

# **SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (AUTONOMOUS)**

(Approved by AICTE, New Delhi, Affiliated to JNTUK, Kakinada)  
Accredited by NAAC with A+ Grade, Accredited by NBA (UG: Civil, CSE, ECE, EEE, IT & ME)  
Recognised as Scientific and Industrial Research Organisation  
SRKR Marg, CHINA AMIRAM, BHIMAVARAM-534204, W.G.Dt., A.P., India.



**Transformative Learning:  
Higher Education Driving the SDG Agenda**

## Sustainable Development Goals (SDGs)

The 17 Sustainable Development Goals (SDGs), adopted by all member states of the United Nations in 2015, address a wide spectrum of socio-economic, environmental, and technological challenges. These goals are designed to be universal, applying to every nation worldwide, rather than being limited to countries traditionally categorized as "developing" or "emerging." Significantly, the SDGs broadened the educational scope by incorporating tertiary education alongside primary and secondary education. This inclusion marked a pivotal shift, as higher education had been notably absent from earlier global development frameworks, such as the Millennium Development Goals (MDGs) and the Education for All (EFA) initiative.



Source: <https://sdgs.un.org/goals>

Higher education institutions play a crucial role in equipping students with essential skills to support the implementation of the SDGs. These include strategic thinking, design-oriented approaches, social responsibility, problem-solving abilities, foresight, and effective interdisciplinary collaboration. By integrating the SDGs into higher education curricula, future professionals can gain the knowledge, tools, and competencies needed to tackle complex, interconnected global challenges. This approach fosters reciprocal learning across high-, middle-, and low-income countries and promotes both interdisciplinary and multidisciplinary problem-solving. For example, to ensure environmentally sustainable construction practices, civil engineering students must understand and incorporate SDG principles into their learning and professional development.



## SDGs in NIRF Ranking Framework

The National Institutional Ranking Framework (NIRF) has introduced a new category for Sustainable Development Goals (SDGs) for the 2025 India Rankings. Institutions can register for the SDG category.

NIRF Ranking Framework 2024 - Engineering Category, the research component, which accounts for 100 marks, now allocates 10 marks specifically to publications and citations aligned with the Sustainable Development Goals (SDGs). This emphasizes the growing recognition of research contributions that address societal challenges and drive sustainable development. Aligning our research efforts with the SDGs not only enhances our institutional ranking but also strengthens our impact on society and the environment.

### NIRF Ranking Framework

Teaching, Learning & Resources 100 Marks (0.30 weightage)	Student Strength (20)
	Faculty Student Ratio (25)
	Faculty with Ph.D (20)
	Financial Resources & Utilisation (20)
	Online Education (10)
	Multiple Entry/Exit, Indian Knowledge System and Regional languages (5)
Teaching, Learning & Resources 100 Marks (0.30 weightage)	Publications (30)
	Citations (30)
	Patents (15)
	Research Projects (15)
	<b>Publication &amp; Citation in SDG's (10)</b>
Graduation Outcome 100 Marks (0.20 weightage)	Placement & Higher Studies (40)
	University Examinations (15)
	Median Salary (25)
	Ph.D Students (20)
Outreach and Inclusivity 100 Marks (0.10 weightage)	Region Diversity (30)
	Women Diversity (30)
	Economically and Socially Challenged Students (20)
	Physically Challenged Students (20)
Perception 100 Marks (0.10 weightage)	Peer Perception: Academic Peers and Employers (100)

## Sustainable Development Goals now on Scopus Author Profiles



Since 2021, Sustainable Development Goals (SDGs) have been integrated into Scopus Document Details pages and more recently on Scopus Organizational pages.

Elsevier's SDG Classification System:

SDGs are linked to documents by matching terms from Scopus records with specific search queries, complemented by a machine learning model. This mapping uses inputs such as:

- Title
- Abstract
- Author Keywords
- Indexed Terms
- Subject Areas

The process currently supports only English-language text. Articles can be associated with multiple SDGs or none at all.



SDG classifications have also been added to author profile pages under the newly branded "Impact" section, which was previously referred to as "Author Metrics." Over 10 million author profiles on Scopus now include at least one SDG.



This inclusion enables several valuable capabilities:



- Tracking and showcasing individual researcher contributions to specific SDGs.
- Quickly accessing documents authored by researchers and grouped under each SDG.
- Evaluating the societal contributions and impact of researchers.
- Exploring detailed information about each SDG.



This development highlights the increasing focus on the societal impact of research and its alignment with global sustainable development goals.

## SDGs KEYWORDS

SDGs	SDG's Name	Keywords
SDG 1		<p>Developing countries, Basic services, Class, Disadvantaged, Economic resources, End poverty, Environment, Equality, Extreme poverty, Financial inclusion, Income, Income equality, Microfinance, Nondiscrimination, Poor, Poor and vulnerable, Poverty, Poverty eradication, Poverty line, Quality of Life, Resources, Social protection systems /social protection, Sustainable, Third World, Vulnerable, Wealth distribution, social protection, health insurance, social welfare, welfare, social security, pension, social policy, unemployment, social investment, safety net, social, social exclusion, inequality, insurance, retrenchment, access, employment.</p>
SDG 2		<p>Agricultural Orientation index, Agricultural productivity, Agriculture, Consume, Crop diversity, Crops, End hunger, Environment, Food, Food gap, Food production, Food reserves, Food Security, Genetic diversity, Genetics, Hunger, Hungry people, Improved nutrition, Innovations and health, Legumes, Maize, Malnourished, Malnutrition, Nutrition, Nutritional needs, Nutritious, Poverty, Produce, Productivity, Quality of life, Resilient Agriculture, Rural infrastructure, Small-scale food producers, Stunted growth, Stunting, Sufficient food, Sustainable, Sustainable agriculture, Sustainable food production, Trade diversity, Trade restrictions, Under nourished , Wasting, World's hungry, Undernourished, biological control, domestication, organic systems, agroforestry, biocontrol, agricultural, undernutrition, smallholder, organic, natural enemies, precision agriculture, enemies, intercropping, precision, crop.</p>


<p><b>SDG 3</b></p>	<p><b>3 GOOD HEALTH AND WELL-BEING</b></p> 	<p>Access to clean water and sanitation, Affordable medicines, AIDS, Air contamination, Air pollution, Alcohol abuse, Antenatal care, Antiretroviral, Antiretroviral therapy, Biomedical, Bodily autonomy, Child deaths, Contraceptive use, Death rate, Dental, Disability and family support, Disability and inclusion, Disability and politics of location, Diseases, Family planning, Health, Health in resource-constrained settings, Health worker, Density, Healthy, Healthy lives, Hepatitis, HIV, Improving mortality, Increasing life expectancy, Indigenous, Infected, International health policy, International health regulations, Malaria, Maternal mortality, Measles, Medical, Mental health, Mortality, Mortality rate, Narcotic drug abuse, Neonatal mortality, Polio, Premature mortality, Preventable deaths, cancer, stroke, diabetes, obesity, suicide, asthma, carcinoma, tuberculosis, pneumonia, anticancer, influenza, heart disease, leukemia, strokes, cancers, melanoma.</p>
<p><b>SDG 4</b></p>	<p><b>4 QUALITY EDUCATION</b></p> 	<p>Access to education, Basic education, Basic literacy, Basic literacy skills, Cultural diversity, Disability, Disability and education, Early childhood, 14 Early childhood development, Education, Education for sustainability, Education in development, Enrolment, Equal access, Equal education, Equitable education, Gender disparities in education, Gender disparity, Gender equality, Gender equity, Gender sensitive, Global citizenship, Global education, Inclusion and education, Inclusive, Innovation, International cooperation, Learning opportunities, trainees, apprenticeship, professional training, educational needs, distance learning, educational strategies, school environment, trainee, professional education, special education, reading, academic performance, distance education, education needs, school buildings, practical training, education reform, educational, humanistic.</p>


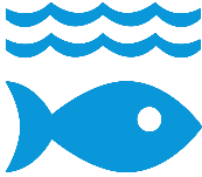
<p><b>SDG 5</b></p>	<p><b>5 GENDER EQUALITY</b></p> 	<p>Basic living standards, Dignity, Disadvantaged, Discrimination, Employment, Empower girls, Empowerment, Empowerment of women, Equal access, Equal opportunities, Equality, Exploitation, Female genital mutilation, Feminism, Forced marriage, Gender, Gender discrimination, Gender equality/parity, Governance and gender, Human rights, Human trafficking, Humanitarian, Marginalised, Parity, Pay, Reproductive rights, Sexual and reproductive health, Sexual exploitation, Sexual violence, Social inclusion, Trafficking Universal health coverage, Violence, Violence against girls, Violence against women, Women, Women in work, Women's rights, Workplace equality, std, sexism, feminist, aggression, marginalized, gender issues, sexual risk, hypersexuality, gender gap, female, gender bias, status women, misogyny, feminist theory, condom, marginalization, transmission.</p>
<p><b>SDG 6</b></p>	<p><b>6 CLEAN WATER AND SANITATION</b></p> 	<p>Affordable drinking water, Aquifer, Cities, Clean water, Contaminated, Defecation, Desalination, Diarrheal diseases, Drought, Dumping, Ecosystem protection, Ecosystem restoration, Equitable sanitation, Floods, Fresh water, Hydropower, Hygiene, Improving water, Inadequate water, Inadequate water supply, Infrastructure, Irrigation, Lakes, Latrines, Open defecation, Pollution, Recycled water, Reuse, River basins, Rivers, Safe, drinking water, Sanitation, Sanitation and hygiene, Sanitation management, Sewerage, Sustainable water management, Sustainable withdrawals, Third world, Toilets, Untreated wastewater, Urban, Waste, Wastewater, Wastewater treatment, Accessible water, water management, water quality, waste water, activated sludge, water pollution, wastewaters, water, water treatment, contaminated water, sewage treatment, drinking, groundwater, restoration, effluent.</p>

<p><b>SDG 7</b></p>	<p><b>7 AFFORDABLE AND CLEAN ENERGY</b></p> 	<p>Affordable energy, Alternative energy, Animal waste, Battery, Carbon, Charcoal, Clean energy, Clean energy technology, Clean fuel technology, Clean fuels, Cleaner fossil fuel technology, Climate goal, Coal, Electricity, Electricity infrastructure, Emissions, Energy, Energy efficiency, Energy infrastructure, Energy research, Energy technology, Fossil-fuel, Green economy, Greenhouse gas, Greenhouse gas emissions, Hydroelectric, Low carbon, Modern electricity, Modern energy, Reliable energy, Renewable, Renewable energy, Renewable power, Solar, Solar energy, Solar power, Sustainable energy, Sustainable energy services, 15 Sustainable power, Vehicles, Wave, Wind, Wind power, Wind turbine, Wood, photovoltaic, biodiesel, internet things, biofuel, energy efficient, fuel cell, solar cells, hydropower, geothermal, biofuels, fuel cells, bioenergy, energy saving, hydrogen evolution.</p>
<p><b>SDG 8</b></p>	<p><b>8 DECENT WORK AND ECONOMIC GROWTH</b></p> 	<p>Aid for trade, Banking, Child labour, Child soldiers, Creativity and innovation, Culture, Decent work, Decent work for all, Development oriented policy, Economic growth, Economic productivity, Economy, Enterprises, Entrepreneurship, Equal pay, Finance, Financial services, Forced labour, GDP growth, Global resource efficiency, Global trade, Gross domestic product growth, Human trafficking, Inclusive economic growth, Innovation, Insurance, Job creation, Jobs, Labour market, Labour rights, Micro finance, Migrant workers, Modern slavery, Poverty eradication, Poverty line, Productive employment, Productivity, Public policy, Quality jobs, Quality of life, Resource efficiency, Safe work, Secure work, Slavery, Social policies, human capital, labor market, crop productivity, economic development, occupational safety, environmental economic, sustainable development, soil productivity, regional development, regional growth, economies scale, job search, industrial policy, labor markets, climate change, technological progress, environmental impact.</p>



<p><b>SDG 9</b></p>	<p><b>9</b> <b>INDUSTRY, INNOVATION AND INFRASTRUCTURE</b></p> 	<p>Access to the internet, Affordable access, Affordable credit, Clean technologies, Cooperation, Data banks, Economic development, Electrical power, Energy, Enterprises, Environmentally sound technologies, Financial services, ICT, Infrastructure, Industrial diversification, Industrialisation, Information and communication technology, Infrastructure, Innovation, Internet access, Irrigation, Knowledge in education for all, Mobile networks in developing countries, National, Security, Network infrastructure, Phone service, Public policy, Quality of life, Regional infrastructure, Research, Resilient infrastructure, Resource use efficiency, Roads, Sanitation, Scientific research, Society, Sustainable industrialization, Sustainable infrastructure, Technological capabilities, Technology, Trade, Transborder infrastructure, Transport, Value chains, Value chains and markets, Water infrastructure, Water resources, manufacturing, industrial, microfabrication, prototyping, industry, innovative, micromachining, nanofabrication, mobile users, research development, rapid prototyping, access internet, digital divide, manufacturing technology, infrastructure projects, sustainable, employment.</p>
<p><b>SDG 10</b></p>	<p><b>10</b> <b>REDUCED INEQUALITIES</b></p> 	<p>Affordable housing, Age, Ageism, Business, Children, Culture, Developing countries, Developing states, Development assistance, Disabilities, Discrimination, Discriminatory, Economy, Education, Empower, Equal opportunity, Equality, Equity, Ethnicity, Financial assistance, Foreign aid, Foreign investment, Gender, Global financial markets, Health, Homelessness, Homophobia, Human rights, Inclusion, Income growth, Income inequality, Indigenous, Inequalities, Inequality, Migrant remittance, Migration, Population growth, Poverty, Public policy, Quality 16 of life, Race, Racism, Reduce inequalities, Religion, Rural, Sex, Sexism, Social protection, Society, Vulnerable nations, World trade, medicaid, social justice, financial crisis, social integration, social inclusion, disparities, social mobility, health disparities, social inequality, financial stability, social stratification, social inequalities, migrant workers, health inequalities, students autism, asylum, remittances.</p>

<p><b>SDG 11</b></p>	<p><b>11 SUSTAINABLE CITIES AND COMMUNITIES</b></p> 	<p>Adaptable, Adaptation, Affordable housing, Air pollution, Air quality, Cities, Climate change, Community, Cultural heritage, Decentralisation, Development planning, Disaster management, Disaster risk reduction, Disaster Strategy, Disasters, Fine particulate matter, Green spaces, Heritage, Housing, Human settlements, Impact of cities, Inadequate housing, Informal settlements, Infrastructure, Land, Land consumption, Local materials, Mitigation, Natural disasters, Natural heritage, Overcrowding, Pollution, Population, Population growth, Public spaces, Public transport, Resilient, Resilient buildings, Resource efficiency, Resource needs, Risk reduction strategy, Road safety, Safe cities, Shanty, Slums, Smart cities, Solid waste, Suburban, Sustainable, Sustainable building/s, Sustainable cities/city, Sustainable communities, Sustainable urbanisation, Town planning, Transport, Transport systems, Urban, Urban development, Urban planning, Urban sustainability, Urbanisation, Waste, Waste generation, Waste management, road network, earthquake, intelligent transportation, city, public transportation, road networks, housing market, municipal, flood.</p>
<p><b>SDG 12</b></p>	<p><b>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</b></p> 	<p>Capitalism, Cars, Circular economy, Commercial enterprises, Consumer levels, Consumerism, Consumption, Deep decarbonisation, Ecological, Efficient use of resources, Energy, Energy consumption, Energy efficiency, Energy use, Food, Food losses, Food supply, Food waste, Fossil fuel subsidies, Future proof, Global food waste, Greenhouse gasses, Harvest losses, Life cycle, Market distortions, Materialism, Materials goods, Monitoring sustainable development, Natural resources, Obsolescence, Overconsumption, Production, Recycle, Recycling, Reduce waste generation, Reduction, Renewable, Resource efficiency, Responsible production chains, Retail, Retail industry, Reuse, Sustainable, Sustainable consumption, Sustainable management, Sustainable practices, Sustainable production, Sustainable public procurement, Sustainable resource use, Sustainable supply chain, Sustainable tourism, Vehicles, Waste, Wasteful consumption, Water, Water pollution, Water supply, composting, waste disposal, vermicompost, food preservation, hazardous waste, tourism, waste</p>

		management, recycled, landfill, waste treatment, tourism development, natural resource, environmental attitudes, cycle analysis, sustainability assessment, nuclear waste.
<b>SDG 13</b>	<p><b>13 CLIMATE ACTION</b></p> 	<p>Average global temperature, Carbon, Carbon dioxide, Changing weather patterns, Climate, Climate action, Climate adaptation, Climate and gender, Climate and infectious disease, Climate and politics, Climate change, Climate change management, Climate change planning, Climate 17 change policy, Climate early warning, Climate hazards, Climate impact, Climate mitigation, Climate refugees, Climate related hazards, Climate resilience, CO<sub>2</sub> capture, CO<sub>2</sub> conversion, COP 21, COP 22, Ecosystems, Emissions, Extreme weather, Extreme weather events, Global mean temperature, Global temperature, Global warming, Greenhouse gas, Greenhouse gas emissions, Greenhouse gases, Ice loss, Low-carbon economy, Natural disasters, Natural systems, Ocean warming, Paris Agreement, Pollution, Renewable, Sea level rise/ Rising sea / Rising sea level, Temperature, CO<sub>2</sub>, climate warming, global climate, emission, CO<sub>2</sub> emission, warming, carbon footprint, gas emissions, carbon conversion, capture, greenhouse, ipcc.</p>
<b>SDG 14</b>	<p><b>14 LIFE BELOW WATER</b></p> 	<p>Artisanal fishers, Biodiversity, Carbon dioxide, Coastal biodiversity, Coastal ecosystems, Coastal habitats, Coastal parks, Coastal resources, Coastlines, Conserve, Conserve oceans, Coral bleaching, Coral reef, Ecosystem management, Fish species, Fish stocks, Fish stocks and Fisheries management, Fisheries, Fishers, Fishing, Fishing practices, Global warming, Illegal fishing, Kelp, Law of the Sea, Marine, Marine areas, Marine biodiversity, Marine ecosystems, Marine fisheries, Marine Parks, Marine pollution, Marine resources, Ocean, Ocean acidification, Ocean temperature, Oceanography, Oceans, Overfishing, Productive oceans, Protected areas, Sea grasses, Seas, Sustainable ecosystems, Unregulated fishing, Water resources and policy, oil spill, conservation, coastal, spill, phosphorus removal, sea, bloom, blooms, fisheries management, aquaculture, hydrocarbons, oil spills, eutrophication, coast, spills, contamination, pollution.</p>

<p><b>SDG 15</b></p>	<p><b>15 LIFE ON LAND</b></p> 	<p>Afforestation, Agriculture, Animals, Arable land, Bees, Biodiversity, Biodiversity loss, Conservation, Deforestation, Desertification, Drought, Dry lands, Ecosystem, Ecosystem restoration, Ecosystems, Extinct, Extinct species, Extinction, Forest, Forest management, Forests, Genetic resources, Illegal wildlife products, Illicit trafficking, Indigenous, Indigenous populations, Invasive alien species, Land conservation, Land degradation, Land loss, Land use and sustainability, Manage forests, Managed forests, Micro-organisms, Permaculture, Plants, Poaching, Poverty, Protected fauna, Protected flora, Protected species, Reforestation, Soil, Soil degradation, Species, Strategic plan for biodiversity, Terrestrial ecosystems, Threatened species, Tree, Tree species, Wetlands, bioremediation, phytoremediation, invasive, endangered, soil conservation, revegetation, restoration, predator prey, endangered species, valuation, environmental conservation, nature conservation, invasive weed, ecosystem management.</p>
<p><b>SDG 16</b></p>	<p><b>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</b></p> 	<p>Abuse, Accountability, Accountable institutions, Arbitrary detention, Arms, Arms trafficking, Birth registration, Bribery, Combat terrorism, Conflict resolution, Conflicts, Corruption, Discrimination, Education, Enforced disappearance, Equal access, Equity, Exploitation, Flow of arms, Freedom, Geography of poverty, Governance, Hate crime, Human rights, Human trafficking, Illegal arms, Illicit financial flows, Inclusion, 18 Inclusive institutions, Inclusive societies/society, Institutions, Internally displaced, Judiciary, Justice, Justice for all, Legal identity, National Security, Non-violence, Organized crime, Paris principles, Peace, Peaceful societies, Physical abuse, Police, Prevent violence, community engagement, community participation, child welfare, rule law, mafia, participatory, homicide, community involvement, public participation, participatory research, collaborative decision, public engagement, human right, child protection, infanticide, participatory approach.</p>

<p><b>SDG 17</b></p>	<p><b>17 PARTNERSHIPS FOR THE GOALS</b></p> 	<p>Capacity building, Civil society partnerships, Communication technologies, Debt sustainability, Development assistance, Disaggregated data, Doha Development Agenda, Entrepreneurship, Environmentally sound technologies, Foreign direct investments, Fostering innovation, Free trade, Fundamental principles of official statistics, Global partnership, Global partnership for sustainable development, Global stability, International aid, International cooperation, International population and housing census, International support, International support for developing countries, Knowledge sharing, Multi-stakeholder partnerships, Poverty eradication, Publicprivate partnerships, Science cooperation agreements, Technology cooperation agreements, Technology transfer, Weighted tariff average, Women entrepreneurs, World Trade Organization.</p>
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**1** NO POVERTY



**2** ZERO HUNGER



**3** GOOD HEALTH AND WELL-BEING



**4** QUALITY EDUCATION



**5** GENDER EQUALITY



**6** CLEAN WATER AND SANITATION



**7** AFFORDABLE AND CLEAN ENERGY



**8** DECENT WORK AND ECONOMIC GROWTH



**9** INDUSTRY, INNOVATION AND INFRASTRUCTURE



**10** REDUCED INEQUALITIES



**11** SUSTAINABLE CITIES AND COMMUNITIES



**12** RESPONSIBLE CONSUMPTION AND PRODUCTION



**13** CLIMATE ACTION



**14** LIFE BELOW WATER



**15** LIFE ON LAND



**16** PEACE, JUSTICE AND STRONG INSTITUTIONS



**17** PARTNERSHIPS FOR THE GOALS



The SDGs, Progress, and Recommendations to HEIs

