



# IDEA ENGINEERING LAB I

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SUSTAINABLE  
DEVELOPMENT  
GOALS





## PEOPLE + PROCESS + PURPOSE = SUCCESS

At Sairam, we realize that the higher education sector is under significant pressure to adapt to the changing needs of the future. Institutions need to become more operationally efficient and effective, improve student outcomes, increase access to higher education, recruit and retain top faculty and researchers, and more.

Effective transformation in these areas requires an organization-wide strategic approach that seeks to improve and enhance organizational models, operating processes, technology, leadership, and talent models. We have adopted a 3Ps model of aligning People, Process and Purpose with the vision of the organization.



*Inspiring*  
**PEOPLE**

**Sairam**  
**RAISE**



*Improving*  
**PROCESS**

**Sairam**  
**EOMS**

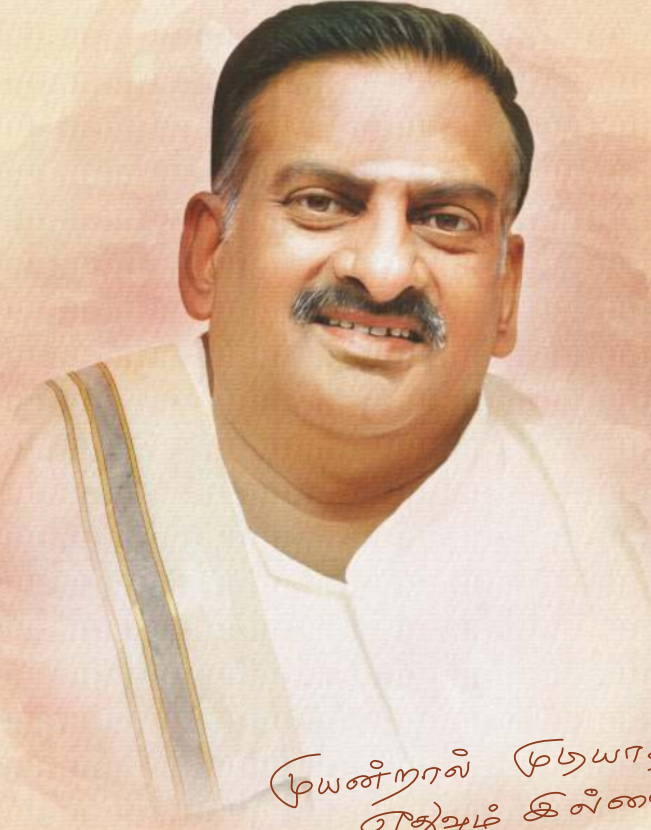


*Instilling*  
**PURPOSE**

**Sairam**  
**SDG ACTION PROGRAM**

# OUR GUIDING ST★R...

THE VALUES YOU SET AT SAIRAM WILL ALWAYS GUIDE US!



முன்னரல் முயராதது  
எதுவும் இல்லை.

அன்புடன்...  
M.J.F. LN. Leo Muthu

MJF. LN. LEO MUTHU

FOUNDER CHAIRMAN - SAIRAM INSTITUTIONS

**Sairam**  
INSTITUTIONS



RAISE is a simple yet powerful word that defines Sairam's philosophy of always looking to do better, be better and raise higher and higher. RAISE is an acronym that gives each one of us at Sairam, direction, meaning and purpose. It instills an ambition and attitude that 'we can achieve whatever we set our minds to' and helps each one of us to improve as individuals and reach where we want to be in our lives.

RAISE is all about raising the aspirations of each and every individual. It is a shared common desire to rise, to succeed and create a better future for themselves, their families and the society at large.



## REALIZE

- ★ THE NEED FOR IMPROVEMENT
- ★ THE NEED TO ADAPT TO CHANGING TIMES



## ASPIRE

- ★ TO BE A BETTER VERSION OF YOURSELF
- ★ TO BE A PART OF CONTINUOUS IMPROVEMENT



## INTELLIGENCE

- ★ OF HOW TO BRING ABOUT IMPROVEMENT
- ★ OF THE KNOWLEDGE AND SKILLS REQUIRED



## STRIVE

- ★ TO IMPROVE SKILLS AND COMPETENCIES
- ★ TO DEMONSTRATE A CHANGED BEHAVIOUR



## ENFORCEMENT

- ★ TO MAKE A HABIT OF "SEEKING IMPROVEMENT"
- ★ TO MAKE THE IMPROVEMENT ENDURABLE



*The ACT 3-Phase  
Process is one of the  
main components of  
the RAISE Model.  
While the RAISE  
model enables*



## APPROACH & ACTION PLAN



## CHANGE & TRACK



## TRANSFORM & SUSTAIN

### PHASE 1

Define Success  
Define Impact  
Define Approach

#### Approach & Action Plan

##### Define Success

What are we trying  
to achieve?

##### Define Impact

Who has to do  
their jobs differently  
and how?

##### Define Approach

What will it take to  
achieve success?

Change Management Strategy

### PHASE 2

Plan and Act  
Track Performance  
Adapt Actions

#### Change & Track

##### Plan and Act

What will we do  
to prepare equip and  
support people?

##### Track Performance

How are we doing?

##### Adapt Actions

What adjustments  
do we need to  
make?

Master Change Management Plan

### PHASE 3

Review Performance  
Activate Sustainment  
Transfer Ownership

#### Transform & Sustain

##### Review Performance

Now, where are we?  
Are we done yet?

##### Activate Sustainment

What is needed to  
ensure the change  
sticks?

##### Transfer Ownership

Who will assume  
ownership and sustain  
outcomes?

Change Management Closeout

# CONTINUOUS IMPROVEMENT

*Everyone. Everyday. Everywhere.*



1

## START WITH THE BIG PICTURE IN MIND

What do we want to achieve?

---



2

## IDENTIFY THE KEY ACTION POINTS

What needs to be done to accomplish the action points?

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3

## BREAK IT DOWN

Identify and list out smaller goals to achieve action points.

---



4

## STRATEGISE

Based on research and analysis generate a detailed road map

---



5

## EXECUTE

Based on detailed road map get going

---



6

## EVALUATE

Regularly measure and analyse the results / feedback.

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7

## KEEP IMPROVING

Keep finding ways and means to do things in better and more effective ways

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**NO MATTER HOW GOOD WE ARE,  
WE CAN ALWAYS **BE BETTER!****

In 2003, ISO published ISO 9001:2000 guidelines for the education sector with the aim of helping – as the name implies – educational organizations in providing educational products and services. The guidelines were intended for educational organizations at all levels, providing all types of education, such as: elementary, medium or higher education. ISO 21001 is the successor of ISO 9001, the Quality Management Systems Standard, adopted for the education sector. Sairam has adopted the Educational Organisations Management System (EOMS) to improve the efficiency of our processes and student outcomes.

## PRINCIPLES OF EOMS



## **1. Focus on learners and other beneficiaries**

The primary focus of the EOMS is to meet learner and other beneficiary requirements and to exceed their expectations.

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## **2. Visionary leadership**

Visionary leadership is to engage all learners and other beneficiaries in creating, writing, and implementing the organization mission, vision and objectives.

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## **3. Engagement of people**

It is essential for the organization that all individuals involved are competent, empowered and engaged in delivering value.

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## **4. Process approach**

Consistent and predictable results are achieved more effectively and efficiently when activities are understood and managed as interrelated processes that function as a coherent system, including input and output.

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## **5. Improvement**

Successful organizations have an ongoing focus on improvement.

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## **6. Evidence-based decisions**

Decisions and curricula based on the analysis and evaluation of data and information are more likely to produce desired results.

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## **7. Relationship management**

For sustained success, organizations manage their relationships with interested parties, such as providers.

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## **8. Social responsibility**

Socially responsible organizations are sustainable and ensure long-term success.

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## **9. Accessibility and equity**

Successful organizations are inclusive, flexible, transparent and accountable, in order to address learners' individual and special needs, interests, abilities and backgrounds.

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## **10. Ethical conduct in education**

Ethical conduct relates to the ability of the organization to create an ethical professional environment where all interested parties are dealt with equitably, conflicts of interests are avoided, and activities are conducted for the benefit of the society.

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## **11. Data security and protection**

The organization creates an environment where all interested parties can interact with the educational organization in full confidence that they maintain control over the use of their own data, and that the educational organization will treat their data with appropriate care and confidentiality.



## I AM A STUDENT

**Empowered  
Learner**



I use technology to set goals, work toward achieving them and demonstrate my learning.

I understand the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world.



**Digital  
Citizen**

**Knowledge  
Constructor**



I critically select, evaluate and synthesize digital resources into a collection that reflects my learning and builds my knowledge.

I solve problems by creating new and imaginative solutions using a variety of digital tools.



**Innovative  
Designer**

**Computational  
Thinker**



I identify authentic problems, working with data and use a step-by-step process to automate solutions.

I communicate effectively and express myself creatively using different tools, styles, formats and digital media.



**Creative  
Communicator**

**Global  
Collaborator**



I strive to broaden my perspective, understand others and work effectively in teams using digital tools.



## I AM AN INNOVATOR

### CREATIVITY & INNOVATION

I will demonstrate creative thinking and apply existing knowledge to generate new ideas, products and processes using technology.

### TECHNOLOGY OPERATIONS

I will demonstrate a sound understanding of technology, concepts, systems to use them effectively and productively.

### COMMUNICATION & COLLABORATION

I will use digital media to interact, collaborate with peers and experts to communicate information and ideas to have a better understanding and awareness about various global problem.

### RESEARCH & INFORMATION

I will apply digital tools to gather, evaluate and ethically use information from a variety of sources and media to process data and report results.

### DIGITAL CITIZENSHIP

I will advocate and practice safe, legal and responsible use of Information & Technology and demonstrate responsibility in understanding human, cultural and societal issues (related to technology)

### CRITICAL THINKING

I will use critical thinking skills to identify, define authentic problems, conduct research, collect and analyze data, plan and manage activities to develop a technological solution.



# SEMESTER - I

<b>24ESID101</b> SDG NO. 1-17	<b>IDEA ENGINEERING LAB - I</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
		<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>

## **MODULE - I UNITED NATIONS SUSTAINABILITY AND THE SUSTAINABLE DEVELOPMENT AGENDA**

- Introduction to Sustainability
- Indian Rural Environment: Necessity and Sustainability
- Millennium Development Goals (MDGs)
- United Nations Sustainable Development Goals (SDGs) & the Agenda
- Overview of the Sustainable Development Goals (SDGs)

## **MODULE - II UNIVERSAL SDG TARGETS** **4**

### **SDG Framework**

Key Components:

- Pillars of the SDGs
- Targets of the Goals
- Indicators of the Targets

## **MODULE - III SDG AND INDIAN GRAM PANCHAYAT** **3**

### **Gram Panchayat**

- Salient Features of Constitutional Amendments
- Transition from SDGs to LSDGs (Localizing Sustainable Development Goals)

## **MODULE - IV GOVERNMENT SCHEMES** **4**

### **Introduction to State and Central Government Schemes**

- Overview of Government Schemes
- Localization and Implementation at the Regional Level
- Impact on Local Communities



MODULE - V    COMMUNITY ENGAGEMENT

4

Key Recommendations of the National Education Policy

Guidelines for Fostering Social Responsibility:

- Awareness
- Participation
- Collaboration

MODULE - VI    IDEA GENERATION

12

Immersion Program

Focus Areas:

- Channelizing Ideas
- Forming Working Teams for SDGs (Sustainable Development Goals)

TOTAL: 30 PERIODS



# SYLLABUS

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	<ul style="list-style-type: none"><li>● Introduction to Sustainability</li><li>● Indian Rural Environment: Necessity and Sustainability</li><li>● Millennium Development Goals (MDGs)</li><li>● United Nations Sustainable Development Goals (SDGs) &amp; the Agenda</li></ul>	
<b>MODULE-2</b>	<b>UNIVERSAL SDG TARGETS</b>	<b>4</b>
	<b>SDG framework</b> <ul style="list-style-type: none"><li>● Pillars of the SDGs</li><li>● Targets of the Goals</li><li>● Indicators of the Targets</li></ul>	
<b>MODULE-3</b>	<b>SDG AND INDIAN GRAM PANCHAYAT</b>	<b>3</b>
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<b>MODULE-4</b>	<b>GOVERNMENT SCHEMES</b>	<b>4</b>
	Introduction to State and Central Government Schemes <ul style="list-style-type: none"><li>● Overview of Government Schemes</li><li>● Localization and Implementation at the Regional Level</li><li>● Impact on Local Communities</li></ul>	
<b>MODULE-5</b>	<b>COMMUNITY ENGAGEMENT</b>	<b>4</b>
	<b>Key Recommendations of the National Education Policy</b> <b>Guidelines for Fostering Social Responsibility</b> <ul style="list-style-type: none"><li>● Awareness</li><li>● Participation</li><li>● Collaboration</li></ul>	
<b>MODULE-6</b>	<b>IDEA GENERATION</b>	<b>12</b>
	<b>Immersion Program</b> <ul style="list-style-type: none"><li>● Channelizing Ideas</li><li>● Forming Working Teams for SDGs (Sustainable Development Goals)</li></ul>	
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## Preface

With an objective of guiding the teaching fraternity to have complete apprehension about SDGs, this handbook is prepared.

All the educational institutions and like minded communities synchronize their responsibilities in typical ways with the Indian Constitution.

Resources and Schemes from the Government are brought to the grassroot levels.

As the Government specifies, it is important to set Gram Panchayat level targets with measurable indicators that have vertical and horizontal linkages, convergence possibilities, resource mobilization and feasible action.

Let the revival start with the intuitive minds from our villages, the heart of our sub continent.



## Acknowledgement

Global Unity and Cooperation are the prerequisites to address the common challenges. The implementation of the SDG framework at Sairam Premises offers multiple collective actions. This is largely due to the initiation with continuous and untiring efforts of Dr. Saiprakash Leo Muthu, Chairman Sairam Group of Institutions to contribute to creating a more equitable, sustainable and prosperous globe.

**Dr. C. R. Rene Robin** is currently Professor in the Department of Computer Science and Engineering, and Dean (Innovation) at Sri Sairam Engineering College, Chennai. He has successfully produced 16 Ph.D scholars and doctoral committee members of Anna University and other universities. He has designed and developed an innovation ecosystem integrated with UN SDG and in line with NEP 2020 for higher education institutions. The enliven eco system to foster collaborative research has been made dynamic and monitored by Dr. Rene Robin and he is instrumental to bring the IDEA LAB within the curriculum.

**Dr. PA. Shanthi**, Associate Professor in the Department of Mathematics, at Sri Sairam Engineering College, Chennai. She is the coordinator for the event Ideathon, the first step of the Innovation ecosystem and a SCOPE member of UBA adopted village.

**Dr. B. Thanuja** is a seasoned Associate Professor with a strong background in Organic Chemistry and its applications. She is a supervisor in Organic Chemistry. She is Director of AGSAIMO ORGANIC SOLUTIONS PRIVATE LIMITED, a pioneering venture focused on waste-to-wealth conversion, specifically converting floral waste into viable products. And associated with prestigious initiatives such as UBA, IGEN and UHV.

**Dr. V. Yuvaraj**, a dedicated academic and researcher has over 20 years of experience in academia. He currently serves as an Associate Professor in the Department of Mathematics at Sri Sairam Institute of Technology, Chennai. He is the coordinator for the event Ideathon, the first step of the Innovation ecosystem and SCOPE member of UBA adopted village.

The team has spent quality time to offer a deep understanding of SDGs and the initiatives of the State as well as the Central Government by bringing this handbook. The content has been presented coherently with the valuable editing work of Dr. M. Shanmugathai, faculty in English.

Together We Can !!







# MODULE 1

## UNITED NATIONS SUSTAINABILITY AND THE SUSTAINABLE DEVELOPMENT AGENDA

### INTRODUCTION

During the 1990s the human development paradigm was introduced. It suggested that the development of the nation is not merely the economic growth but also related to the development of the people and their capabilities. Development is linked to healthy life, education and decent standards of living. This emphasized the need to shift the focus from national income as the only indicator of development to the choices of people. Thus, it became a people centric development process.

In 1990, the United Nations Development Programme introduced the first global Human Development Report (HDR) and with it the Human Development Index (HDI) that measures a country's progress beyond gross national income to include social indicators such as health and education.

India welcomed and adapted the concept of human development. This was reflected in the Eighth National Five-Year Plan formulated in 1992 which stated that "human development was the ultimate goal of all planning".

### SUSTAINABLE DEVELOPMENT AGENDA

International response to the warnings of the scientific community about the contribution of anthropogenic emissions of greenhouse gasses (GHG) to climate change led to the negotiation of the United Nations Framework Convention on Climate Change (UNFCCC) in record time. In less than seventeen months more than 140 States agreed on a multilateral framework with the objective to stabilize "greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" (article 2). The Convention, which was opened for signature at the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, includes a set of generally formulated commitments for States on how to achieve the objective (article 4).

The Kyoto Protocol was an international treaty which extended the 1992 United Nations Framework Convention on Climate Change (UNFCCC) that commits state parties to reduce greenhouse gas emissions, based on the scientific consensus

that global warming is occurring and that human-made CO<sub>2</sub> emissions are driving it. The Kyoto Protocol was adopted in Kyoto, Japan, on 11 December 1997 and entered into force on 16 February 2005. There were 192 parties (Canada withdrew from the protocol, effective December 2012) to the Protocol in 2020.

The Kyoto Protocol implemented the objective of the United Nations Framework Convention on Climate Change (UNFCCC) to reduce the onset of global warming by reducing greenhouse gas concentrations in the atmosphere to "a level that would prevent dangerous anthropogenic interference with the climate system" (Article 2).

The Kyoto Protocol applied to the seven greenhouse gases listed in Annex A: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), nitrogen trifluoride (NF<sub>3</sub>). Nitrogen trifluoride was added for the second compliance period during the Doha Round.

Sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development calls for concerted efforts towards building an inclusive, sustainable and resilient future for people and the planet. For sustainable development to be achieved, it is crucial to harmonize three core elements: economic growth, social inclusion and environmental protection. These elements are interconnected and all are crucial for the well-being of individuals and societies.

Eradicating poverty in all its forms and dimensions is an indispensable requirement for sustainable development. To this end, there must be promotion of sustainable, inclusive and equitable economic growth, creating greater opportunities for all, reducing inequalities, raising basic standards of living, fostering equitable social development and inclusion, and promoting integrated and sustainable management of natural resources and ecosystems.

The Agenda of Sustainable Development is the world's roadmap for ending poverty, protecting the planet and tackling inequalities.

In the United Nations, the Millennium Development Goals (MDGs) were eight international development goals for the year 2015 created following the Millennium Summit, following the adoption of the United Nations Millennium Declaration. They were based on the OECD Development Assistance Committee (DAC) agreed by Development Ministers in the "Shaping the 21st Century

Strategy". The Sustainable Development Goals (SDGs) succeeded the MDGs in 2016.

All 191 United Nations member states, and at least 22 international organizations, have committed to help achieve the following Millennium Development Goals by 2015:

1. To eradicate extreme poverty and hunger
2. To achieve universal primary education
3. To promote gender equality and empower women
4. To reduce child mortality
5. To improve maternal health
6. To combat HIV/AIDS, malaria, and other diseases
7. To ensure environmental sustainability
8. To develop a global partnership for development



Each goal had specific targets, and dates for achieving those targets. The eight goals were measured by 21 targets.





The Millennium Development Goals (MDGs) established measurable, universally agreed objectives for tackling extreme poverty and hunger, preventing deadly diseases, and expanding primary education to all. MDGs prioritize interventions, establish obtainable objectives with useful measurements of progress despite measurement issues and increase the developed world's involvement in worldwide poverty reduction. MDGs include gender and reproductive rights, environmental sustainability, and spread of technology. Prioritizing interventions helps developing countries with limited resources make decisions about allocating their resources.

The SDGs replace the Millennium Development Goals (MDGs), which started a global effort in 2000 to tackle the indignity of poverty. The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.



The 17 SDGs are integrated—they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability. Countries have committed to prioritize progress for those who're furthest behind. The SDGs are designed to end poverty, hunger, AIDS, and discrimination against women and girls. The creativity, knowhow, technology and financial resources from all of society is necessary to achieve the SDGs in every context.



The Sustainable Development Goals (SDGs) were born at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012. The objective was to produce a set of universal goals that meet the urgent environmental, political and economic challenges facing our world. The 17 SDGs, the cornerstone of the Agenda, offer the most practical and effective pathway to tackle the causes of violent conflict, human rights abuses, climate change and environmental degradation and aim to ensure that no one will be left behind. The SDGs reflect an understanding that sustainable development everywhere must integrate economic growth, social well-being and environmental protection. The 2030 Agenda for SDGs promises “more peaceful, just and inclusive societies which are free from fear and violence” with attention to democratic governance, rule of law, access to justice and personal security.



## MODULE 2

### UNIVERSAL SDG TARGETS

The SDG framework has a total of 17 goals, 169 targets and 230 indicators—92 of which are environment related. Each of the 169 targets has one or more **indicators to measure progress on that target**. The total number of indicators is 230. The global indicator framework was developed by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs). Targets are the quantifiable benchmarks you want to reach to meet your goals.

The 17 Sustainable Development Goals (SDGs) with **169** targets are broader in scope and go further than the MDGs by addressing the root causes of poverty and the universal need for development that works for all people.

A robust follow-up and review mechanism for the implementation of the 2030 Agenda for Sustainable Development requires a solid framework of indicators and statistical data to **monitor progress, inform policy and ensure accountability of all stakeholders**.

For example, Using the “improving sales” goal, we could build a simple target of “closing 10 deals per week.” **KPIs (Key Performance Indicators) are measurable values used to track progress toward a goal.**

At a broader level, IMF engagement on the SDGs is aligned with the Five Ps of SDG : People, Prosperity, Planet, Peace, and Partnership.

#### People

The first five goals of the sustainable development goals are designed to provide an appropriate target for meeting the fundamental development of all people around the world. The first two goals addressed the most basic necessities. Goals three and four assert the access to fundamental goals of health, well-being and education. Goal 5 is to focus on one of the key social issues of empowering girls and women around the world.

#### Planet

Goals 6, 12, 13,14 and 15 present the challenges that our planet is facing around the world. We are determined to protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations.

## Prosperity

Goal 8, 9, 10, 11 speaks to the issues involving fair and justice systems both in public and private communities and national entities. We are determined to ensure that all human beings can enjoy prosperous and fulfilling lives and that economic, social and technological progress occurs in harmony with nature. In these goals, the SDG highlights the importance in reducing inequalities for fair gross for everyone.

## Peace

Goal 16 shows how the international community must come together to promote and protect peace around the world, not with military actions but preferably with strong institutions of justice. We are determined to foster peaceful, just and inclusive societies which are free from fear and violence. There can be no sustainable development without peace and no peace without sustainable development.

## Partnership

Goal 17 represent the partnerships for the goals. We are determined to mobilize the means required to implement this Agenda through a revitalized Global Partnership for Sustainable Development, based on a spirit of strengthened global solidarity, focused in particular on the needs of the poorest and most vulnerable and with the participation of all countries, all stakeholders and all people.



# THE PILLARS OF SDGS



நீடித்த நிலையான வளர்ச்சிக்கான  
இலக்குகள்  
(Sustainable Development Goals)

## 3 Pillars of SDGs

### Economic Pillar



### Environmental Pillar



### Social Pillar





## GOAL - 1 NO POVERTY



Poverty is a multidimensional phenomenon. There are several economic, social, gender and other deprivations contributing to poverty. The problems of poverty and unemployment are interlinked and need a concrete action plan.

The Targets and Sairam SDG Action Program codes are listed below.

TARGETS	SAP CODE
● Eradicate extreme poverty	SAP0101
● Reduce poverty by at least 50%	SAP0102
● Implement social protection systems	SAP0103
● Equal rights to ownership, basic services, technology and economic resources	SAP0104
● Build resilience to environmental, economic and social disasters	SAP0105
● Mobilize resources to implement policies to end poverty	SAP010A
● Create pro-poor and gender-sensitive policy frameworks	SAP010B

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## GOAL - 2 ZERO HUNGER



Humankind embraced agriculture because it ensured the availability of a chosen food by maintaining a delicate balance between many environmental factors. Problems of hunger, food security and malnutrition arise whenever this appropriate mix or balance with the environment is lost. Environmental elements such as sunlight, wind and humidity cannot be controlled easily. But through appropriate use of water and nutrients, food productivity can be increased dramatically.

The Targets and Sairam SDG Action Program codes are listed below.

TARGETS	SAP CODE
● Universal access to safe and nutritious food	SAP0201
● End all forms of malnutrition	SAP0202
● Double the productivity and incomes of small-scale food producers	SAP0203
● Sustainable food production and resilient agricultural practices	SAP0204
● Maintain the genetic diversity in food production	SAP0205
● Invest in rural infrastructure, agricultural research, technology and gene banks	SAP020A
● Prevent agricultural trade restrictions, market distortions and export subsidies	SAP020B
● Ensure stable food commodity markets and timely access to information	SAP020C

## GOAL - 3 GOOD HEALTH AND WELL-BEING



Ill health not only prevents individuals from working but also drains resources due to medical expenses, hospital expenses, bystander's time and loss of employment. Maintaining and ensuring health of our citizens will ensure the success of all the programmes.

The Targets and Sairam SDG Action Program codes are listed below.

TARGETS	SAP CODE
● Reduce maternal mortality	SAP0301
● End all preventable deaths under 5 years of age	SAP0302
● Fight communicable diseases	SAP0303

- Reduce mortality from non-communicable diseases and promote mental health SAP0304
- Prevent and treat substance abuse SAP0305
- Reduce road injuries and deaths SAP0306
- Universal access to sexual and reproductive care, family planning and education SAP0307
- Achieve universal health coverage SAP0308
- Reduce illnesses and death from hazardous chemicals and pollution SAP0309
- Implement the who framework convention on tobacco control SAP030A
- Support research, development and universal access to affordable vaccines and medicines SAP030B
- Increase health financing and support health workforce in developing countries SAP030C
- Improve early warning systems for global health risks SAP030D

## GOAL - 4 QUALITY EDUCATION



Education plays a major role in various aspects of development such as employment, health, sanitation, hygiene and alleviating poverty. Acquiring new skills for better employment is also dependent on it.

India enacted 'The Right of Children to Free and Compulsory Education Act' or 'Right to Education Act, an Act of the Parliament of India upholding the importance of free and compulsory education for children between 6 and 14 in India under Article 21A of the Indian Constitution.

The Targets and Sairam SDG Action Program codes are listed below.

TARGETS	SAP CODE
● Free primary and secondary education	SAP0401
● Equal access to quality pre-primary education	SAP0402
● Equal access to affordable technical, vocational and higher education	SAP0403
● Increase the number of people with relevant skills for financial success	SAP0404
● Eliminate all discrimination in education	SAP0405
● Universal literacy and numeracy	SAP0406
● Education for sustainable development and global citizenship	SAP0407
● Build and upgrade inclusive and safe schools	SAP040A
● Expand higher education scholarships for developing countries	SAP040B
● Increase the supply of qualified teachers in developing countries	SAP040C

## GOAL - 5 GENDER EQUALITY



The Constitution of India envisages a discrimination-free India. Without ensuring gender equity and equal rights for women, social and developmental disparities cannot be eradicated. The Targets and Sairam SDG Action Program codes are listed below.

TARGETS	SAP CODE
● End discrimination against women and girls	SAP0501
● End all violence against and exploitation of women and girls	SAP0502
● Eliminate forced marriages and genital mutilation	SAP0503

● Value unpaid care and promote shared domestic responsibilities	SAP0504
● Ensure full participation in leadership and decision-making	SAP0505
● Universal access to reproductive health and rights	SAP0506
● Promote empowerment of women through technology	SAP050A
● Adopt and strengthen policies and enforceable legislation for gender equality	SAP050B
● Equal rights to economic resources, property ownership and financial services	SAP050C

## GOAL - 6

### CLEAN WATER AND SANITATION



Water is essential for human life. Various water sources include rain, streams, rivers, lakes, ponds, open wells, bore wells, tube wells etc. Every household needs water for a number of purposes like cooking, drinking, washing of utensils, cleaning of the house, bathing, washing of clothes, personal sanitation, for household animals and watering plants around the house. The challenge is to ensure water of adequate quality in sufficient quantities for each purpose so that the quality of life is improved. The Targets and Sairam SDG Action Program codes are listed below.

TARGETS	SAP CODE
● Safe And Affordable Drinking Water	SAP0601
● End Open Defecation And Provide Access To Sanitation And Hygiene	SAP0602
● Improve Water Quality, Wastewater Treatment And Safe Reuse	SAP0603
● Increase Water-Use Efficiency And Ensure Freshwater Supplies	SAP0604
● Implement Integrated Water Resources Management	SAP0605

● Protect And Restore Water-Related Ecosystems	SAP0606
● Expand Water And Sanitation Support To Developing Countries	SAP060A
● Support Local Engagement In Water And Sanitation Management	SAP060B

## GOAL - 7 AFFORDABLE AND CLEAN ENERGY



It is hard to imagine our life without the use of various renewable and nonrenewable forms of energy. We use energy at every moment of our life. To lift water we may use - hands, animals, pumps powered by electricity from grid/solar/wind/diesel/kerosene/biogas.

To cook food fuels like fire wood, kerosene, LPG and biogas are used. For cooling purposes fans, electric fans, air coolers and air conditioners, To preserve food items refrigerators and freezers are used . All these use electricity. The Targets and Sairam SDG Action Program codes are listed below.

TARGETS	SAP CODE
● Universal Access To Modern Energy	SAP0701
● Increase Global Percentage Of Renewable Energy	SAP0702
● Double The Improvement In Energy Efficiency	SAP0703
● Promote Access To Research, Technology And Investments In Clean Energy	SAP070A
● Expand And Upgrade Energy Services For Developing Countries	SAP070B

## GOAL - 8

### DECENT WORK AND ECONOMIC GROWTH



Local economic development is not just about development of basic needs of individuals but about people working together to achieve sustainable economic growth and improved lives. Employment and income are needed to prosper. The Targets and Sairam SDG Action Program codes are listed below.

TARGETS	SAP CODE
● Sustainable Economic Growth	SAP0801
● Diversify, Innovate And Upgrade For Economic Productivity	SAP0802
● Promote Policies To Support Job Creation And Growing Enterprises	SAP0803
● Improve Resource Efficiency In Consumption And Production	SAP0804
● Full Employment And Decent Work With Equal Pay	SAP0805
● Promote Youth Employment, Education And Training	SAP0806
● End Modern Slavery, Trafficking And Child Labour	SAP0807
● Protect Labour Rights And Promote Safe Working Environments	SAP0808
● Promote Beneficial And Sustainable Tourism	SAP0809
● Universal Access To Banking, Insurance And Financial Services	SAP08010
● Increase Aid For Trade Support	SAP080A
● Develop A Global Youth Employment Strategy	SAP080B

## GOAL - 9

### INDUSTRY, INNOVATION AND INFRASTRUCTURE



A functioning and resilient infrastructure is the foundation of every successful community. To meet future challenges, our industries and infrastructure must be upgraded. For this, we need to promote innovative sustainable technologies and ensure equal and universal access to information and financial markets. This will bring prosperity, create jobs and make sure that we build stable and prosperous societies across the globe. The Targets and Sairam SDG Action Program codes are listed below.

#### TARGETS

#### SAP CODE

- |  |         |
|--|---------|
| ● Develop Sustainable, Resilient And Inclusive Infrastructures               | SAP0901 |
| ● Promote Inclusive And Sustainable Industrialization                        | SAP0902 |
| ● Increase Access To Financial Services And Markets                          | SAP0903 |
| ● Upgrade All Industries And Infrastructures For Sustainability              | SAP0904 |
| ● Enhance Research And Upgrade Industrial Technologies                       | SAP0905 |
| ● Facilitate Sustainable Infrastructure Development For Developing Countries | SAP090A |
| ● Support Domestic Technology Development And Industrial Diversification     | SAP090B |
| ● Universal Access To Information And Communications Technology              | SAP090C |

## GOAL - 10

### REDUCED INEQUALITIES



Too much of the world's wealth is held by a very small group of people. This often leads to financial and social discrimination. In order for nations to flourish, equality and prosperity must be available to everyone – regardless of gender, race, religious beliefs or economic status. When every individual is self-sufficient, the entire world prospers. The Targets and Sairam SDG Action Program codes are listed below.



**TARGETS****SAP CODE**

- Reduce Income Inequalities. SAP1001
- Promote universal social, Economic and political inclusion. SAP1002
- Ensure equal opportunities and end discrimination. SAP1003
- Adopt fiscal and social policies that promote equality. SAP1004
- Improved regulation of global financial markets and institutions. SAP1005
- Enhanced representation for developing countries in financial institutions. SAP1006
- Responsible and well-managed migration policies. SAP1007
- Special and differential treatment for developing countries. SAP100A
- Encourage development assistance and investment in least developed countries. SAP100B
- Reduce transaction costs for migrant remittances. SAP100C

**GOAL - 11****SUSTAINABLE CITIES AND COMMUNITIES**

The world's population is constantly increasing. To accommodate everyone, we need to build modern, sustainable cities. For all of us to survive and prosper, we need new, intelligent urban planning that creates safe, affordable and resilient cities with green and culturally inspiring living conditions. The Targets and Sairam SDG Action Program codes are listed below.

**TARGETS****SAP CODE**

- Safe and affordable housing SAP1101
- Affordable and sustainable transport systems SAP1102
- Inclusive and sustainable urbanization SAP1103
- Protect the world's cultural and natural heritage SAP1104
- Reduce the adverse effects of natural disasters SAP1105
- Reduce the environmental impact of cities SAP1106

● Provide access to safe and inclusive green and public spaces	SAP1107
● Strong national and regional development planning	SAP110A
● Implement policies for inclusion, resource efficiency and disaster risk reduction	SAP110B
● Support least developed countries in sustainable and resilient building	SAP110C

## GOAL - 12

### RESPONSIBLE CONSUMPTION AND PRODUCTION



Our planet has provided us with an abundance of natural resources. But we have not utilized them responsibly and currently consume far beyond what our planet can provide. We must learn how to use and produce in sustainable ways that will reverse the harm that we have inflicted on the planet. The Targets and Sairam SDG Action Program codes are listed below.

TARGETS	SAP CODE
● Implement the 10-year sustainable consumption and production framework	SAP1201
● Sustainable management and use of natural resources	SAP1202
● Halve global per capita food waste	SAP1203
● Responsible management of chemicals and waste	SAP1204
● Substantially reduce waste generation	SAP1205
● Encourage companies to adopt sustainable practices and sustainability reporting	SAP1206
● Promote sustainable public procurement practices	SAP1207
● Promote universal understanding of sustainable lifestyles	SAP1208
● Support developing countries' scientific and technological capacity for Sustainable consumption and production	SAP120A
● Develop and implement tools to monitor sustainable tourism	SAP120B
● Remove market distortions that encourage wasteful consumption	SAP120C

## GOAL - 13 CLIMATE ACTION



Climate is a phenomenon which is continuously changing. The main components of climate are rainfall, humidity, temperature, wind and sunlight. Some of the factors affecting local climate are slope of the land, soil depth, soil type, cropping pattern, wetlands, water bodies, forests, trees etc. There are regular patterns for the rain, wind, sunlight etc. and human society developed by matching its agricultural operations with this change. But the patterns are varying with extreme change in quantity and time which leads to disasters. The Targets and Sairam SDG Action Program codes are listed below.

TARGETS	SAP CODE
● Strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries .	SAP1301
● Integrate climate change measures into national policies, strategies, and planning .	SAP1302
● Build Knowledge And Capacity To Meet Climate Change	SAP1303
● Implement The UN Framework Convention on Climate Change	SAP130A
● Promote Mechanisms To Raise Capacity For Planning And Management	SAP130B

## GOAL - 14 LIFE BELOW WATER



Healthy oceans and seas are essential to our existence. They cover 70 percent of our planet and we rely on them for food, energy and water. Yet, we have managed to do tremendous damage to these precious resources. We must protect them by eliminating pollution and overfishing and immediately start to responsibly manage and protect all marine life around the world. The Targets and Sairam SDG Action Program codes are listed below.

## TARGETS

## SAP CODE

● Reduce marine pollution	SAP1401
● Protect and restore ecosystems	SAP1402
● Reduce ocean acidification	SAP1403
● Sustainable fishing	SAP1404
● Conserve coastal and marine areas	SAP1405
● End subsidies contributing to overfishing	SAP1406
● Increase the economic benefits from sustainable use of marine resources	SAP1407
● Increase scientific knowledge, research and technology for ocean health	SAP140A
● Support small scale fishers	SAP140B
● Implement and enforce international sea law	SAP140C

## GOAL - 15 LIFE ON LAND



Trees and animals are developed in an area as per the ecosystem. There are aliens and natives among plants. All the living beings in an ecosystem are connected by a food chain. The destruction of one element in the food chain will impact the food of the next element and so on. The same applies to all living beings in the forest. The trinity-soil, plants and water - strengthens each other only in appropriate balanced conditions. If this balance is lost, the result is catastrophic. Therefore, human intervention in the ecosystem should be very carefully executed. The Targets and Sairam SDG Action Program codes are listed below.

## TARGETS

## SAP CODE

● Conserve And Restore Terrestrial And Freshwater Ecosystems	SAP1501
● End Deforestation And Restore Degraded Forests	SAP1502
● End Desertification And Restore Degraded Land	SAP1503
● Ensure Conservation Of Mountain Ecosystems	SAP1504

● Protect Biodiversity And Natural Habitats	SAP1505
● Promote Access To Genetic Resources And Fair Sharing Of The Benefits	SAP1506
● Eliminate Poaching And Trafficking Of Protected Species	SAP1507
● Prevent Invasive Alien Species On Land And In Water Ecosystems	SAP1508
● Integrate Ecosystem And Biodiversity In Governmental Planning	SAP1509
● Increase Financial Resources To Conserve And Sustainably use Ecosystem And Biodiversity	SAP150A
● Finance And Incentivize Sustainable Forest Management	SAP150B
● Combat Global Poaching And Trafficking	SAP150C

## GOAL - 16

### PEACE, JUSTICE AND STRONG INSTITUTIONS



Compassion and a strong moral compass is essential to every democratic society. Yet, persecution, injustice and abuse still runs rampant and is tearing at the very fabric of civilization. We must ensure that we have strong institutions, global standards of justice, and a commitment to peace everywhere. The Targets and Sairam SDG Action Program codes are listed below.

TARGETS	SAP CODE
● Reduce violence everywhere	SAP16001
● Protect children from abuse, exploitation, trafficking and violence	SAP16002
● Promote the rule of law and ensure equal access to justice	SAP16003
● Combat organized crime and illicit financial and arms flows	SAP16004
● Substantially reduce corruption and bribery	SAP16005

- Develop effective, accountable and transparent institutions SAP16006
- Ensure responsive, inclusive and representative decision-making SAP16007
- Strengthen the participation in global governance SAP16008
- Provide universal legal identity SAP16009
- Ensure public access to information and protect fundamental freedoms SAP16010
- Strengthen national institutions to prevent violence and combat terrorism and crime SAP160A
- Promote and enforce non-discriminatory laws and policies SAP160B

## GOAL - 17

### PARTNERSHIPS FOR THE GOALS



The Global Goals can only be met if we work together. International investments and support is needed to ensure innovative technological development, fair trade and market access, especially for developing countries. To build a better world, we need to be supportive, empathetic, inventive, passionate, and above all, cooperative. The Targets and Sairam SDG Action Program codes are listed below.

TARGETS	SAP CODE
● Mobilize resources to improve domestic revenue collection	SAP1701
● Implement all development assistance commitments	SAP1702
● Mobilize financial resources for developing countries	SAP1703
● Assist developing countries in attaining debt sustainability	SAP1704
● Invest in least developed countries	SAP1705
● Knowledge sharing and cooperation for access to science, technology and innovation	SAP1706
● Promote sustainable technologies to developing countries	SAP1707

- Strengthen the science, technology and innovation capacity for least developed countries SAP1708
- Enhance SDG capacity in developing countries SAP1709
- Promote a universal trading system under the WTO SAP17010
- Increase The Exports Of Developing Countries SAP17011
- Remove Trade Barriers For Least Developed Countries SAP17012
- Enhance Global Macroeconomic Stability SAP17013
- Enhance Policy Coherence For Sustainable Development SAP17014
- Respect National Leadership To Implement Policies For The Sustainable Development Goals SAP17015
- Enhance The Global Partnership For Sustainable Development SAP17016
- Encourage Effective Partnerships SAP17017

### SDG AND INDIAN GRAM PANCHAYAT

Development at a village level can be reflected by the facilities that a village has to implement for enriching human life and sustaining the environment around it. Water, sanitation, housing, no poverty, energy, health, environment, education, employment etc. reflect the development of a village.

The 73rd and 74th Amendments to the Constitution of India laid the way for a paradigm shift in the governance system of the country. From two levels of the National and State governments, another new level was introduced which could be broadly called local government.

#### **The major guiding principles followed in this shift are :**

- Autonomy of local governments
- Powers to take decisions in matters transferred to local governments
- Devolution of functions, finance and functionaries.

The major objectives of these Constitutional Amendments include ensuring social, justice and local economic development. And these definitely cover all aspects of human development.

#### **Salient Features of the Constitutional Amendment**

- Every State shall have Panchayats in rural areas and Municipalities in urban areas. A three-tier system for States having a population over two million.
- For others, a two-tier system with no intermediate tier.
- Panchayats and Municipalities are established as institutions of self government.
- There is reservation of seats – not less than one-third seats for women while for scheduled caste and tribes, proportional to their population.
- The term of office for the elected representatives of these local governments is five years.
- The local governments have to prepare local area development plans.



- Resources to the local governments may come from own resources generated by them like taxes, duties, tolls, fees, rent, user charges, taxes collected by the state and a part of which assigned to or shared with the local governments, specific purpose grants from the State and Central governments, untied grants, borrowing, donations and gifts. These are to be decided by the State Governments based on the recommendations of a mandatory State Finance Commission.
- Each district has a District Planning Committee (DPC), which prepares a development plan for the district, consolidating the urban and rural local plans and higher tier plans.
- Village assemblies' alias Gram Sabhas with all adult citizens as members are established in every local government.
- States are mandated to confer power and responsibilities to these Gram Sabhas.
- The State Governments shall constitute independent State Election Commissions.
- 29 subjects are transferred to the local governments and the details of which have to be defined by the State governments



### **Gram Panchayats and LSDG**

Grama Sabha of Village Panchayat consist of persons registered in the electoral roll relating to the Panchayat Village, comprised within the area of the said Village Panchayat. The Grama Sabha shall meet at least twice in a year but six months shall not intervene between any two meetings.

Every meeting of the Grama Sabha shall be presided over by the President and in his absence, by the Vice President and in the absence of both the President and Vice President, by a member chosen by the members present at the meeting.

### **The Agenda of Grama Sabha Meeting:**

- Approve the village plan
- Approve the village budget for the year
- Approve the audit report on the Village Panchayat accounts of the previous year
- Review the progress of the implementation of all schemes entrusted to the Village Panchayat.
- The Government may, by notification, entrust to the Grama Sabha such other functions as may be specified.
- The Village Panchayat shall give due consideration to the recommendations and suggestions of the Grama Sabha.

The focus of the revamped scheme is on reimagining Panchayati Raj Institutions as vibrant centers of local self-governance and economic growth with special focus on Localization of Sustainable Development Goals (LSDGs) at grassroots level adopting 9 thematic approaches through the concerted and collaborative efforts of Central government.

**The LSDGs are:**

- 1) Towards Poverty free Panchayat
- 2) Hunger free village
- 3) Towards a Healthy Village
- 4) Education for all
- 5) Engendering development
- 6) Swachh Bharat/Swachh village
- 7) Sustainable energy for all
- 8) Local economic development
- 9) Towards a climate resilient Panchayat

**Subjects Transferred to Local Governments**

As per the Eleventh Schedule of Article 243 G of 73rd Amendment to the Indian Constitution, following subjects fall within the responsibilities of local governments.

- 1) Agriculture including agricultural extension
- 2) Land improvement, implementation of land reforms, land consolidation and soil conservation
- 3) Minor irrigation, water management and watershed development
- 4) Animal husbandry, dairying and poultry
- 5) Fisheries
- 6) Social forestry and farm forestry
- 7) Minor forest production
8. Small-scale industries, including food-processing industries
- 9) Khadi, village and cottage industries
- 10) Rural housing
- 11) Drinking water
- 12) Fuel and fodder

- 13) Roads, culverts, bridges, ferries, waterways and other means of communication
  - 14) Rural electrification, including distribution of electricity
  - 15) Non-conventional energy sources
  - 16) Poverty alleviation programmes
  - 17) Education including primary and secondary school
  - 18) Technical training and vocational education
  - 19) Adult and non-formal education
  - 20) Libraries
  - 21) Cultural activities
  - 22) Market and fairs
  - 23) Health and sanitation
  - 24) Family welfare
  - 25) Women and child development
  - 26) Social welfare, including welfare of the handicapped and mentally retarded
  - 27) Welfare of the weaker sections, and in particular, of the Scheduled Caste and Scheduled Tribes
  - 28) Public distribution system
  - 29) Maintenance of community assets
- The twin objectives of the Panchayati Raj system as envisaged by the Constitution of India are to ensure local economic development and social justice.
  - The Eleventh schedule of the Constitution expects the Panchayats to play key roles in various thematic domains enlisted as 29 functions, though the specific mandates and capacities of these local governments vary from State to State.
  - Many of the SDG targets are within the purview of these functions listed in the Eleventh Schedule.
  - There are also the various flagship programmes such as Swachh Bharat Abhiyan, Make in India, Digital India, Skill India, and Jan Dhan Yojana which are at the core of the SDGs and local governments play a pivotal role in many of these programmes.

The Gram Panchayat Development Plans (GPDP) initiated after the historical recommendation of the Fourteenth Finance Commission have paved the way for the Panchayats to link planning with the SDGs. For localisation of SDGs, the Ministry of Panchayati Raj (MoPR) has prepared a 'Draft Vision Document for Achieving SDGs'. It has mapped roles of Panchayats in terms of SDGs and centrally sponsored schemes (CSS). The challenge related to Panchayats is to capacitate them for planning, fund absorption and improving service delivery towards achieving sustainable development goals. It is important that the SDG goals and targets are deconstructed with the perspective of local governments and presented to them in a way in which they can be used in local planning and implementation.

## MODULE 4

### GOVERNMENT SCHEMES

#### **Beti Bachao Beti Padhao (BBBP)**

- The trend of decline in the Child Sex Ratio (CSR), defined as the number of girls per 1000 of boys between 0-6 years of age, has been unabated since 1961.
- The decline from 945 in 1991 to 927 in 2001 and further to 918 in 2011 is alarming. The decline in the CSR is a major indicator of women's dis-empowerment.
- CSR reflects both, prebirth discrimination manifested through gender biased sex selection, and post birth discrimination against girls.
- Coordinated and convergent efforts are needed to ensure survival, protection and empowerment of the girl child, hence the Government has announced Beti Bachao Beti Padhao (BBBP) initiative.
- The Beti Bachao Beti Padhao (BBBP) Scheme was introduced in October, 2014 to address the issue of declining Child Sex Ratio (CSR).

#### **Deen Dayal Antyodaya Yojana (DAY)**

- Deen Dayal Antyodaya Yojana (DAY) operates with an aim to uplift the urban poor folks by enhancing sustainable livelihood opportunities through skill development.
- Keeping in view the objective of Make in India, Skill Development is essential for socio economic betterment.
- Deen Dayal Antyodaya Yojana was launched under the Ministry of Housing and Urban Poverty Alleviation (HUPA).
- The Government of India has provisioned Rs.500 crore for the scheme. The scheme is an integration of the National Urban Livelihoods Mission (NULM) and National Rural Livelihoods Mission (NRLM).
- National Urban Livelihoods Mission (NULM) is renamed as Deen Dayal Antyodaya Yojana-(DAY-NULM).

- Under the scheme urban areas extend the coverage to all the 4041 statutory cities and towns, thereby covering almost the entire urban population.

### **Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY)**

- Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) is designed to provide continuous power supply to the entire rural India.
- The scheme was launched under leadership of Prime Minister Shri Narendra Modi in November 2014 announcing that the government had decided to electrify 18,452 unelectrified villages within 1000 days, by May 1, 2018.
- It is one of the key initiatives of the Government of India and a flagship programme of the Ministry of Power.
- The DDUGJY benefits rural households significantly as electricity is extremely vital for growth and development of the country.

### **Deen Dayal Upadhyaya Grameen Kaushalya Yojana**

- The Ministry of Rural Development (MoRD) announced the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) Antyodaya Diwas, on 25th September 2014.
- DDU-GKY is a part of the National Rural Livelihood Mission (NRLM), tasked with the dual objectives of adding diversity to the incomes of rural poor families and cater to the career aspirations of rural youth.
- DDU-GKY is uniquely focused on rural youth between the ages of 15 and 35 years from economically weak families.
- As a part of the Skill India campaign, it plays an instrumental role in supporting the social and economic programs of the government like the Make In India, Digital India, Smart Cities and Start-Up India, Stand-Up India campaigns.

### **Green India Mission (GIM)**

- National Mission for a Green India or the commonly called Green India Mission (GIM), is one of the eight Missions outlined under India's action plan for addressing the challenge of climate change -the National Action Plan on Climate Change (NAPCC).

- GIM, launched in February 2014, is aimed at protecting, restoring and enhancing India's diminishing forest cover and responding to climate change by a combination of adaptation and mitigation measures.
- The mission has the broad objective of both increasing the forest and tree cover by 5 million, as well as increasing the quality of the existing forest and tree cover.
- The Mission proposes a holistic view of greening and focuses not on carbon sequestration targets alone, but also, on multiple ecosystem services, especially, biodiversity, water, biomass etc., along with provisioning services like fuel, fodder, timber and non-timber forest products.

### **Integrated Child Development Scheme (ICDS)**

- The Integrated Child Development Services (ICDS) scheme is the largest program for the promotion of maternal and child health and nutrition not only in India but in the whole world.
- The scheme was launched in 1975 in pursuance of the National Policy for Children.
- The scheme has expanded in the last twenty-seven years from 33 projects to 5171 blocks.
- ICDS is a multi-sectoral program and involves several departments of the government. The program services are coordinated at the village, block, district, state and central government levels.
- The primary responsibility for the implementation of the program lies with the Department of Women & Child Development at the Centre and the nodal department at the states, which may be Social Welfare, Rural Development, Tribal Welfare or Health Department or an independent Department.
- The beneficiaries are children below 6 years, pregnant and lactating women and also women in the age group of 15 to 44 yrs.

### **Janani Suraksha Yojana (JSY)**

- Janani Suraksha Yojana (JSY) is a safe motherhood intervention under the National Rural Health Mission (NHM).



- It is being implemented with the objective of reducing maternal and neonatal mortality by promoting institutional delivery among poor pregnant women.
- The scheme is under implementation in all States and Union Territories (Uts), with a special focus on Low Performing States (LPS).
- The scheme was transferred from the Ministry of Rural Development to the Department of Health & Family Welfare during the year 2001-02.
- The NMBS provides for financial assistance of Rs. 500/- per birth up to two live births to the pregnant women who have attained 19 years of age and belong to the below poverty line (BPL) households.

### **National Digital Literacy Mission**

- National Digital Literacy Mission Programme is a dynamic and integrated platform of digital literacy awareness, education and capacity programmes that will help rural communities to take lead in the global digital economy and help them in maintaining the competitiveness and also shape a technologically empowered society.
- NDLM is an effort to complement the objectives of National Optic Fibre Network (NOFN) plan to transform one from each household as digitally literate.
- Under NDLM, we pledge to work with multi-stakeholder to Digitally Literate at least One Adult from each of 147 million rural households of India.
- DLM will be an ecosystem of digital literacy awareness, education and training that will help India take a lead in the global digital economy and help us maintain the competitiveness and also shape a technologically empowered society.
- DLM is an effort to extend NOFN objectives to empower rural citizens by making them digitally literate.

### **National Health Mission (NHM)**

- The National Health Mission (NHM) encompasses its two Sub-Missions, the National Rural Health Mission (NRHM) and the newly launched National Urban Health Mission (NUHM).

- The main programmatic components include Health System Strengthening Reproductive, Maternal, Neonatal-Child , Adolescent Health (RMNCH+A), Communicable and Non-Communicable Diseases in rural and urban areas.
- The NHM envisages achievement of universal access to equitable, affordable & quality health care services that are accountable and responsive to people's needs. NRHM was launched on 12th April, 2005 throughout the country with special focus on 18 states, including eight Empowered Action Group (EAG) States, the North Eastern States, Jammu and Kashmir and Himachal Pradesh.
- The Union Cabinet vide its decision dated 1st May 2013 has approved the launch of National Urban Health Mission (NUHM) as a Sub-mission of an overarching National Health Mission (NHM), with National Rural Health Mission (NRHM) being the other Sub-mission of National Health Mission.

### **National Mission for Empowerment of Women (NMEW)**

- National Mission for Empowerment of Women was operationalised during the financial year 2011-12 as a Centrally Sponsored Scheme in April 2011.
- The focus was to bring convergence of efforts through inter-sectoral coordination amongst different ministries and programmes with the Ministry of Women and Child Development (MWCD) as the nodal for achieving holistic empowerment of women.
- Following the restructuring of Centrally Sponsored Schemes (CSS) during the 12th Plan period, NMEW was approved for continuation as a sub-scheme of the Umbrella Scheme for Protection and Development of Women.
- The revised NMEW Scheme aims to achieve holistic empowerment of women through convergence of schemes/programmes of different Ministries/Department of Government of India as well as State Governments.

### **National Mission for Sustainable Agriculture (NMSA)**

- The National Mission for Sustainable Agriculture (NMSA), which is one of the eight Missions under the National Action Plan on Climate Change (NAPCC) seeks to address issues regarding 'Sustainable Agriculture'.
- In the context of risks associated with climate change by devising appropriate adaptation and mitigation strategies for ensuring food security, equitable access to food resources, enhancing livelihood opportunities and contributing to economic stability at the national level.
- The Mission acknowledges that the risks to the Indian agriculture sector due to climatic variabilities and extreme events would be accentuated at multiple levels including at the levels of crop or livestock, farm or cropping system and the food system.
- The Mission, therefore, seeks to transform Indian agriculture into a climate resilient production system through suitable adaptation and mitigation measures in the domain of crops and animal husbandry.

### **National Rural Drinking Water Programme (NRDWP)**

- The aim and objective of National Rural Drinking Water Programme (NRDWP) is to provide every rural person with adequate safe water for drinking, cooking and other basic domestic needs on a sustainable basis, with a minimum water quality standard, which should be conveniently accessible at all times and in all situations.
- In the 12th Five Year Plan period, under the NRDWP, the Ministry is giving special emphasis on piped water supply in rural habitations.
- States are being asked to plan for coverage of habitations with piped water supply through stand posts or household connections.
- In addition to the fact that this shall reduce the drudgery and time taken in the collection of water, it shall also facilitate in tackling the problem of drinking water quality in the habitations affected with water issues.

### **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)**

- The Cabinet Committee on Economic Affairs (CCEA), chaired by the Prime Minister Shri Narendra Modi, has given its approval to a new scheme the "Pradhan Mantri Krishi Sinchayee Yojana" (PMKSY).

### **The major objective of the PMKSY:**

- To achieve convergence of investments in irrigation at the field level
- To expand cultivable area under assured irrigation (Har Khet ko pani)
- To improve on-farm water use efficiency to reduce wastage of water
- To enhance the adoption of precision-irrigation and other water saving technologies and recharge of aquifers
- To introduce sustainable water conservation practices by exploring the feasibility of reusing treated municipal based water for peri-urban agriculture and attract greater private investment in precision irrigation systems.

### **Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG)**

- The scheme aims at covering all out-of-school Adolescent Girls in the age group of 11 to 18 years who would assemble at the Anganwadi Centre on a fixed day at regular intervals.
- School going girls, meet at the AWC at least twice a month to receive life skills education, nutrition and health education, and awareness about socio legal issues.
- This provides an opportunity for mixed group interaction between school going and out of school girls, motivating the latter to also join school to receive the life skills.
- This scheme mainly aims at reducing the dropout rate of Adolescent Girls by increasing their literacy rate and work participation.

### **Rashtriya Krishi Vikas Yojana (RKVY)**

- The RKVY aims at achieving 4% annual growth in the agriculture sector during the XI Plan period, by ensuring a holistic development of Agriculture and allied sectors (Fisheries Department, Horticulture, Animal Husbandry etc).

### **The main objectives of the scheme are:**

- To incentivise the states so as to increase public investment in Agriculture and allied sectors.
- To provide flexibility and autonomy to states in the process of planning and executing Agriculture and allied sector schemes.

- To ensure the preparation of agriculture plans for the districts and the states based on agro-climatic conditions, availability of technology and natural resources.
- To ensure that the local needs/crops/priorities are better reflected in the agricultural plans of the states.
- To achieve the goal of reducing the yield gaps in important crops, through focussed interventions.
- To maximize returns to the farmers in Agriculture and allied sectors.
- To bring about quantifiable changes in the production and productivity of various components of Agriculture and allied sectors by addressing them in a holistic manner.

### **Rashtriya Swasthya Bima Yojana (RSBY)**

- It has been clearly recognized that health insurance is one way of providing protection to poor households against the risk of health spending leading to poverty.
- The poor are unable or unwilling to take up health insurance because of its cost, or lack of perceived benefits.
- Organizing and administering health insurance, especially in rural areas, is also difficult.
- Recognizing the need for providing social security to these workers, the Central Government has introduced the Rashtriya Swasthya Bima Yojana (RSBY).
- RSBY has been launched by the Ministry of Labour and Employment, Government of India to provide health insurance coverage for Below Poverty Line (BPL) families.
- The objective of RSBY is to provide protection to BPL households from financial liabilities arising out of health shocks that involve hospitalization. It provides cashless insurance for hospitalization in public as well private hospitals.

### **Sarva Siksha Abhiyan (SSA)**

- SSA is an effort to universalise elementary education by community-ownership of the school system.

- It aims at changing the current school system in order to improve the quality of the education provided in the country.
- SSA has been operational since 2000-2001 to provide for a variety of interventions for universal access and retention, bridging of gender and social category gaps in elementary education and improving the quality of learning.
- SSA interventions include inter alia, opening of new schools and alternative schooling facilities, construction of schools and additional classrooms, toilets and drinking water, provisioning for teachers, regular teacher in service training and academic resource support, free textbooks & uniforms and support for improving learning achievement levels / outcome.
- With the passage of the RTE Act, changes have been incorporated into the SSA approach, strategies and norms. hools.

# MODULE 5

## COMMUNITY ENGAGEMENT

### INTRODUCTION

UGC's commitment is to strengthen social responsibility and community engagement of Higher Education Institutions (HEIs) in India. An earlier policy of the Ministry of Human Resource Development renamed as Ministry of Education, Government of India (2012) had been developed into a Scheme to promote stronger community engagement amongst HEIs in the country.

Unnat Bharat Abhiyaan (UBA) 2.0 was launched by the Ministry of Human Resource Development, in February 2018. UBA 2.0 aims to bring a transformative change in rural development through the active participation of higher education institutes with rural communities and the reorientation of communities through research and development. The University Grants Commission (UGC) set up a Subject Expert Group (SEG) on Curricular Reforms and Social Responsibility Educational Institutions for achieving the objectives of UBA 2.0 in June 2018. "The Subject Expert Group (SEG) on Curricular Reforms and Educational Institutions Social Responsibility will basically work on the reforms in the curriculum at the level of UG and PG to instill the concept of Rural Community Engagement and Social Responsibility.

### Community Engagement

The community engagement is not seen as a standalone activity, but is integrated into the regular curriculum of the university to ensure the development of the society around the university. It has been developed by the Expert Group through a series of consultations over this period.

### Key Recommendations of the National Education Policy (NEP) 2020

To achieve the objectives of the socio-economic development of New India, HEIs can play an important role through active community engagement. This approach will also contribute to improving the quality of both teaching and research in HEIs in India. HEIs, being the largest growing sector in the country,

need to foster social responsibility and community engagement in their vision and mission itself. It is also important that institutional mechanisms are developed to adopt a holistic and functional approach to community engagement, encompassing all three functions of HEIs—teaching, research and service.

Around the world, HEIs are being encouraged to foster social responsibility and community. The declaration from the second UNESCO Conference on Higher Education held in Paris in July 2009 stated explicitly that, ‘Higher education has the social responsibility to advance our understanding of multifaceted issues and our ability to respond to them. Through its core missions of teaching, research and service, it should lead society in generating global knowledge to address global challenges, inter alia, food security, climate change, water management, intercultural dialogue, renewable energy and public health.

### **Guidelines for Fostering Social Responsibility & Community Engagement**

Community University Engagement (CUE) is central to the creation of new citizenship. This Report proposes integrating CUE into all institutional, teaching and research activities, as a way of thinking and acting. There have been several other initiatives around the world that demonstrate the growing practice of community engagement and social responsibility in higher education.

India is a signatory to the global commitment for achieving Sustainable Development Goals (SDGs) by 2030.

Achieving these 17 SDG goals requires generating locally appropriate solutions. HEIs can play significant roles by teaching about SDGs and undertaking locally prioritized research for communities around them.

Research and teaching of each SDG will enable multi-disciplinarily in HEIs, as each SDG cuts across several academic disciplines. Global University Network for Innovations (GUNI) in its 6th World Report beacons HEIs to engage with SDGs:3



- Educating the Generation to make the SDGs a reality, with the necessary knowledge, skills, competencies and partnerships, thereby helping to produce new SDG leaders
- Conducting transversal reviews and refinements of curricula to ensure the mainstreaming of SDG issues across curricula, and including new values and practices for economic development that enhance social equity while reducing environmental risk

### **Community Engagement of India**

In 2011, a national review was conducted by a Committee of Experts (set up by the then Planning Commission) to analyze the purposes, principles and forms of social responsibility and community . Its recommendations to the Ministry of Education (MoE) about “fostering social responsibility and community engagement of HEIs” in India contain several important elements for the new policy. The National Education Policy (NEP) announced by the Government of India in 2020 has presented a transformative framework for higher education in the country. It has reinforced many of the recommendations already included in the new policy, as exemplified through the below lines: The purpose of the education system is to develop a good human being capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical moorings and values. It aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution

### **The goals of fostering social responsibility and community engagement in HEIs**

- Improving the quality of teaching/learning in HEIs, by bridging the gap between theory and practice through community engagement
- Promoting deeper interactions between higher educational institutions and local communities for identification and solution of real-life problems faced by the communities in a spirit of mutual benefit

- Facilitating partnerships between local communities and institutions of higher education so that students and teachers can learn from local knowledge and wisdom
- Engaging higher education institutions with local communities in order to make curriculum, courses and pedagogies more appropriate to achieve the goals of national development.
- Catalyzing acquisition of values of public service and active citizenship amongst students and youth, which would also encourage, nurture and harness the natural idealism of youth
- Undertaking research projects in partnership with the local community through community based research methods.

### **Key Principles for Community Engagement**

In light of the global and national approaches currently prevalent, and key recommendations of NEP 2020, the following key principles shall guide community engagement of HEIs:

- Mutually agreed interests and needs of both rural and peri-urban poor communities and HEIs should be articulated and respected. Without ensuring mutual benefit, community engagement does not serve the purpose of social responsibility of HEIs. While the community learns from students and faculty engaging with them, students and teachers should also learn from community knowledge and experiences.
- Community engagement should not be limited to a few social science disciplines alone. It should be practiced across all disciplines and faculties of HEIs. Faculties of natural sciences and engineering can also promote community engagement in teaching and research. This will help educate local communities about new technological innovations as well as inform students and faculty about ways to harness local technology and knowledge.
- Participation of students in teaching activities of community engagement and research projects earning them credits.
- Performance assessments of teachers, researchers and administrators in HEIs should include a review of their involvement and contributions to community engagement in teaching and research. Criteria and weightage

to community engagement by teachers and researchers should be explicitly included in assessments for recruitment, regularization and promotion.

As per these Regulations, community service is one of the assessment criteria for Universities/ Colleges teachers highlighting the participation of college teachers in extension, co-curricular and extracurricular activities, including the community service.

### **New Course on Community Engagement and Social Responsibility**

New generation of students are increasingly unaware of local rural and peri-urban realities surrounding their HEIs, as rapid urbanization has been occurring in India. A large percentage of the Indian population continues to live and work in rural and peri-urban areas of the country. While various schemes and programmes of community service have been undertaken by HEIs, there is no singular provision of a well-designed community engagement course that provides opportunities Guidelines for Fostering Social Responsibility & Community Engagement in Higher Education Institutions in India 2.0 7 for immersion in rural realities. Such a course will enable students to learn about challenges faced by vulnerable households and develop an understanding of local wisdom and lifestyle in a respectful manner.

#### **Objectives:**

- To develop an appreciation of rural culture, lifestyle and wisdom amongst students.
- To learn about the status of various agricultural and development programmes.
- To understand the causes of distress and poverty faced by vulnerable households and explore solutions for the same.
- To apply classroom knowledge of courses to field realities and thereby improve the quality of learning. Learning Outcomes After completing this course, students will be able to
- Gain an understanding of rural life, Indian culture and ethos and social reality.

### **Learning Outcomes After completing this course, students will be able to**

- Gain an understanding of rural life, Indian culture and ethos and social realities
- Develop a sense of empathy and bonds of mutuality with the local community
- Appreciate significant contributions of local communities to Indian society and economy
- Learn to value the local knowledge and wisdom of the community
- Identify opportunities for contributing to community's socio-economic improvement

**Adapting Existing Courses for Community Engagement** The purpose of teaching is to enable the learning of students. However, the reality of the present system of teaching in most HEIs is that students are taught only in the classroom style delivery of content. Using advances in teaching aids, infrastructure, updated curricula and pedagogies, students should be able to relate what they study in the classroom to the field realities in which they live and where they would work in future. Therefore, it is important that the classroom theory is linked to the realities of the local field areas. Thus, existing courses can be adapted, both in content and pedagogy, for community engagement to facilitate learning from the field. For instance, management curriculum may include aspects of micro-financing in a rural context. The chemistry syllabus can have a component of conducting water and soil analysis in surrounding field areas, and the political science syllabus could include a mapping of local rural governance institutions and their functioning. In terms of adapting all courses to engage with society for mutual learning in the context of the climate crisis and the Covid-19 pandemic, the NEP 2020 suggests: "Towards the attainment of such a holistic and multidisciplinary education, the flexible and innovative curricula of all HEIs shall include credit-based courses and projects in the areas of community engagement and service, environmental education, and value-based education. Environmental education will include areas such as climate change, pollution, waste management, sanitation, conservation of biological diversity, management of

biological resources and biodiversity, forest and wildlife conservation, and sustainable development and living.

In all these courses, localisation of content and field work through community engagement can be included. Practical internships and field studies can also be used to document and analyze local community innovations and solutions. Local knowledge of farming, livestock, forestry and water management practices can be a source of knowledge in such community engagement, and documentation of the same will make these available to others in the country.

One of the essential prerequisites for HEIs to fulfill the twin mandates of improved quality of learning of students and their practical contributions to the socio-economic development of the nation is to introduce such dynamic curricular reforms which facilitate the connection between classroom theory and field realities. Within existing courses being taught at HEIs, Community Guidelines for Fostering Social Responsibility & Community Engagement in Higher Education Institutions in India 2.0 11 engagement may provide better quality learning opportunities for students, while also contributing to service to the local community.

Keeping local realities in view, HEIs can develop new contents in existing courses which make them more relevant to students from the local areas and also be useful to the local community. This will not only enrich the curriculum of existing courses through locally- appropriate subject matter, but will also create new, locally appropriate course content that is useful to the local community. Even within the existing curriculum and syllabus, community engaged learning can be facilitated through the use of new and innovative teaching-learning methods.

The pedagogies of engaged and experiential learning can be designed in each course and discipline. These include field labs, internships, participatory action research, service-learning, community projects, etc. Engaged teaching entails the interaction of students with the curriculum and the world around the university.

An engaged, outward, trans-disciplinary stance will enable enriching the curriculum and promoting learning in multi-modal pedagogies in addition to the classroom and laboratories. Therefore, new approaches to learning based on dialogical, co-learning, participatory and problem-oriented methods are required for teaching the existing curriculum. If a part of the theory is complemented with field-based application, the value and usability of the theory increases manifold. This will improve the quality of learning through application of classroom theory in field realities. It will also contribute to the deeper sensitisation of students and faculty to the socio-economic realities of our nation. The wisdom, knowledge and expertise of the local communities and the practitioners will also thus become accessible to students and their teachers alike.

## MODULE 6

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### IDEA GENERATION

Immersion program-Channelising Ideas - Working teams for SDGs

#### **Finer Remarks for a Transforming Journey**

The role of youth in achieving the Sustainable Development Goals (SDGs) in India is highly important as they constitute the largest aspiring youth mass in the universe. Notable ways in which youth can contribute to SDGs in India can be extensively viewed:

#### **Economic citizenship**

Youth can be equipped with skills, knowledge and confidence to contribute to the economy and achieve SDGs.

#### **Participation in politics**

Youth can engage in local politics and become involved in the decision-making process to ensure their voices are heard.

#### **Innovation and social entrepreneurship**

Youth can drive innovation and social entrepreneurship to address pressing societal challenges and achieve SDGs.

#### **Voluntary commitments**

Youth can register their voluntary commitments and partnerships to achieve SDGs and share their projects with the world.

#### **Education and Awareness**

Youth can educate and bring awareness of SDGs and their importance in achieving a sustainable future amidst all.

To sum up, youth have the potential to be the key players for the implementation of SDGs in India, and their involvement is essential in achieving the goals that are pivotal for a new nation attaining sustainability in all endeavors and the highest degree of equilibrium.

## Case Study: 1

### Dr. Yuvaraj's Journey from Academia to Organic Farming and Community Leadership

#### Background

Dr. Yuvaraj, an academic professional from a rural village near Vedanthangal (Vaiyavoor), has been working in the education sector since 2004. During the COVID-19 lockdown in 2020 and 2021, Yuvaraj has a profound realization about the importance of self-sufficiency and the need for sustainable practices. This epiphany led him to explore organic farming, despite having no prior experience in agriculture.

#### Challenges in the Initial Stages

Starting his journey into organic farming, Yuvaraj faced numerous challenges, particularly in navigating government bureaucracy. Even with all necessary documents and fulfilling formalities, Yuvaraj found it difficult to access agricultural services and schemes. The bureaucratic hurdles were a significant barrier, making it clear to Yuvaraj that the struggles he faced were only a fraction of what less-educated farmers endure. This experience highlighted the systemic corruption and the lack of support for small-scale farmers, particularly those from rural and uneducated backgrounds.

#### Formation of Farmer Interest Groups (FIG)

Determined to overcome these challenges, Yuvaraj took the initiative to bring together local farmers. In 2021, he formed five Farmer Interest Groups (FIGs), each consisting of 20 farmers. These groups pooled their resources, each member contributing ₹1000, to create a collective bank account for each FIG. Together, they formed the "Vaiyavoor Farmers Producer Group" (FPG), with Yuvaraj elected as the president.

The collective efforts enabled the group to receive a government grant of ₹5 lakh, which they used to purchase essential agricultural tools, including a tractor with a rotavator. This equipment was then made available to all 100 farmers, significantly boosting their farming efficiency.



## **Expansion and Formation of Farmer Producer Organization (FPO)**

In 2022, Yuvaraj's efforts took another leap forward. The FPG he had helped establish joined forces with five other FPGs to form the "Madurantakam Uzhavan Collective Farmers Producer Company Limited," a Farmer Producer Organization (FPO) with 500 farmers. As a board member of this FPO, Yuvaraj played a crucial role in securing further government grants and purchasing essential agricultural machinery, such as an oil-extracting cold pressing machine and a ground decorticator.

The FPO allowed farmers to purchase seeds at wholesale rates and sell their produce through the organization, ensuring better profits for all members. The FPO also facilitated the dissemination of information about government schemes, ensuring that all 500 farmers could benefit from available resources.

## **Personal Farming and Training**

While leading these collective efforts, Yuvaraj also developed his own 6-acre organic farm, cultivating a variety of crops, including rice, groundnut, sesame, millets, and vegetables. He integrated livestock, such as chickens, goats, and fish, into his farming system, creating a sustainable and diversified agricultural model.

In recognition of his efforts, Yuvaraj was selected by the Tamil Nadu State Government in 2023 to attend a one-week Hi-Tech Training program at the World Vegetable Centre at Kasetsart University in Bangkok, Thailand. This experience further enriched his knowledge and skills, which he shared with the farming community upon his return.

## **Innovative Solutions for Agricultural Challenges**

In the face of numerous challenges in farming, such as manpower shortages, marketing difficulties, climate monitoring, soil fertility inspection, and water management, a proactive approach was adopted to overcome these hurdles. Groundnut thrusters were ingeniously developed using available waste materials to efficiently harvest groundnuts. However, the threat of crop damage from wild boars, peacocks, monkeys, parrots, and sparrows, especially as the crops approached harvest, remained a significant issue.

To address these challenges, a collaboration was formed between our FPO, Sairam Incubation, and the Agriculture Club. Together with students, we initiated a project to find effective solutions. Leveraging AI technology and solar panels, we constructed a sonic shield designed to protect crops from these animal threats. This innovative approach not only safeguarded the harvest but also demonstrated how technology could be integrated into agriculture to solve real-world problems.

Our FPO continues to work closely with Sairam institutions, identifying problem areas and providing technical solutions to enhance the efficiency and sustainability of farming practices.

### **Involvement in Local Politics**

Recognizing the importance of good governance, Yuvaraj decided to participate in local politics to address the issues he had observed in his panchayat. Despite facing resistance from local politicians, he ran for ward counselor in the 2022 local body election. He actively participates in Grama Sabha meetings, educating people about the proper use of funds and advocating for the community's needs.

Yuvaraj remains committed to improving his panchayat, which, despite its wealth from local industries, suffers from mismanagement and corruption. His ultimate goal is to create a better society for future generations, where every individual contributes to the earth and enriches the lives of those who come after them.

### **Bio-Fertilizer Plant and Future Vision**

In 2024, Yuvaraj took another significant step by starting a bio-fertilizer plant in his area. He began producing various organic inputs like fish amino acid, seaweed extract liquid, and various beneficial bacteria. His goal is to promote organic farming and reduce dependency on chemical fertilizers, thus contributing to a healthier, disease-free society.

Yuvaraj's vision extends beyond farming. He aims to establish a self-sufficient community that produces all its needs locally, with a focus on providing chemical-free products and creating a transparent society. He believes that preserving and passing on ancient knowledge is crucial for the enrichment of future generations.

## Conclusion

Yuvaraj's journey from an academic professional to a community leader and organic farmer is a testament to his determination and vision. His efforts have not only transformed his own life but have also positively impacted the lives of hundreds of farmers in his region. Through collective action, knowledge sharing, and a commitment to sustainable practices, Yuvaraj is paving the way for a better, more self-reliant future for his community.

## Case Study: 2

### AGSAIMO - Transforming Floral Waste into Sustainable Agarbathi Sticks

#### Background

AGSAIMO, a startup founded by Dr. B. Thanuja, aimed to address the environmental issue of floral waste disposal while promoting sustainable practices. It looks ahead into the future, envisioning a world of limitless possibilities, we introduce a groundbreaking addition to our array of sustainable products - the transformation of floral waste into agarbathi sticks, also known as incense sticks.

#### Challenge

- Floral waste disposal contributes to environmental pollution and waste management issues.
- Traditional agarbathi stick production relies on virgin resources, contributing to deforestation and ecological degradation.

#### Solution

- AGSAIMO developed an innovative process to transform floral waste into agarbathi sticks, reducing waste disposal and promoting sustainable practices.
- The process involves collecting floral waste, sorting and processing, extracting floral essence, and combining it with natural binders and aromatic materials.
- Artisans skillfully hand-roll each stick, creating a unique and sustainable product.

#### Results

- Reduced floral waste disposal and minimized ecological footprint.
- Provided employment opportunities and empowered local communities with valuable skills.

- Created a sustainable and eco-friendly alternative to traditional agarbathi sticks.

### **Lessons Learned**

- Innovative thinking and collaboration can lead to sustainable solutions.
- Education and awareness are key to promoting sustainable practices.
- Community involvement and empowerment are essential for long-term impact.

### **Recommendations**

- Encourage businesses and individuals to adopt circular economy practices.
- Support startups and initiatives promoting sustainable innovation.
- Develop educational programs and training centers to empower communities with sustainable practices.

### **Conclusion**

AGSAIMO's innovative approach to transforming floral waste into sustainable agarbathi sticks demonstrates the potential for sustainable solutions to environmental challenges. By adopting circular economy practices and promoting education and awareness, we can create a more sustainable future.

## Reflections-Setting for Ideation Academic 2022-2023

### **SDG IMMERSION PROGRAM HELD during January 2023 State Institute of Rural Development (SIRD)**

Sairam Innovation Ecosystem in association with State Institute of Rural Development & Panchayat Raj organized Sairam SDG Immersion Program with a motto of localization, the SDGs and Field Exposure visit for Idea Engineering. It is a first-of-its-kind event being introduced for the First Year Engineering Students of Sri Sairam Engineering and Sairam Institute of Technology from 11.01.2023 to 02.03.2023. The first session was conducted for the students across all branches. Around 2200 students with nearly 100 faculties and Heads of the various departments visited SIRD & Panchanyat Raj at Maraimalar Nagar.

The Inaugural Function was held on 11.01.2023 in the SIRD & PR Auditorium. Dr. K. Porkumaran, Principal, SEC, delivered the Welcome Address. Dr. Sai Prakash Leo Muthu, Chairman & CEO, Sairam Group of Institutions delivered the Presidential Address by motivating the student community to be innovative in their projects. Dr. S. Deivanayaki, Director, SIRD & PR – TN delivered the Chief Guest Address and encouraged the students to get involved in the development of rural society through their projects. Dr. Rene Robin, Dean Innovation gave a brief introduction about the SDG Immersion Program.

Dr. A. Arputharaj briefed the students on the various sessions to be conducted during the two-day Immersion Program. Each session dealt with the core Nine themes of SDG like Poverty free and enhanced livelihoods village, Healthy village, Child friendly village, Water Sufficient Village and Clean and Green Village. The sessions were handled by experts of various fields and sample videos were played related to the themes. Students gained a lot of information related to the importance of rural development by using sustainable energy and technology. Interesting group activities were conducted for the students. After the briefing sessions dealing with five themes on the first day, the students left the campus at 6 p.m. after the refreshments.

The second day sessions started at 10 a.m. Themes based on Self-Sufficient infrastructure in village, socially secured village, Village with Good Governance and Engendered Development in Village were discussed in detail. Sample videos like the Nallathur Village were played to show the students to know about the works implemented by the village president and villagers to preserve water, cattle, etc.

After lunch, students were taken on a field trip to The Epic in Padur, where Ms. Santha Sheela Nair, Retired IAS Officer, spoke on the use of sustainable energy. She provided a real-world illustration of how human wastes have been separated and used as manure and irrigation. She also discussed the method for collecting rainwater and using it for plantations. With the use of technology, students gained a broad understanding of the balancing of renewable energy. As she traveled the world, she displayed her many priceless collections. She is interested in ecological living, as seen by the mud house she built without concrete. A brief presentation on mushroom planting employing artificial intelligence was given by Mr. Saravanan, an IT professional. All 9 themes had been clarified to the students, who felt prepared to present their research as a finished product in their higher semesters. Dr. Rene Robin thanked the whole team of SIRD for giving this excellent opportunity for the students.

# Reflections-Setting for Ideation

## Academic 2023-2024

### SDG IMMERSION PROGRAM HELD ON December 2023

#### Forge Innovation Ecosystem Lab

The objective of the industrial visit to FORGE, Chennai, was to gain practical insights into the manufacturing processes and technologies employed in the automotive industry.

#### Overview

FORGE is a leading manufacturer of forged and machined components for the automotive sector. The company specializes in producing high-quality components for engines, transmissions, and chassis applications.

#### Visit Highlights

- **Introduction to FORGE:** The visit began with a presentation on the history, mission, and key products of FORGE.
- **Factory Tour:** Students were given a guided tour of the manufacturing facility, where they observed various processes such as forging, machining, heat treatment, and quality control.
- **Interactive Sessions:** Engineers and managers from FORGE conducted interactive sessions, explaining the technologies and equipment used in the production processes.
- **Quality Control:** Students learned about the stringent quality control measures implemented by FORGE to ensure the reliability and durability of its products.
- **Safety Measures:** The importance of safety measures in a manufacturing environment was emphasized, with a focus on best practices and compliance with safety standards.



The students also had fun activities like poster making, building a free-standing tower out of the given materials; a few sticks of spaghetti and a ball of yarn and quizzes.

### **Key Learning's**

- Understanding of forging and machining processes
- Importance of quality control in manufacturing
- Application of technology in automotive component production
- Safety practices in an industrial setting

### **Conclusion**

The industrial visit to FORGE, Chennai, provided students with valuable insights into the automotive manufacturing industry. It was a learning experience that complemented their theoretical knowledge with practical exposure to real-world processes and technologies.



# Imagine the Future and Make it happen!



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



Together let's build a better world where there is **NO POVERTY** and **ZERO HUNGER**.  
We have **GOOD HEALTH AND WELL BEING** **QUALITY EDUCATION** and full **GENDER EQUALITY** everywhere.  
There is **CLEAN WATER AND SANITATION** for everyone. **AFFORDABLE AND CLEAN ENERGY**  
which will help to create **DECENT WORK AND ECONOMIC GROWTH**. Our prosperity shall be fuelled  
by investments in **INDUSTRY, INNOVATION AND INFRASTRUCTURE** that will help us to  
**REDUCE INEQUALITIES** by all means. We will live in **SUSTAINABLE CITIES AND COMMUNITIES**.  
**RESPONSIBLE CONSUMPTION AND PRODUCTION** will help in healing our planet.  
**CLIMATE ACTION** will reduce global warming and we will have abundant,  
flourishing **LIFE BELOW WATER**, rich and diverse **LIFE ON LAND**.  
We will enjoy **PEACE AND JUSTICE** through **STRONG INSTITUTIONS**  
and will build long term **PARTNERSHIPS FOR THE GOALS**.



For the goals to be reached,  
everyone needs to do their part:  
governments, the private sector,  
civil society and **People like you.**

*Together we can...*

*Sai Prakash Leo Muthu*

Chairman & CEO - Sairam Institutions



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