INSTITUTE OF AERONAUTICAL ENGINEERING

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INTERNAL QUALITY ASSURANCE CENTRE

SUSTAINABLE DEVELOPMENT GOALS

The 17 SDGs are integrated - that is, **Sustainable Development Goals** recognize that action in one area will affect outcomes in others, and that development must balance social, economic, and environmental sustainability.

WHAT ARE THE SUSTAINABLE DEVELOPMENT GOALS?

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.

Through the pledge to Leave No One Behind, countries have committed to fast-track progress for those furthest behind first. That is why the SDGs are designed to bring the world to several life-changing 'zeros', including zero poverty, hunger, AIDS, and discrimination against women and girls.

Everyone is needed to reach these ambitious targets. Creativity, know-how, technology, and financial resources from all of society is necessary to achieve the SDGs in every context.

The UN General Assembly adopted the 2030 Development Agenda titled "Transforming our world: the 2030 Agenda for Sustainable Development". This agenda has 17 Sustainable Development Goals and the associated 169 targets, 232 indicators. Each goal typically has 8 -12 targets, and each target has between one and four indicators used to measure progress toward reaching the targets, with the average of 1.5 indicators per target. The targets are either outcome targets (circumstances to be attained) or means of implementation targets. The latter targets were introduced late in the process of negotiating
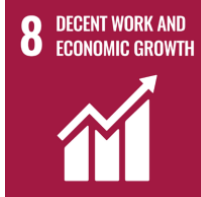
the SDGs to address the concern about how the SDGs were to be achieved. Outcome targets use numbers, whereas implementation targets use lower case letters.

SDG's with their targets and indicators

Goal	Description	Progress measurement
1 NO POVERTY	End poverty in all its forms everywhere	Targets: 7 and Indicators: 13 **Outcome targets: 05** - Eradication of extreme poverty - Reduction of all poverty by half; - Implementation of social protection systems; - Ensuring equal rights to ownership, basic services, technology and economic resources; - The building of resilience to environmental, economic and social disasters. **Implementation targets: 02** - Mobilization of resources to end poverty; - The establishment of poverty eradication policy frameworks at all levels **Indicators** - Proportion of population living below the poverty line. - The data gets analyzed by sex, age, employment status, geographical location (urban/rural).
2 ZERO HUNGER	**End hunger, achieve food security and improved nutrition, and promote sustainable agriculture**	Targets: 8 and Indicators: 14 **Outcome targets: 05** - Ending hunger and improving access to food; - Ending all forms of malnutrition; - Agricultural productivity; - Sustainable food production systems and resilient agricultural practices; - Genetic diversity of seeds, cultivated plants and farmed and domesticated animals; investments, research and technology. **Implementation targets: 03** - Addressing trade restrictions - Distortions in world agricultural markets - Food commodity markets and their derivatives. **Indicators:** (For example) - Prevalence of undernourishment, - Prevalence of severe food insecurity,

		• Prevalence of stunting among children under five years of age.
3 GOOD HEALTH AND WELL-BEING	**Ensure healthy lives and promote well-being for all at all ages**	Targets: 13 and Indicators: 28 **Outcome targets: 09** • Reduction of maternal mortality • Ending all preventable deaths under five years of age • Fight communicable diseases • Ensure reduction of mortality from non-communicable diseases and promote mental health • Prevent and treat substance abuse • Reduce road injuries and deaths • Grant universal access to sexual and reproductive care, family planning and education; • Achieve universal health coverage • Reduce illnesses and deaths from hazardous chemicals and pollution. **Implementation targets: 04** • Implement the WHO Framework Convention on Tobacco Control • Support research, development and universal access to affordable vaccines and medicines. • Increase health financing and support health workforce in developing countries • Improve early warning systems for global health risks **Indicators**: • life expectancy as well as child and maternal mortality. • For example, deaths from road traffic injuries, prevalence of current tobacco use, suicide mortality rate
4 QUALITY EDUCATION	**Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all**	Targets: 10 and Indicators: 11 **Outcome targets: 07** • Free primary and secondary education; • Equal access to quality pre-primary education; • Affordable technical, vocational and higher education • Increased number of people with relevant skills for financial success • Elimination of all discrimination in education

		• Universal literacy and numeracy • Education for sustainable development and global citizenship. **Implementation targets: 03** • build and upgrade inclusive and safe schools • Expand higher education scholarships for developing countries • Increase the supply of qualified teachers in developing countries **Indicators**: • For example, attendance rates at primary schools, completion rates of primary school education, participation in tertiary education and so forth. • Parity indices are looked at to ensure that disadvantaged students do not miss out (data is collected on "female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples") • The facilities that the school buildings have (access to electricity, the internet, computers, drinking water, toilets etc.)
5 GENDER EQUALITY	**Achieve gender equality and empower all women and girls**	**Indicators:** The representation by women in local deliberative bodies. Numbers on forced marriage and female genital mutilation / cutting are also included in another indicator. • Grant women and girls equal rights, opportunities to live free without discrimination including workplace discrimination or any violence. • Achieve gender equality and empower all women and girls.
6 CLEAN WATER AND SANITATION	**Ensure availability and sustainable management of water and sanitation for all**	Targets: 8 **Outcome targets: 06** • Safe and affordable drinking water • End open defecation and provide access to sanitation, and hygiene, • Improve water quality, Ensure freshwater supplies, • Wastewater treatment and Safe reuse, increase water-use efficiency • Implement Integrated Water Resources Management, • Protect and restore water-related ecosystems.

		Implementation targets: 02 • Expand water and sanitation support to developing countries and support local engagement in water • Sanitation management **Indicators:** • Percentages of the population that uses safely managed drinking water, and has access to safely managed sanitation. • Another indicator looks at the proportion of domestic and industrial wastewater that is safely treated.
7 AFFORDABLE AND CLEAN ENERGY	**Ensure access to affordable, reliable, sustainable and modern energy for all"**	Targets: 5 and Indicators: 6 **Outcome targets: 03** • Universal access to modern energy • Increase global percentage of renewable energy • Double the improvement in energy efficiency. **Implementation targets: 02** • Promote access to research, technology and investments in clean energy • Expand and upgrade energy services for developing countries. **Indicators:** • The percentage of population with access to electricity (progress in expanding access to electricity has been made in several countries. • Renewable energy share and energy efficiency
8 DECENT WORK AND ECONOMIC GROWTH	**Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all**	Targets: 12 **Outcome targets: 10** • Sustainable economic growth • Diversify, innovate and upgrade for economic productivity • Promote policies to support job creation and growing enterprises • Improve resource efficiency in consumption and production • Full employment and decent work with equal pay • Promote youth employment, education and training • End modern slavery, trafficking, and child labour

		• Protect labour rights and promote safe working environments • Promote beneficial and sustainable tourism • Universal access to banking, insurance and financial services. **Implementation targets: 02** • Increase aid for trade support • Develop a global youth employment strategy. **Indicators:** • Include economic growth in least developed countries and the rate of real GDP per capita. • Further examples are rates of youth unemployment and occupational injuries or the number of women engaged in the labour force compared to men.
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	**Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation**	Targets: 8 and Indicators: 12 **Outcome targets: 5** • Develop sustainable, resilient and inclusive infrastructures • Promote inclusive and sustainable industrialization • Increase access to financial services and markets • Upgrade all industries and infrastructures for sustainability • Enhance research and upgrade industrial technologies. **Implementation targets: 03** • Facilitate sustainable infrastructure development for developing countries • Support domestic technology development and industrial diversification • Universal access to information and communications technology. **Indicators:** • For example, the proportion of people who are employed in manufacturing activities or who are living in areas covered by a mobile network or who have access to the internet. • An indicator that is connected to climate change is "CO2 emissions per unit of value added".

10 REDUCED INEQUALITIES	**Reduce income inequality within and among countries**	Targets: 10 **Outcome targets: 7** • Reduce income inequalities • Promote universal social, economic and political inclusion • Ensure equal opportunities and end discrimination • Adopt fiscal and social policies that promotes equality • Improved regulation of global financial markets and institutions • Enhanced representation for developing countries in financial institutions • Responsible and well-managed migration policies. **Implementation targets: 03** • Special and differential treatment for developing countries • Encourage development assistance and investment in least developed countries • Reduce transaction costs for migrant remittances. **Indicators:** • Income disparities, aspects of gender and disability, as well as policies for migration and mobility of people
11 SUSTAINABLE CITIES AND COMMUNITIES	**Make cities and human settlements inclusive, safe, resilient, and sustainable**	Targets: 10 and Indicators: 15 **Outcome targets: 7** • Safe and affordable housing • Affordable and sustainable transport systems, • Inclusive and sustainable urbanization • Protection of the world's cultural and natural heritage • Reduction of the adverse effects of natural disasters • Reduction of the environmental impacts of cities • Provide access to safe and inclusive green and public spaces. **Implementation targets: 03** • Strong national and regional development planning

		• Implementing policies for inclusion, resource efficiency, • Disaster risk reduction in supporting the least developed countries in sustainable and resilient building. **Indicators:** • The number of people living in urban slums, the proportion of the urban population who has convenient access to public transport, and the extent of built-up area per person.
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	**Ensure sustainable consumption and production patterns**	Targets: 11 **Outcome targets: 8** • Implement the 10-year framework of programs on **sustainable consumption and production patterns**; • Achieve the sustainable management and efficient use of natural resources • Reducing by half the per capita global food waste at the retail and consumer levels and the reduction of food losses along production and supply chains, including post-harvest losses • Achieving the environmentally sound management of chemicals and all wastes throughout their life cycle • Reducing waste generation through prevention, reduction, recycling and reuse • Encourage companies to adopt sustainable practices • Promote public procurement practices that are sustainable • Ensure that people everywhere have the relevant information and awareness for sustainable development. **Implementation targets: 03** • Support developing countries to strengthen their scientific and technological capacity • Develop and implement tools to monitor sustainable development impacts • Remove market distortions, like fossil fuel subsidies, that encourage wasteful consumption **Indicators:** • The number of national policy instrument to promote sustainable consumption and production patterns.

		• Global fossil fuel subsidies. • Increase in domestic recycling and a reduced reliance on the global plastic waste trade are other actions that might help meet the goal.
13 CLIMATE ACTION	**Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy**	Targets: 5 **Outcome targets: 3** • Strengthen resilience and adaptive capacity to climate-related disasters • Integrate climate change measures into policies and planning • Build knowledge and capacity to meet climate change. **Implementation targets: 03** • Implement the UN Framework Convention on Climate Change, • Promote mechanisms to raise capacity for planning and management **Indicators:** • Provide a method to review the overall progress of each target • UNFCCC is the primary international, intergovernmental forum for negotiating the global response to climate change.
14 LIFE BELOW WATER	**Conserve and sustainably use the oceans, seas and marine resources for sustainable development**	Targets: 10 **Outcome targets: 7** • Reduce marine pollution • Protect and restore ecosystems • Reduce ocean acidification • Sustainable fishing • Conserve coastal and marine areas • End subsidies contributing to overfishing • Increase the economic benefits from sustainable use of marine resources. **Implementation targets: 3** • To increase scientific knowledge, research and technology for ocean health • Support small scale fishers • Implement and enforce international sea law. **Indicators:** • Relates to reducing impacts from marine plastic pollution.

		- Efforts to protect oceans, marine environments and small-scale fishers are not meeting the need to protect the resources. - Increased ocean temperatures and oxygen loss act concurrently with ocean acidification and constitute the deadly trio of climate change pressures on the marine environment.
	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss"	Targets: 12 **Outcome targets: 9** - Conserve and restore terrestrial and freshwater ecosystems - End deforestation and restore degraded forests - End desertification and restore degraded land - Ensure conservation of mountain ecosystems, protect biodiversity and natural habitats - Protect access to genetic resources and fair sharing of the benefits - Eliminate poaching and trafficking of protected species - Prevent invasive alien species on land and in water ecosystems - Integrate ecosystem and biodiversity in governmental planning. **Implementation targets: 3** - Increase financial resources to conserve and sustainably use ecosystem and biodiversity - Finance and incentivize sustainable forest management - Combat global poaching and trafficking **Indicators:** - The proportion of remaining forest area, desertification and species extinction risk are example indicators of this goal.
	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Targets: 12 **Outcome targets: 10** - Reduce violence - Protect children from abuse, exploitation, trafficking and violence - Promote the rule of law and ensure equal access to justice - Combat organized crime and illicit financial and arms flows, substantially reduce corruption and bribery

		- Develop effective, accountable and transparent institutions - Ensure responsive, inclusive and representative decision-making - Strengthen the participation in global governance - Provide universal legal identity - Ensure public access to information and protect fundamental freedoms. **Implementation targets: 2** - Strengthen national institutions to prevent violence and combat crime and terrorism - Promote and enforce non-discriminatory laws and policies **Indicators:** - Rates of birth registration - Prevalence of bribery
17 PARTNERSHIPS FOR THE GOALS	**Strengthen the means of implementation and revitalize the global partnership for sustainable development**	**Indicators:** - Public-private partnerships which involve civil societies are specifically mentioned - Improved and more equitable trade, as well as coordinated investment initiatives to promote sustainable development across borders. - Strengthening and streamlining cooperation between nation-states, using the SDGs as a shared framework and a shared vision for defining that collaborative way forward

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