The use of satellite and drone technology offers instant feedback on the performance of measures to combat desertification and improve degraded lands and soils, helping those affected by drought and flooding.

DID YOU KNOW?

Not only are healthy soils essential for life, but they are the largest store of terrestrial carbon, contributing to climate change mitigation.

SDG INTERLINKAGES

Linking prominently to SDGs 1, 2, 6, 8, 10, 13, 15 and 16, this indicator will help to improve policy coherence on agricultural production, forest and water management as well as conservation areas and watershed management.

FAO SUPPORT TO COUNTRIES IN MONITORING TARGETS

Indicator 15.3.1 Proportion of land that is degraded over total land area (Tier III)

➨ Working together with the secretariat of the UN Convention to Combat Desertification (UNCCD) and other partners in the development of methodologies and tools to assess land degradation.

➨ Software tools and strengthening countries' capacities in regular data collection and analysis through FAOSTAT and in the use of FAO's products for enhanced analysis in member countries.

➨ Capacity development activities may target one or more of the three sub-components of the indicator : land cover change, net productivity and carbon stock.

Impact

Instant information on the performance of measures to combat desertification and improve degraded lands and soils, and lands affected by drought and flooding. Evidence crucial for increasing yield and mitigating climate change.

Fact

A third of the planet's soils are degraded.

COUNTRY ACTION

Niger

SDGs 1 2 8 10 11 13 15 16 17

Making land fertile again.
A land restoration project in Tera, northern Niger is making degraded areas productive again, while providing economic opportunities in a region where migration has become a tradition.

Part of FAO's Action Against Desertification programme, the project combines local knowledge with modern technology, placing communities at the heart of restoration efforts.

In 2013, seeds, selected following village consultations, were planted in five village nurseries. Benefitting from continuous capacity development support since then, 70 hectares of land have been restored around Tera, with the nurseries now producing 100 000 seedlings per year.

Expanding to six African countries, the programme encompasses 120 villages and involves 50 000 farmers, half of them women. Some 2 235 hectares of degraded land were restored in Burkina Faso, Niger and Mali alone between 2013 and 2015.

Action Against Desertification was launched in 2014 to support local communities, government and civil society in Burkina Faso, Ethiopia, the Gambia, Niger, Nigeria and Senegal in the sustainable management and restoration of dryland forests and rangelands. It follows the creation, in 2007, of the Great Green Wall initiative, Africa's flagship initiative to combat the effects of climate change and desertification and build resilient landscapes and livelihoods. Activities focus on capacity development, good practices, income generation and knowledge exchange.

Related Policy: Status of the world's soil resources (**www.fao.org/documents/card/en/c/39bc9f2b-7493-4ab6-b024-feeaf49d4d01/**)

FAO AND THE SDGs

Indicators - Measuring up to the 2030 Agenda for Sustainable Development

On 25 September 2015, the 193 Member States of the United Nations adopted the 2030 Agenda for Sustainable Development – including 17 Sustainable Development Goals (SDGs) and 169 targets – committing the international community to end poverty and hunger and achieve sustainable development between 2016 and 2030. Six months later, a global indicator framework for the SDGs – comprising 230 indicators - was identified to monitor the 169 targets and track progress, becoming the foundation of the SDGs' accountability structure.

The number of indicators - four times greater than for the MDGs - represents an immense challenge for countries. FAO - proposed 'custodian' UN agency for 21 SDG indicators and a contributing agency for six more – can assist countries in meeting the new monitoring challenges.

This publication presents FAO's work in developing and strengthening indicators that measure food, agriculture and the sustainable use of natural resources, shining a light on the 21 indicators of FAO custodianship. It describes how the organization can support countries track progress and make the connection between monitoring and policymaking to achieve the SDGs.

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