Karunya INSTITUTE OF TECHNOLOGY AND SCIENCES
(Declared as Deemed to be University under Sec.3 of the UGC Act, 1956)
MoE, UGC & AICTE Approved
NAAC A++ Accredited

SDG 17 - Partnerships to achieve the Goal

University Officials Participation in National Government or Regional Non-Government Organisations towards SDG policy development

Karunya Institute of Technology and Sciences (KITS) has demonstrated strong leadership in SDG 17 – Partnerships for the Goals through active engagement in national, regional, and international collaborations and policy development. Under the guidance of Dr. E. J. James, Pro Vice-Chancellor, the university has collaborated with global organizations such as NASA, the World Bank, Wetlands International, SUEZ India, the University of Waterloo, and the Ramsar Bureau, alongside premier national bodies including IIT Madras Research Park, IIT Tirupati, K-DISC, Kerala Forest Research Institute, and several NGOs. These partnerships have influenced policies on water security, climate resilience, wetland conservation, and sustainable development. KITS officials have contributed to over 15 major SDG-linked national and international engagements, including media outreach, advisory committee roles, conference leadership, environmental management plans, and technology-driven research collaborations.

The institution's efforts have resulted in significant outcomes such as the development of the Integrated Water Resources Management (IWRM) Joint M. Tech Program with SUEZ, extension of the NASA–AERONET scientific collaboration, contributions to Kerala's Vision 2035 Water Strategy, and preparation of policy documents with NGOs like the M.S. Swaminathan Research Foundation and Friends of Bharathapuzha. KITS has also advanced global knowledge-sharing through the French TV documentary on climate impacts, proposals to the World Bank for training India's water leaders, and invitations to host the ICWRER 2025 International Conference. Together, these initiatives position KITS as an influential knowledge partner driving policy development, multi-stakeholder engagement, and sustainable innovation in alignment with SDG 17.

Strategic Context

In alignment with the Institutions Strategic Plan and its Sustainability Roadmap, KITS has continuously strengthened partnerships at local, national, and international levels to advance Sustainable Development Goal 17. The following initiatives represent the cumulative outcomes of these sustained collaborations.

Impact and Outcomes

These multi-stakeholder collaborations have not only enhanced KITS's global visibility but also translated research into actionable policy recommendations, technology transfers, and curriculum innovations such as the Joint M. Tech program in Integrated Water Resources Management. The cumulative impact reflects the Institutions role as a knowledge partner contributing to national and international dialogues on water security, climate resilience, and sustainable development.

Key Collaborations and Events

Sl. No.	Event / Activity	Date/ Year	Description / Outcome	Nature of Collaboration
1	French TV Interview – CFRT (Le Jour du Seigneur)	27.6.2023	Interview on *"Impact of Climate Change on Water Cycle"* aired for a French television program on climate awareness.	International Media Collaboration / Knowledge Outreach

2	Proposal with World Bank and Alluvium Consulting	20.7.2023	Joint proposal to train India's water leaders on *River Basin Planning* in collaboration with Alluvium Consulting India Pvt. Ltd.	International Institutional & Corporate Partnership
3	Collaboration with University of Waterloo	25.7.2023	Request to host *ICWRER 2025 International Conference on Water Resources and Environment Research* at KITS.	International Academic Research Partnership
4	IITM Research Park Collaboration	27.9.2023	Collaboration on *Automated Wheelchair and Sustainable Transportation* with IIT Madras Research Park.	National Academic–Industry Collaboration
5	K-DISC Vision 2035 Consultation	16.8.2023	Participation in *Vision 2035 Event at Trivandrum*; contribution to Kerala's Vision Document on water and innovation.	State Government Policy Engagement
6	Industry–Academia Meet (Israel)	24.8.2023	Consultation with Deputy Consul General of Israel for Industry–Academia Meet in Jerusalem.	International Diplomatic and Academic Engagement
7	Wetlands International Collaboration	9.10.2023	Review and feedback on *Vembanad–Kol Wetland Management Plan (Ramsar Site).*	International Environmental NGO Partnership
8	Wetlands International South Asia – Invitation	1.9.2023	Invitation to *World Wetlands Day on "Wetlands and Human Wellbeing"* at India Habitat Centre, New Delhi.	International Event Participation / Policy Network
9	Appointment to Committee – Wetlands International South Asia	1.9.2023	Dr. James appointed to *Skills & Qualification Matrix Committee* for governing body formation.	International Advisory Committee Membership
10	Kerala Forest Research Institute Collaboration	22.3.2024	Invitation to speak at *World Water Day Workshop on Forest Hydrology.*	National Research Institution Collaboration
11	Collaboration with M.S. Swaminathan Research Foundation	25.3.2024	Contribution to publication on *Pampa River Management – Empowering Local Governments.*	NGO Policy & Knowledge Partnership

12	NGO Collaboration – Friends of Bharathapuzha	4.5.2024	Invited as keynote speaker at *Water Conference, Palakkad* to promote sustainable river management.	Civil Society & Environmental NGO Engagement
13	NASA Collaboration – AERONET Project	2024	Extension of NASA–KITS partnership on *Aerosol Research Network (AERONET)* confirmed by NASA HQ.	International Government Scientific Collaboration
14	IIT Tirupati Technology Innovation Hub	30.5.2024	Invitation to participate in seminar *"Innovations in Underwater Navigation"* with Indian Navy at IIT Delhi.	National Academic and Defence Research Collaboration
15	M.Tech Joint Program with SUEZ India	2024	Initiation of joint postgraduate program on *Integrated Water Resources Management (IWRM).*	Academic–Industry Curriculum Collaboration
16	Interaction with Kol Wetland Farmer Groups	9.9.2023	Regular engagement with local farmers for Sustainable Wetland Management and livelihood programs.	Community Partnership and Stakeholder Engagement
17	Collaboration with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH Indo-German Biodiversity Programme (IGBP)	2023	Hydro-Ecology of Point Calimere Wildlife And Bird Sanctuary, Tamil Nadu An Assessment For Integrated Management	An assessment for integrated management https://indianwetlands.in/wp-content/uploads/library/1675678121.pdf

Narrative of Activities

Karunya Institute of Technology and Sciences (KITS) has actively strengthened national and international partnerships through a diverse set of activities spanning scientific collaboration, policy engagement, community outreach, and global knowledge exchange. The institution contributed significantly to climate and water-related policy dialogues, beginning with a French Television (CFRT) interview on "Impact of Climate Change on the Water Cycle" (27.06.2023), which enhanced global public awareness. KITS deepened international ties through a joint proposal with the World Bank and Alluvium Consulting (20.07.2023) aimed at training India's future water leaders in river basin planning. The University of Waterloo (25.07.2023) recognized KITS' expertise and requested to host the prestigious ICWRER 2025 conference on campus.

Parallelly, KITS expanded national collaborations through the IIT Madras Research Park (27.09.2023) on automated wheelchairs and sustainable transportation, and contributed to Kerala

Development and Innovation Strategic Council (K-DISC) Vision 2035 consultations (16.08.2023) shaping water resource strategies. International diplomatic engagement was strengthened through discussions with the Deputy Consul General of Israel (24.08.2023) for an Industry–Academia Meet in Jerusalem. Environmental stewardship was further advanced through a series of collaborations with Wetlands International, including review of the Vembanad–Kol Wetland Management Plan (09.10.2023), participation in World Wetlands Day at India Habitat Centre, New Delhi (01.09.2023), and appointment of Dr. James to the Skills & Qualification Matrix Committee (01.09.2023).

KITS also made significant contributions within India through lectures and expert consultations with the Kerala Forest Research Institute (22.03.2024), the M.S. Swaminathan Research Foundation (25.03.2024) for Pampa River governance, and the NGO Friends of Bharathapuzha (04.05.2024) to promote sustainable river management. Its scientific credibility was further recognized when NASA Headquarters confirmed the extension of the long-standing AERONET collaboration with KITS (2024). The institution also partnered with IIT Tirupati's Technology Innovation Hub (30.05.2024) for discussions on underwater navigation technologies with the Indian Navy.

Academically, KITS launched an innovative M.Tech Joint Program in Integrated Water Resources Management (IWRM) with SUEZ India (2024), fostering a new model of industry-driven curriculum development. At the community level, the institution maintained continuous engagement with Kol Wetland farmer groups (09.09.2023) to enhance sustainable agriculture, wetland conservation, and livelihood improvement. Additionally, KITS collaborated with GIZ's Indo-German Biodiversity Programme (2023) on a hydro-ecological assessment of the Point Calimere Wildlife and Bird Sanctuary, contributing data and insights for integrated ecosystem management.

Together, these activities reflect KITS' strong leadership in SDG 17 through multi-level collaborations that bridge scientific research, policy development, community empowerment, and global sustainability partnerships.

SDG Engagement in Policy Development

TV Interview with a French Channel on 'IMPACT OF CLIMATE CHANGE ON WATER CYCLE'.

Stéphanie TESSON <s.tesson@ext.cfrt.tv>
Jun 27, 2023, 6:42 PM
to me

Dear Professor James,

I am contacting you on behalf of Father Ignacimuthu.

I'm editor-in-chief for Le Jour du Seigneur, a French TV Company. We are preparing a series of TV programs on creation care, based on Laudato Si, from Pope Francis. The programs are weekly broadcasts, 26 minutes each Sunday. They include short interviews by Zoom with someone from the South presenting the concrete impacts of climate change in his country.

Our next program will be devoted to water-related issues. I would be very happy to do an interview with you about this topic.

The interview should be very simple and educational to help the French public understand the issues at stake.

Proposal sent to the World Bank – India Office, along with Alluvium Consultants Ltd to Train Water Leaders of India on 'RIVER BASIN PLANNING'.

On Thu, 20 Jul 2023, 6:52 pm Hemanta Sarkar, <hemanta.sarkar@alluviumgroup.in> wrote:
Dear Dr. Chabungbam Rajagopal Singh,

Following several discussions with you, we, are pleased to offer a proposal for **Inspiring and supporting India's water leaders on river basin planning in India**. We are hereby submitting our Proposal, which includes this Technical Proposal and a Financial Proposal.

We are submitting our Proposal with **Karunya Institute of Technology and Sciences (Deemed to be University under Sec.3 of the UGC Act. 1956) (JV Partner)** and **M/s. Alluvium Consulting India Pvt Ltd. (as a sub-consultant)**.

Looking forward to working with you.

Warm Regards,

Hemanta Sarkar | Alluvium Consulting India
P +91 98109 75035

Request from the Water Institute of the University of Waterloo for a Detailed Proposal to Jointly Conduct the International Conference on 'Water Resources and Environment Research' at KITS

---------- Forwarded message ---------
From: **Kumaraswamy Ponnambalam** <ponnu@uwaterloo.ca>
Date: Tue, 25 Jul 2023, 3:42 am
Subject: Formal request for ICWRER 2025 to be held in December 2025 at Karunya University
To: ejjamesm@gmail.com <ejjamesm@gmail.com>
Cc: esther P <esther.jegatha2011@gmail.com>, Keith Hipel <kwhipel@uwaterloo.ca>

Dear Pro Vice Chancellor Professor James,

Thanks for your time and the nice meeting we had recently and your willingness to conduct the conference at the Karunya University. I have attached an almost done proposal to save you much time and some information need to be still filled in by Karunya university which I have left open. Also attached are some other documents regarding the conference organization at the international level currently active.

Collaborations with IITMRP by the Faculty and Students on Automated Wheelchair and Sustainable Transportation

From: James E. J. <ejjamesm@gmail.com>
Sent: Thursday, July 27, 2023 7:19 PM
To: ashok jhunjhunwala <ashok@tenet.res.in>
Cc: krskrishnan@karunya.edu
Subject: Re: Meeting @ AWCV & HASTIC celebration at IITM Research Park

Dear Prof Ashok,
It was a real pleasure to learn from the young innovative minds. IITMRP has proved once again that 'Impossible is Possible'. The initiative has considerably helped our students. Thank the entire team there for their dynamic and polite interaction with us. Dr Krishnan and myself always enjoy your sense of commitment and humour.
Looking forward to more such interaction,
James

On Thu, 27 Jul 2023, 4:51 pm Dr. Ashok Jhunjhunwala, <tenetoffice@tenet.res.in> wrote:
To
Dr. E.J. James
Pro-Vice Chancellor
Karunya Institute of Technology And Sciences
Karunya Nagar, Coimbatore - 641 114
Mob : +91 94878 46504 / +91 98958 32581

Dear Dr James,

It was great to meet you last week during the celebration of "Impossible is Possible: Technical Abilities of our Youth" at IITM Research Park.

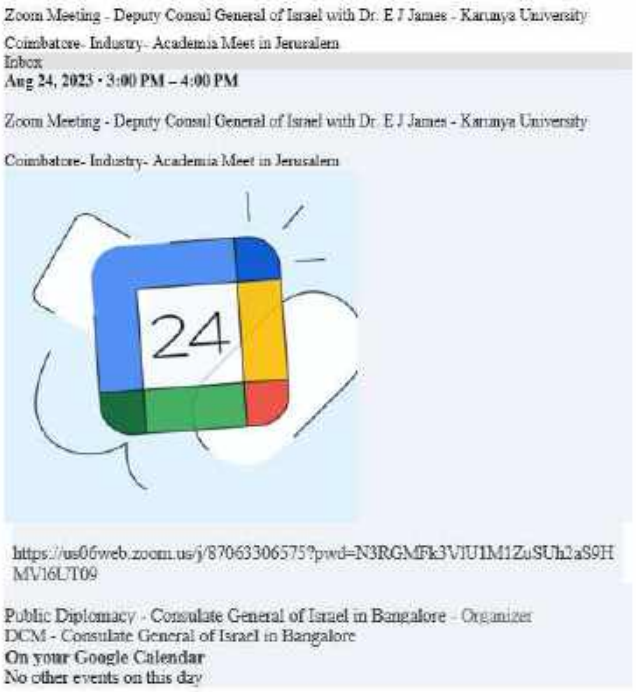
Stay in touch.

Thanking You,

(Ashok Jhunjhunwala)

Vision Document of Kerala for Future Water Resources Development – Collaboration with K-DISC (Kerala Development and Strategic Council, and Concept Paper Presentation)

Industry - Academia Meet in Jerusalem – Preliminary Consultation with DCG of Israel in Bangalore



Collaboration with Wetlands International in Preparing a Management Action Plan for the Vembanad-Kol Wetland – A Ramsar Site

Vembanad Kol IMP final draft report
Inbox

R

Ritesh Kumar <ritesh.kumar@wi-sa.org> Mon, Oct 9, 2023, 8:53 AM

to me

Dear Dr James,

The Vembanad Kol management plan is attached for your kind review and comments.

Sincerely yours

Ritesh Kumar

——— Forwarded message ———
From: **Kalpana Ambastha** <kalpana.ambastha@wi-sa.org>
Date: Thu, 5 Oct 2023 at 6:56 PM
Subject: Vembanad Kol IMP final draft report
To: johncmdoecc <johncmdoecc@gmail.com>, swakprofessionals <swakprofessionals@gmail.com>, Dr P S Hari Kumar <pshari@gmail.com>, Renjith <renjith@cwrdm.org>, Asghar Nawab <asghar.nawab@wi-sa.org>, Ritesh Kumar <ritesh.kumar@wi-sa.org>

Dear Colleagues,

A final draft of the Vembanad Kol IMP is attached for your kind perusal.
An Executive Summary is to be added which we will be doing by this Monday. The detailed action plans with budgets are also attached as a zip file.

Please share your feedback and also advise in case we have missed anything.

Best regards,
–
Kalpana Ambastha
Technical Officer

Networking with Ramsar Bureau, MoEFCC - GoI, and State Wetland Authority Kerala on the Report of KITS on Kol Wetland (Ramsar Site) and Climate Change.

From: "Chandan Singh" <c.singh@nic.in>
To: "SWAK, Govt of Kerala DoECC" <swak.kerala@gmail.com>, "STATE WETLAND AUTHORITY KERALA" <swak.envt@kerala.gov.in>, "pamidisuneel" <pamidisuneel@gmail.com>
Cc: brema@karunya.edu, "James J" <jamesej2007@yahoo.co.in>, "RAGHU KUMAR KODALI" <kodali.rk@gov.in>, "Sujit Kumar Bajpayee" <sujit.baju@gov.in>
Sent: Tuesday, December 13, 2022 12:49:02 PM
Subject: Fwd: RRC-EA Wetland fund 2023

Dear Sir/Madam,

Please find attached a copy of the project proposal " **Evaluation of ecosystem services in the context of climate change – Kol Wetlands, India** " submitted by the Karunya Institute of Technology and Sciences, Coimbatore seeking wetland funds from RRC-EA. It is requested to kindly confirm whether any study of similar nature has been undertaken by SWAK/State Government of Kerala by return email. The Project Proponent ought to at least engage with the SWA or similar bodies to ensure that there is no duplication of effort and also that the proposal has synergies.

This may be treated as most urgent.
With regards

Chandan Singh
Consultant
Wetlands Division , MoEF&CC

Committee Constituted by Wetlands International to Identify Skillsets for Wetland Experts

Wetlands International South Asia
Module 003, Ground Floor
NSIC Business Park
Okhla Industrial Area
New Delhi – 110020, INDI Order

Constitution of a committee to prepare Skills and Qualification matrix for Governing Body and Office Bearers for Wetlands International South Asia Society
As per rule 13.2 of the Wetlands International South Asia Society Rules and Regulation, the President was authorised to constitute a committee to prepare a skill and qualification matrix for the approval of the Governing body.
The Society Rules and Regulation stipulate that the Governing Body composition shall reflect diversity in skillsets, disciplinary expertise, regional experience, gender and age and overall having vast expertise in wetland conservation/nature conservation. Subsequently, to operationalize this decision, an amendment to the Rules was effected in September 2023, wherein it was decided that the 'President shall constitute a Committee to prepare a Skills and Qualification Matrix for the Governing Body and Office Bearers. This Skills and Qualification Matrix shall be approved by the Governing Body'. Three months prior to elections, a three-member Screening Committee appointed by the President shall use this Matrix to prepare a list of eligible members for nomination as President and Governing Body members.
1. The President herewith constitutes a Skills and Qualification committee of the following individuals:
1) Dr Asad Rahmani, Founder Member, WISA Society
2) Dr Ajit Pattnaik, Founder Member, WISA Society
3) Prof E J James, Founder Member, WISA Society
4) Ms Archana Chatterjee, Nominated Member, WISA Society

Involvement with the Kerala Forest Research Institute on Forest Hydrology

Pawan Wable <pawan.wable@kfri.res.in> Mar 2, 2024, 11:54 AM

to me, Wable

Dear Sir,

I am forwarding you the mail from our Director for the World Water Day workshop invitation (22 March 2024). Please find the attachment for the invitation letter.

Thanking you,

With kind regards,

Pawan

Pawan S. Wable, PhD
Scientist (Forest Hydrology),
Department of Soil Science,
Sustainable Forest Management Division,
Kerala Forest Research Institute,
Peechi- 680 653, Thrissur, Kerala
Tel: +91-954-789-1559

Collaboration with the NGO - MS Swaminathan Foundation, Chennai – Preparation of Policy Document

Inbox

Pampa MSSRF <pampamssrf@gmail.com> Mon, Mar 25, 2024, 12:00 PM

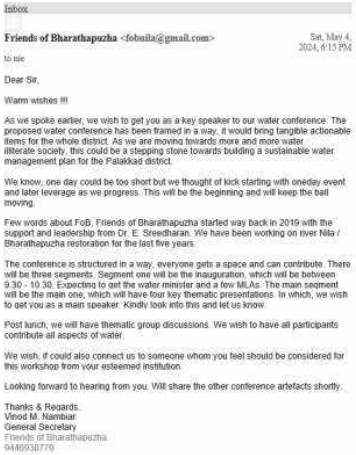
to bcc: me

Dear All,
We are happy to reach out to you with the recent publication titled **Equipping local self governments and development practitioners in managing common pool resources – A case of Pampa River in Kerala State, India** which has come out of the project that all of you were a part of.

Thank you for all your support!

Regards
for the Authors of the Case Study
Team M S Swaminathan Research Foundation

Collaboration with the NGO – the 'Friends of Bharathapuzha' Water conference, 26th May 2024.



Inbox

Friends of Bharathapuzha <fobnila@gmail.com> Sat, May 4, 2024, 6:15 PM

to me

Dear Sir,

Warm wishes !!!

As we spoke earlier, we wish to get you as a key speaker to our water conference. The proposed water conference has been framed in a way, it would bring tangible actionable items for the whole district. As we are moving towards more and more water illiterate society, this could be a stepping stone towards building a sustainable water management plan for the Palakkad district.

We know, one day could be too short but we thought of kick starting with oneday event and later leverage as we progress. This will be the beginning and will keep the ball moving.

Few words about FoB, Friends of Bharathapuzha started way back in 2019 with the support and leadership from Dr. E. Sreedharan. We have been working on river Nila / Bharathapuzha restoration for the last five years.

The conference is structured in a way, everyone gets a space and can contribute. There will be three segments. Segment one will be the inauguration, which will be between 9.30 - 10.30. Expecting to get the water minister and a few MLAs. The main segment will be the main one, which will have four key thematic presentations. In which, we wish to get you as a main speaker. Kindly look into this and let us know.

Post lunch, we will have thematic group discussions. We wish to have all participants contribute all aspects of water.

We wish, if could also connect us to someone whom you feel should be considered for this workshop from your esteemed institution.

Looking forward to hearing from you. Will share the other conference artefacts shortly.

Thanks & Regards.
Vinod M. Nambiar
General Secretary
Friends of Bharathapuzha
9446938779

Invitation to Participate in "Innovations in Underwater Navigation" Seminar and Further Collaboration in the Area with IITT

Inbox

Roshan Karan Srivastav <rosban@iittp.ac.in> Thu, May 30, 2024, 7:58 PM

to Director, me, PRAWIN, RAJESH, vidhyak, nandhakumar@karunya.edu, ku, underwater navi,

Dear Sir,

Greetings from IIT Tirupati Technology Innovation Hub

I am pleased to extend a special invitation for you to participate at our upcoming seminar, "Navigating the Depths: Innovations in Underwater Navigation," hosted by the IIT Tirupati Navavishkar I-Hub Foundation (IITTNiF) in collaboration with the Indian Navy. Scheduled for June 14, 2024, in New Delhi, this event promises to be a groundbreaking assembly of minds in the field of underwater navigation technologies.

Event Highlights:

- Date: June 14, 2024
- Venue:IIT Delhi Research and Innovation Park, New Delhi
- Keynote Speakers: Industry leaders and acclaimed academics
- Sessions Include: Latest advancements in underwater tech, practical applications, and collaborative opportunities.

This seminar is not just a platform to share knowledge but also a unique networking opportunity that will connect you with peers and pioneers in the industry. We are also extending an invitation for you to nominate colleagues or peers from your organization who would benefit from attending this important event.

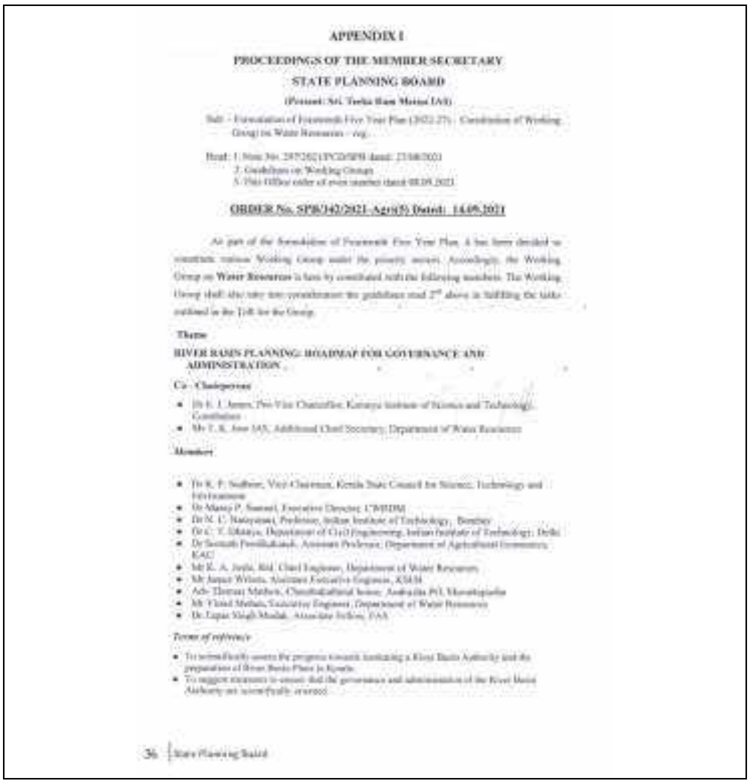
Nominate and Registration
Link: https://docs.google.com/forms/d/e/1FAIpQLSdpEACmyaDVI7zXoqBJpVt4xsQRNymobIpjpNev1UNGrFPjsg/viewform
Brochure Link: https://drive.google.com/file/d/106qJo0epMpVAukUmm8YbAlnG3-fsrs6I/view?usp=sharing
Website Link: https://sites.google.com/iittp.ac.in/underwater-navigation/home

Interaction with the Farmer NGOs and Groups of Kol Wetland of Thrissur – A Ramsar Site

Strategic Interventions for Sustainable Development

Name of the Project	Name of the Funding agency	Type *(Government/ Non-Government)*	Funds provided
Strategies for Improving the Performance of Concrete under Extreme Fire Conditions	Ministry of Innovation and Technology of Hungary through the National Research, Development and Innovation Fund	Government	€56,800
Evaluation of Ecosystem Services in the Context of Climate Change - Kol Wetlands, India	Ramsar Regional Center - East Asia	Non-Government	7.98 Lakh
Design of 2 TPD Rotary Kiln Gasification Pilot Plant with high CV syngas Production	Techurja	Non-Government	10 Lakh

SDG Strategies in Policy Development


APPENDIX I

PROCEEDINGS OF THE MEMBER SECRETARY

STATE PLANNING BOARD

Theme

RIVER BASIN PLANNING: ROADMAP FOR GOVERNANCE AND ADMINISTRATION

- To suggest a roadmap to prepare River Basin Plans for all the major rivers of Kerala, and ways to integrate them with the question of socioeconomic development.
- To suggest ways in which the activities of line departments and LSGIs in Kerala, and local watershed plans, are integrated with the preparation and implementation of River Basin Plans.
- To suggest how the River Basin Plans can be a part of a larger water management information system, including decision support models and facilities for monitoring.

Convener

Sri. S S Nagesh, Chief, Agriculture Division, State Planning Board

Co- Convener

Dr. C Anilkumar, Assistant Director, Agriculture Division State Planning Board

Terms of Reference (General)

1. The non-official members (and invitees) of the Working Group will be entitled to travelling allowances as per existing government norms. The Class I Officers of GoI will be entitled to travelling allowances as per rules if reimbursement is not allowed from Departments.
2. The expenditure towards TA, DA and Honorarium will be met from the following Head of Account of the State Planning Board "3451-00-101-93"- Preparation of Plans and Conduct of Surveys and Studies.

The order read as reference 3 is modified to this extent.

(Sd/-)
Member Secretary

Forwarded By Order

Chief,
Agriculture Division

To

The Members concerned

Copy to

PS to Vice Chairperson
PA to Member Secretary
CA to Member (Dr.Ramakumar.R)
Economic Advisor to VC
Chief, PCD,SPB
Sr. A.O, SPB
The Accountant General, Kerala
Finance Officer, SPB
Publication Officer, SPB
Sub Treasury, Vellayambalam
Accounts Section
File/Stock File

GOVERNMENT OF TAMILNADU
WATER RESOURCES DEPARTMENT

From
Er. A.MUTHAIYA, B.E.,
Engineer-in-Chief &
Chief Engineer (General), WRD,
Chepauk, Chennai – 600 005.

To
The Chairman, HLTC / Joint Chief Engineer, WRD,
Plan Formulation,
Chepauk, Chennai – 600 005.

Letter No. S7(4)/68804(Misc) /OT3/2003 Dated 07.06.2023

Sir,

Sub: Water Summit India (WSI 2022) Coimbatore Declaration – reg.

Ref: 1. Government Letter No. 4399623 / W1 / 2023-1, Dated: 06.04.2023.
2. Dr.E.J.James, Pro - Vice Chancellor, Karunya Institute of Technology and Sciences, Letter No KITS/PVC/LET/2022, Dated 30.09.2022.
3. The Engineer-in-Chief & Chief Engineer (General), WRD Proceedings No.S7(8)/OT7/HLTC/2023 Dated 25.01.2023.

******

In the reference 1st cited, the Government have enclosed a copy of the Water Summit India (WSI 2022) Coimbatore Declaration held on 17.09.2022 at Karunya Institute of Technology and Sciences vide reference 2nd cited and requested to take necessary action.

In the reference 2nd cited, Dr. E.J.James, Pro Vice Chancellor has stated that Water Summit-India (WSI 2022) was organized at Coimbatore by Karunya Institute of Technology and Sciences (Deemed University), Coimbatore in that renowned scientists, academicians, administrators and experts have participated and came out with the Coimbatore Declaration, a Vision Document highlighting the future course of action in Water Resources Management and development in the country. It is also stated that the need for such a summit to formulate a Vision Document for the future Water Resources development and Management in the country was recognized considering the issues such as Over-exploitation of fresh water sources, especially groundwater, Quality of Water Sources, Water stress, Scarcity, Impact of climate variation and change, Degradation of ecosystems and limitations associated with Water Governance and Stakeholder participants.

In the reference 3rd cited, a High Level Technical Committee was constituted for scrutinizing the announcement scheme Water Vision 2047 under the Chairmanship of Joint Chief Engineer, WRD, Plan Formulation.

In this regard, the Chairman, HLTC / Joint Chief Engineer, WRD, Plan Formulation is requested to refer the vision document of Water Summit India (WSI 2022) Coimbatore Declaration and consider suitable ideas if any, while preparing the Tamil Nadu Water vision 2047.

Encl: Copy of references cited. (w.e)

for Engineer-in-Chief &
Chief Engineer (General), WRD

Copy presented to the Additional Chief Secretary, WRD, Water Resources Department, Secretariat, Chennai- 9 for information.

Copy to Dr. E.J.James, Pro - Vice Chancellor, Karunya Institute of Technology and Sciences, Coimbatore for information.

KERALA STATE PLANNING BOARD

Thiruvananthapuram
21.08.2023

No. SPB/1004/2023-Agri

From

Chief
Agriculture

To

Dr.E.J.James

Sir,

Sub:- Technical Committee constituted for Major and Medium Projects - Idamalayar Irrigation Project – Meeting to discuss the DPR on Link Canal - reg

Dr.R.Ramakumar, Member, Kerala State Planning Board desires to convene a review **meeting of the Idamalayar Irrigation Project on 08.09.2023 (Friday).** Kindly recall the telephonic conversation with Dr.R.Ramakumar on the subject. The objective of the meeting is to examine the feasibility in continuing with the works related to the Link Canal of IIP. The Chief Engineer (Projects II) will present the DPR of the Link Canal which will be followed by discussion and site visit. For the convenience of site visit, it has been decided to arrange the meeting at Ernakulam. The venue and meeting schedule shall be communicated shortly.

- Kindly make it convenient to join us for the meeting.

Yours faithfully

Chief
Agriculture

May kindly be permitted to attend the Meeting, since I am serving in the expert Committee as Member along with a Representative from IITM. Thank you.

James
23.08.23

To VC, please

KERALA STATE PLANNING BOARD

No.448/2021/SS (WS)/SPB

Social Services Division
Dated : 14.09.2021

From

Chief & Convener
(Social Services Division)

To

1. Sri. Pranabjyoti Nath IAS,
Secretary to Government,
Department of Water Resources,
Government Secretariat, Thiruvananthapuram

2. Dr. Vijayakumar. K,
Retired Prof. & HoD,
Community Medicine, Medical College, Tvpm,
Honorary Secretary, Self-Action by People, Tvpm

3. Sri. S.Venkatespathy IAS,
Managing Director,
Kerala Water Authority,
Jalabhavan, Vellayambalam, Thiruvananthapuram

4. Dr. P.S Harikumar,
Head & Senior Principal Scientist,
Ecology & Environment Research Group,
Centre for Water Resources Development and Management, Kozhikode

5. Dr. E J James,
Pro -Vice Chancellor,
Karunya Deemed University, Coimbatore and
Former Executive Director of the Centre for Water Resources Development and Management (CWRDM), Calicut.

6. Dr. Ajayakumar Varma, Retd.
Chief Scientist, National Centre for Earth Science Studies, GoI and
Former Executive Director, Suchitwa Mission

7. Dr. Jacob Chandapillai, (Former Director, Fluid Control Research Institute),
Professor, Jyothi Engineering College, Cheruthuruthy.

8. Sri.S Haris, (Former Chief Engineer, Kerala Water Authority),
Director, Technical & Operations, Jalanidhi

9. Sri Solomon Fernandez,
   Chief Engineer (Retd.),
   Kerala Water Authority

10. Sri. Mohan Kumar.V.L,
    Director (Operations) in Kerala Rural Water Supply and Sanitation Agency (KRWSA)

11. Dr. Resmi T.R,
    Senior Scientist, Ecology & Environment Research Group,
    Centre for Water Resources Development and Management, Kozhikode

12. Dr. Abhilash Babu,
    Associate Professor & Director,
    School of Social Sciences, M G University.

13. Sri Rajendran.C,
    Jilla Panchayat Member (Devikulam Division),
    Swamiyaralakudi

14. Sri.RV Satheesh,
    Technical Consultant,
    Haritha Kerala Mission

Madam/ Sir,

Sub:- Formulation of 14th Five Year Plan-Constitution of Working Group on **'Drinking Water and Sewerage'**–reg.

Ref:-Order No 448/2021/SS (WS)/SPB, dated 13.09.2021

Kerala State Planning Board has started the process of formulation of the 14th Five-Year Plan (2022-2027). As part of the formulation of the Five-Year Plan, Working Groups have been constituted in different sectors Accordingly, Working Group on **'Drinking Water and Sewerage'** is constituted, vide reference cited.

It is our pleasure to inform that you are nominated as the Member of the Working Group on **'Drinking Water and Sewerage'. The first meeting of this Working Group is scheduled online on 16.09.2021 (Thursday) at 02.30 pm**. We look forward to your deliberations and suggestions.

The guidelines for the working group has already been sent via e-mail. The revised proceedings of the working group is attached for your kind information. Now enclosing a background note on **"Drinking Water and Sewerage"** sector for your kind information.

The link for the meeting in www.webex.com is

https://kspb1.webex.com/kspb1/j.php?MTID=m4b1f6186b7f1a1bc527b53710c74b47e

Meeting number: 2516 289 2269 Password: drink123

Yours faithfully

for Chief & Convener

State Wetland Authority Kerala (SWAK)
4th Floor, KSRTC Bus Terminal Complex,
Thampanoor,Thiruvananthapuram-695001
Ph: +91471-2326264(Off); (Dir. Envt &Climate Change)
E-mail: swak.kerala@gmail.com swak.envt@kerala.gov.in

150 YEARS OF CELEBRATING THE MAHATMA

SWAK/A1/01/2017 17.1.2022

From
The Member Secretary

To

Sri.T.K.A Nair,
Former Principal Secretary to Prime Minister of India

Dr.E.J.James,
Former Executive Director,
Centre for Water Resources Development and Management (CWRDM)

Prof.(Dr) A. Biju Kumar
Professor, Department of Aquatic Biology & Fisheries, University of Kerala

Dr. Dinesan Cheruvat, Additional Director of Fisheries, Government of Kerala

Dr. T.V.Ramachandra,
Co-ordinator, Energy & Wetlands Research Group,
Centre for Ecological Sciences, Indian Institute of Science, Bengaluru.

Sir,

Sub: SWAK- Expert Member- Nominated- Reg

Ref: G.O (Ms)No.05/2021/Envt-dated 16.12.2021.

As per section 5 (1) of the Wetlands (Conservation & Management) Rules, 2017, the Ministry of Environment, Forest & Climate change, Government of India constituted State Wetlands Authority, Kerala (SWAK). Section 5 (1) (xvii) of the Wetlands (Conversations and Management) Rules, 2017 allows the nomination of one expert each in the fields of Wetland Ecology, Wetland Hydrology, Wetland Fisheries, Landscaping Planning and Socio – economics by the State Government.

Kerala govt. forms technical panel to study efficient river water utilisation

Panel's terms of reference include preparation of a list of vital river water-related interventions for agriculture and flood control, drafting of a proposal for efficient utilisation of 30 TMC of Cauvery river water by 2030, and conservation of water in the seaward-flowing rivers for use in the summer

Published - May 22, 2024 06:42 pm IST - THIRUVANANTHAPURAM

TIKI RAJWI

Observing that Kerala is yet to tap the full potential of its west and east-flowing rivers, the State government has formed a technical committee to draft long-term recommendations on efficient use of river water resources for irrigation, flood control, and drought mitigation.

Constituted on the recommendations of the State Planning Board, the panel has E.J. James, Pro Vice-Chancellor, Karunya University, and former Executive Director, Centre for Water Resources Development and Management (CWRDM), as its chair.

The panel's terms of reference include the preparation of a list of vital river water-related interventions for agriculture and flood control, drafting of a proposal for efficient utilisation of 30 TMC of Cauvery river water by 2030, and conservation of water in the seaward-flowing rivers for use in the summer.

The panel is also tasked with estimating the financial resources needed for these interventions.

The government decision comes just weeks after Kerala managed to limp out of a harsh summer which left the agriculture sector facing direct and indirect losses of ₹500 crore, as per an Agriculture department estimation.

"Although Kerala has an extensive network of rivers, lakes and ponds, the abundance of rivers has not helped to address the water scarcity during the summer. At the same time, during extreme weather events related to rainfall, these rivers cause floods in various

districts leading to loss of lives and property," the Planning and Economic Affairs department said in a May 17 order.

The committee members are K.P. Sudheer, Member Secretary, Kerala State Council for Science, Technology and Environment (KSCSTE), the head of the Agriculture Division at the Planning Board, the Alappuzha District Collector, the board member handling water resources and agriculture, the Chief Engineer (Irrigation), C.T. Dhanya, Department of Civil Engineering, IIT-Delhi, and the present CWRDM Executive Director.

Kerala has 44 rivers; 41 flowing west to drain into the Arabian Sea and three flowing east. The reality is that much of this water goes unutilised and flows out to sea. Further, only 25% of the total area under farming is irrigated.

Planning Board Vice-Chairman V.K. Ramachandran told *The Hindu* that the panel was expected to provide a "total vision" of what was required for the long term. Helping the State achieve goals set out in the 14th Five Year Plan (2022-2027) concerning water resources was part of its objectives.

"We are looking at the entire potential over a longer period, a full accounting for water in the State," Dr. Ramachandran said.

Among the aims were the augmentation of the net area under irrigation and averting summertime water scarcity. "We also want to find out how much it will cost to make Kerala water secure in all aspects of water supply and irrigation," he added.

Kerala's 14th Five Year Plan envisions support to commissioning delayed major and medium irrigation projects and encouraging minor irrigation.

The "steep, short and monsoon-fed rivers" of Kerala present several problems related to hydrology and river mechanics, a working group report on river basin planning prepared by the Planning Board's Agriculture Division for the 14th plan had noted.

"Changing global climate, transboundary issues and fragility of the short, steep and monsoon-fed rivers add to the complexity, and also equitable sharing of water," it said.

Published - May 22, 2024 06:42 pm IST

GOVERNMENT OF KERALA

Abstract

Environment Department - Wetland (Conservation & Management) Rules 2017 - Nomination and appointment of Expert Members to the State Wetland Authority - Orders issued.

ENVIRONMENT (A) DEPARTMENT

G.O.(Ms)No.05/2021/Envt Dated, Thiruvananthapuram, 16.12.2021

Read: (1) G.O.(Ms)No.14/2017/Envt dated 28.12.2017.
(2) G.O.(Ms)No.03/2018/Envt dated 25.06.2018.
(3) Letter No.SWAK/A1/2017 dated 14-09-2021 from the Administrative Officer, State Wetland Authority Kerala.

ORDER

As per section 5 (1) of the Wetlands (Conservation & Management) Rules 2017, the Ministry of Environment, Forest & Climate Change, Government of India constituted State Wetlands Authority (SWAK). As per Government order as paper 1st above, Government has designated Chief Secretary as the Vice Chairperson and the Director, Directorate of Environment & Climate Change as Members Secretary of State Wetland Authority Kerala.

2) Section 5 (1) (xvii) of the Wetlands (Conservation & management) Rules 2017 allows one expert each in the fields of wetland ecology, fisheries, landscaping planning and socio – economic to be nominated by the State Government. The term of non-official members of the authority nominated by the State shall be for a period not exceeding three years.

3) As per letter read above, the Administrative Officer, State Wetland Authority Kerala has reported that the term of the non official members vide Government Order read as paper 2nd was expired as on 24-06-2021 and submitted a panel of experts each in the fields of wetland ecology, fisheries, landscaping planning and socio - economics to be designated to the authority.

4) Government have examined the matter in detail and are pleased to appoint the following persons in the aforesaid fields as expert members of State Wetland Authority under the proviso 5(1)(xvii) of the Wetlands (Conservation & management) Rules 2017.

Field	Name of the Expert
Socio Economic	Sri. T.K.A.Nair, former Principal Secretary to Prime Minister of India
Wetland Hydrology	Dr.E.J.James, Former Executive Director, Centre for Water Resources Development and Management (CWRDM)

Wetland Ecology	Prof.Dr.A Bijukumar, Professor, Department of Aquatic Biology & Fisheries, University of Kerala
Wetland Fisheries	Dr. Dinesan Cheruvat, Additional Director of Fisheries
Landscape Planning	Dr. T.V.Ramachandra, Co-orinator, Energy & Wetlands Research Group, Centre for Econological Sciences, Indian Institute of Science, Bangaluru

(By order of the Governor)
SHARMILA.C
Additional Secretary

To

The Secretary, Ministry of Environment, Forest & Climate Change, Government of India, Delhi (withC/L)
The Member Secretary, State Wetland Authority Kerala, Thiruvananthapuram.
All the expert Members (through the Member Secretary, State Wetland Authority Kerala, Thiruvananthapuram.
The Director,Directorate of Environment & Climate Change, Thiruvananthapuram.
The Principal Accountant General (A&E/Audit) Kerala,Thiruvananthapuram.
The Director, Information & Public Relations (Web & New media) Department (for uploading in the Government Website).
Stock file/ Office copy.

Forwarded/By order

Section Officer

No. PL1 (B) Mon/36805/2017

Office of the Chief Engineer
Irrigation and Administration
Thiruvananthapuram
Dated : 27 .08.2022

From

The Chief Engineer

To

1. Dr. E J James, Former Executive Director CWRDM

2. The Chief Engineer, Projects and Operations ,KWA

3. The Director Operations Kerala Rural water Supply and Sanitization Agency (KRWSA)

4. The Senior Principle Scientist, Library Documentation and Information Division Surface Water Division, CWRDM Kozhikode

5. The Technical Consultant Haritha kerala Mission

6.The Regional Director Central Ground water Board Thiruvanathapuram

7. The Environment Engineer , Department Environment and Climate change

Sir,

Sub: - State Water Policy (SWP) 2022- Convening Meeting of Drafting Committee-reg

Ref: - Government Letter No. ISWC2/172/19/WRD dt 26/08/2022

Kind attention is invited to the reference cited .

The Secretary Water Resources Department (Chairperson Drafting Committee on SWP) desires to convene a meeting of the Drafting Committee on State water Policy at 10 AM on 02.09.2022 at Layam Hall ,Government Secretariat, Annex 2.

In this context, I am to request you to attend the meeting for offering your valuable comments .The draft State Water Policy and the remarks received from the Stake holder departments are attached herewith for kind perusal.

Encl: As above

Yours faithfully,

Chief Engineer
Convenor of the Drafting Committee

Cross Sectoral dialogue about SDGs

Karunya Institute of Technology and Sciences (KITS) actively advances Sustainable Development Goal 17 – Partnerships for the Goals through vibrant cross-sectoral dialogues, research collaborations, and strategic MoUs that connect academia, industry, research organizations, and international institutions. The university firmly believes that sustainable progress is attainable only through synergistic alliances that bridge disciplinary, institutional, and geographical boundaries.

In line with its Strategic Vision 2030 and Sustainability Roadmap, KITS has cultivated an extensive partnership ecosystem through international conferences, joint research initiatives, faculty development programmes, and industry-driven workshops. These platforms facilitate knowledge sharing, capacity building, and joint innovation, enabling impactful contributions toward global sustainability challenges.

The institution has signed multiple MoUs with foreign universities, national research bodies, and industry leaders to promote collaborative research, student and faculty exchange, and technology transfer. Initiatives such as the 2nd International Conference on Frontiers in Chemical Sciences, ICCVIoT'23, and the U.S. University Delegation Visit have expanded KITS's international research footprint and strengthened academic cooperation. Skill-based engagements like the HACCP Level-3 Training Programme and the Workshop on Real-time Streaming and APIs have further connected academia with industry, fostering innovation and employability.

Moreover, initiatives like the FDP on AI in Mechanical Systems and ICDCS'24 have facilitated interdisciplinary research and encouraged green and sustainable manufacturing practices. The

Seminar on SDGs – Embracing the Change and Its Dynamics exemplified the institution's commitment to policy-relevant dialogue by integrating academic, industrial, and governmental perspectives on AI, IoT, and renewable technologies for sustainable solutions.

Through its sustained emphasis on MoUs, collaborative research, and global academic partnerships, KITS continues to strengthen its role as a catalyst for sustainable innovation, aligning its actions with SDG 17 – Partnerships for the Goals to foster shared growth and transformative impact at local, national, and international levels.

1. Cross-Sectoral Dialogues and Collaborations – KITS SDG Initiatives

Sl. No.	Event / Initiative	Date	Details / Highlights	Nature of Collaboration	SDG Mapping
1	2nd International Conference on Frontiers in Chemical Sciences	26.10.2023 & 27.10.2023	Resource persons: 1. Prof. Pierre H. Dixneuf from the University of Rennes, France 2. Prof. Dr. Rene Michael Konigs from RWTH Aachen University, Germany Participants: 200 Researchers	Academia–Research–Collaboration	SDG 9 (Industry, Innovation & Infrastructure) SDG 12 (Responsible Consumption & Production) SDG 17 (Partnerships for the Goals)
2	1st International Conference on Computer Vision and Internet of Things-2023 (ICCVIoT ' 23)	07.12.2023 & 08.12.2023	Resource persons: 1. Dr. Ines Chihi, University of Luxembourg, Luxembourg 2. Dr. Deepak Mishra, Indian Institute of Space Science and Technology, Trivandrum, India 3. Dr. Anastassia Angelopoulou, University of Westminster, UK 4. Dr. Girijesh Prasad, Ulster University, Northern Ireland Total Participants: 58	Academia–Research–Collaboration	SDG 4 (Quality Education) SDG 9 (Industry, Innovation & Infrastructure) SDG 17 (Partnerships for the Goals)
3	U.S. University Delegation Visit	18.2.2024	Hosted experts from 18 U.S. universities to explore collaborations in research, innovation, and Industry 5.0 technologies.	International Academic Partnership	SDG 4 (Quality Education) SDG 9 (Industry, Innovation & Infrastructure)

					SDG 17 (Partnerships for the Goals)
4	HACCP Level-3 (Highfield Approved) Training Programme	28.2.2024 & 29.2.2024	Conducted with national agencies to strengthen skills in food safety and hygiene management.	Academia–Industry–Skill Development Partnership	SDG 2 (Zero Hunger) SDG 3 (Good Health & Well-being) SDG 8 (Decent Work & Economic Growth)
5	Workshop on Real-time Streaming and APIs	23.2.2024	Delivered by NTT DATA (Netherlands) expert on API integration and real-time data processing.	Academia–Global Industry Collaboration	SDG 4 (Quality Education) SDG 9 (Industry, Innovation & Infrastructure) SDG 17 (Partnerships for the Goals)
6	FDP on Applications of AI Techniques in Mechanical Engineering Systems	5.2.2024 to 9.2.2024	Resource Person: Organized with the Technology Mission on Green and Sustainable Manufacturing to promote AI applications in mechanical design and manufacturing.	Academia–Industry–Research Collaboration	SDG 9 (Industry, Innovation & Infrastructure) SDG 12 (Responsible Consumption & Production) SDG 13 (Climate Action)
7	2nd International Conference on Robotics, Automation, and Intelligent Systems,	19.4.2024	Resource persons: 1. Prof Avital Bechar, a Scientist from The Institute of Agricultural Engineering, Agricultural Research Organization, Volcani Center, Israel 2. Dr Joseph Winston, PhD, Head of Remote Handling and Irradiation Experiments Division at Indira Gandhi Centre for Atomic Research (IGCAR), Chengalpattu, Tamil Nadu.	Academia–Research–Collaboration	SDG 9 (Industry, Innovation & Infrastructure) SDG 11 (Sustainable Cities & Communities) SDG 17 (Partnerships for the Goals)

			Total Participants: 70		
8	7th International Conference on Devices, Circuits and Systems - ICDCS'24	23.04.2024 & 24.04.2024	Resource persons: 1. Dr. Anisul Haque (Chairperson, Department of Electrical and Electronic Engineering at East West University, Bangladesh) 2. Dr. Porkumaran (Chairman, IEEE Madras Section, India) 3. Dr. Mustapha Slamani (Distinguish Member of the Technical Staff at Global Foundries, USA) 4. Dr. Subhash Chander (Scientist F, Solid state physics laboratory (SSPL), DRDO, India) 5. Prof. Mario Lanza (Associate Professor, Materials Science and Engineering Program, King Abdullah University of Science and Technology (KAUST), Saudi Arabia) 6. Mr. Wilson Pradeep (DFT lead and architect in Google, Mountain view, California, USA) Total Participants: 64	Academia–Research–Industry Collaboration	SDG 7 (Affordable & Clean Energy) SDG 9 (Industry, Innovation & Infrastructure) SDG 17 (Partnerships for the Goals)
9	Seminar on SDGs – Embracing the Change and Its Dynamics	11.06.2024	Focused on AI, IoT, blockchain, and renewable technologies for sustainable solutions and monitoring SDG progress.	Academia–Industry–Policy Dialogue	SDG 4 (Quality Education), SDG 9 (Industry, Innovation & Infrastructure), SDG 13 (Climate Action), SDG 17 (Partnerships for the Goals)

Evidences

a. 2nd International Conference on Frontiers in Chemical Sciences - 26.10.2023 & 27.10.2023

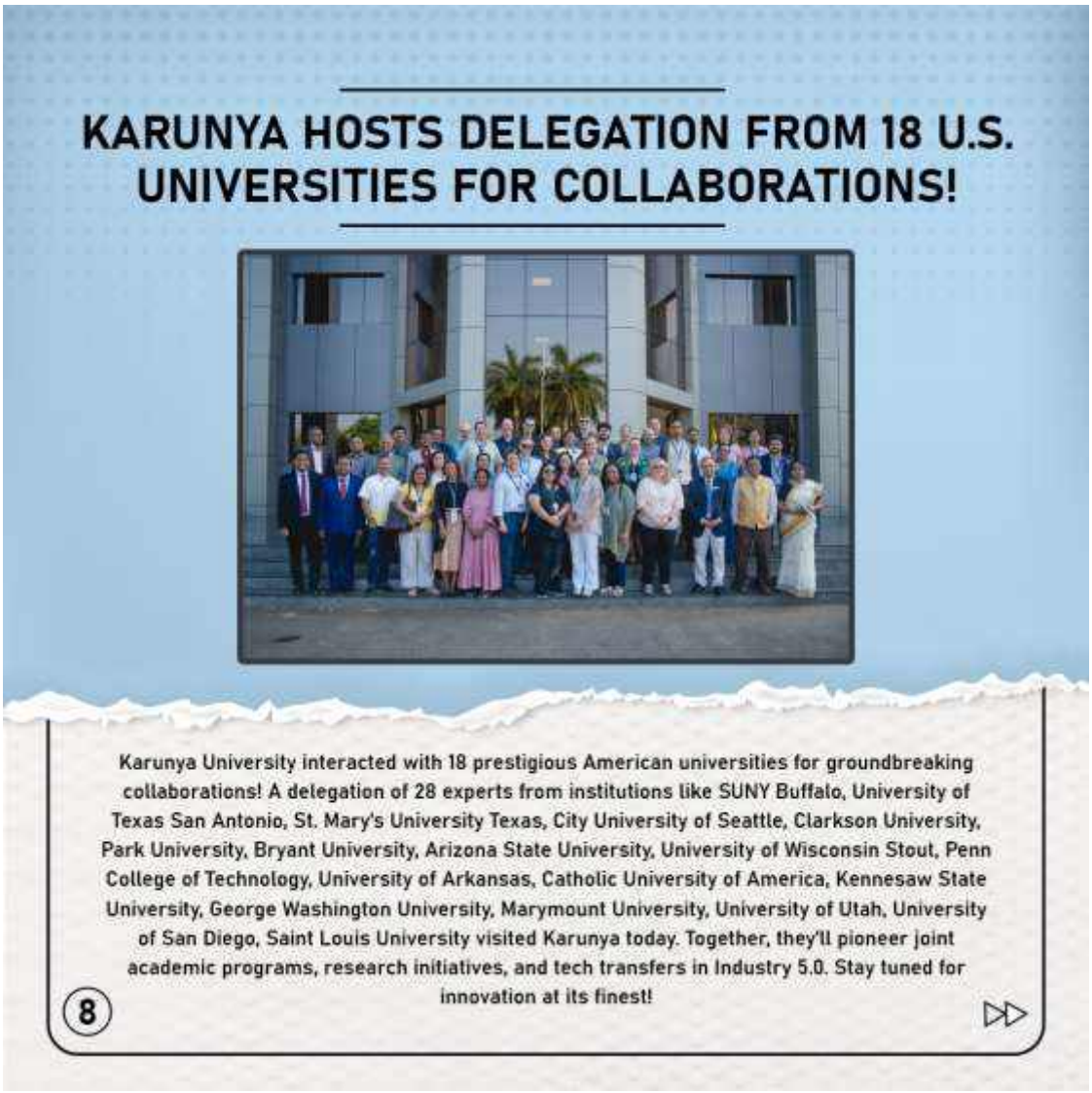
The conference brought together 200 researchers and eminent resource persons including Prof. Pierre H. Dixneuf from the University of Rennes, France, and Prof. Dr. Rene Michael Konigs from RWTH Aachen University, Germany. The event facilitated discussions on sustainable chemical innovations, green chemistry, and advanced materials, promoting cross-border academic collaboration. This initiative aligned with SDG 9 (Industry, Innovation & Infrastructure), SDG 12 (Responsible Consumption & Production), and SDG 17 (Partnerships for the Goals).

b. International Conference on Computer Vision and Internet of Things (ICCVIoT'23)

The ICCVIoT'23 convened global experts including Dr. Ines Chihi (University of Luxembourg), Dr. Deepak Mishra (IIST, Trivandrum), and Dr. Anastassia Angelopoulou (University of Westminster, UK) to explore applications of computer vision, AI, and IoT. With 58 participants, the conference strengthened international research partnerships and encouraged the exchange of technological insights relevant to digital innovation. The initiative supported SDG 4 (Quality Education), SDG 9 (Industry, Innovation & Infrastructure), and SDG 17 (Partnerships for the Goals).

c. KITS Hosts U.S. University Delegation for Global Collaborations

Karunya Institute of Technology and Sciences hosted a high-level delegation of 28 experts from 18 prestigious American universities, including SUNY Buffalo, University of Texas San Antonio, Arizona State University, George Washington University, and Saint Louis University, to explore collaborative opportunities in academic exchange, joint research, and Industry 5.0 innovations. The visit marked a milestone in promoting cross-border knowledge partnerships and advancing SDG 4 (Quality Education), SDG 9 (Industry, Innovation, and Infrastructure), and SDG 17 (Partnerships for the Goals). Through this global engagement, Karunya reaffirmed its commitment to fostering innovation-driven learning and sustainable international cooperation.



d. 2 Days Training Programme - HACCP Level – 3

As part of its commitment to fostering cross-sectoral dialogue and capacity building aligned with the Sustainable Development Goals (SDGs), the Division of Food Processing Technology initiated a two-day HACCP Level-3 (Highfield Approved) training programme. This initiative was designed to strengthen competencies in food safety, hygiene, and quality management, directly supporting SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being), and SDG 8 (Decent Work and Economic Growth). The department engaged with multiple national-level agencies—Aspire Training Research Consulting LLP (Ernakulam), TAK Safe Food Solution Pvt. Ltd. (Tiruppur), SGS Academy (Haryana), HGP Enterprise (Gujarat), and BSI Group India Pvt. Ltd. (Maharashtra)—to explore collaborative partnerships for conducting this internationally recognized certification. Through this initiative, KITS promoted industry–academia interaction, skill enhancement, and knowledge exchange in food technology, contributing to sustainable practices and global workforce readiness.

e. Real-time Streaming and API

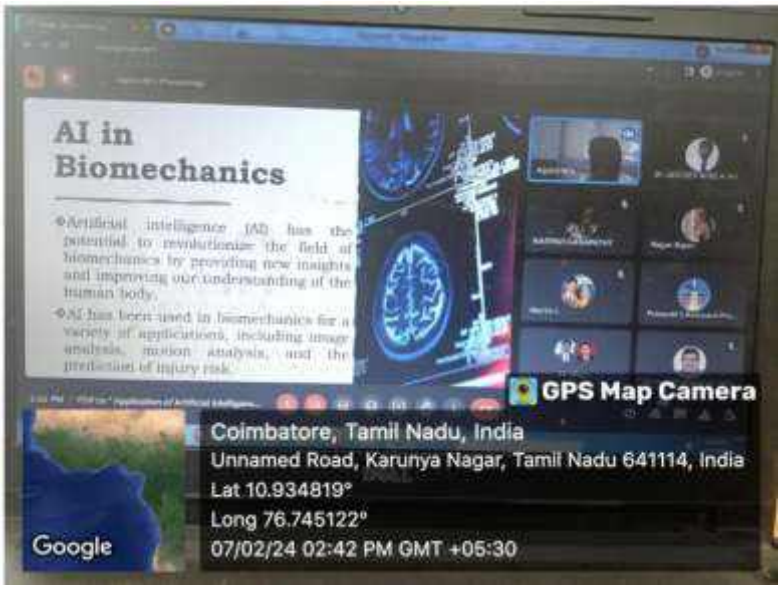
The workshop on "Real-time Streaming and APIs" aimed to provide participants with an in-depth understanding of real-time data integration and API technologies that drive modern digital ecosystems. The session was conducted online by Mr. Enoch Easudoss, Technical Manager at NTT DATA, Amsterdam, The Netherlands. A total of 55 students specializing in Data Science and Artificial Intelligence participated actively in this interactive learning event.

Mr. Enoch Easudoss emphasized the crucial role of Application Programming Interfaces (APIs) as enablers of seamless data communication and innovation across industries. The session explored a wide spectrum of API types—REST, SOAP, RPC, and WebSocket—highlighting their structure, purpose, and practical applications. Participants were introduced to essential concepts such as REST API semantics, pagination strategies, OpenAPI specifications, and endpoint querying techniques, providing a holistic understanding of API development and integration. This academic–industry partnership supported SDG 4 (Quality Education), SDG 9 (Industry, Innovation & Infrastructure), and SDG 17 (Partnerships for the Goals).

f. Faculty Development Programme on Applications of Artificial Intelligence Techniques in Mechanical Engineering Systems

The Division of Mechanical Engineering organized a five-day Faculty Development Programme (FDP) on *"Applications of Artificial Intelligence (AI) Techniques in Mechanical Engineering Systems"* in collaboration with the Technology Mission on Green and Sustainable Manufacturing, aimed at enriching faculty with advanced knowledge of AI-driven innovations and sustainable practices. The programme focused on how AI has transformed mechanical systems through predictive maintenance, design optimization, robotics, automation, supply chain efficiency, and quality control. Experts highlighted how AI algorithms analyze sensor data to forecast equipment failures, simulate design variations for optimization, and improve decision-making in manufacturing and logistics, thereby enhancing performance, reducing costs, and supporting sustainability. Sessions also addressed the role of AI in energy efficiency, defect detection, and simulation-based design, enabling engineers to develop safer, more reliable, and resource-efficient systems. The FDP included technical

sessions on AI in additive manufacturing, biomechanics, automobile engineering, and advanced research such as dry ice hybrid lubri-cooling for titanium alloys. By fostering academic–industry collaboration and promoting AI applications in sustainable manufacturing, the programme contributed to advancing **SDGs**, reinforcing the institution's commitment to innovation-driven learning and sustainable technological development. The event contributed to SDG 9 (Industry, Innovation & Infrastructure), SDG 12 (Responsible Consumption & Production), and SDG 13 (Climate Action).



g. International Conference on Robotics, Automation and Intelligent Systems (ICRAINS' 24)

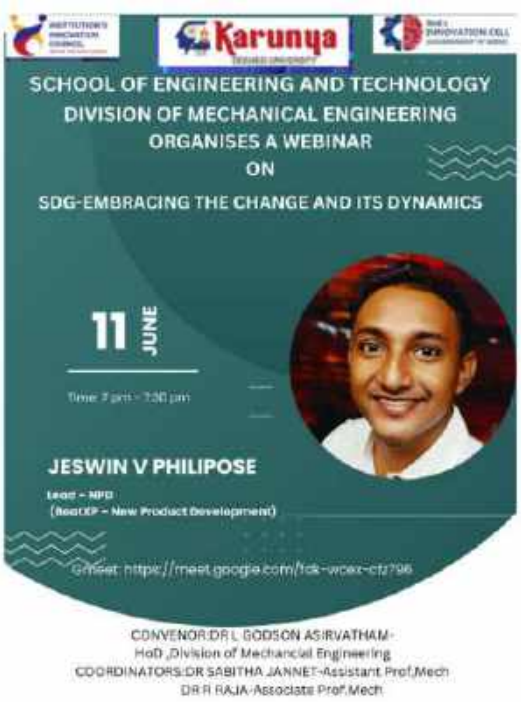
The conference featured distinguished experts such as Prof. Avital Bechar from the Volcani Center, Israel, and Dr. Joseph Winston from IGCAR, India, who shared insights on robotics and automation for sustainable technologies. With 70 participants, the event promoted interdisciplinary research and global partnerships. It addressed SDG 9 (Industry, Innovation & Infrastructure), SDG 11 (Sustainable Cities & Communities), and SDG 17 (Partnerships for the Goals).

h. International Conference on Circuits, Devices and Systems (ICDCS'24)

ICDCS'24 brought together experts from Bangladesh, Saudi Arabia, the USA, and India to discuss advances in electronics, nanotechnology, and semiconductor systems. The conference emphasized innovation in sustainable device design and intelligent systems development, enhancing research-industry synergy. It aligned with SDG 7 (Affordable & Clean Energy), SDG 9 (Industry, Innovation & Infrastructure), and SDG 17 (Partnerships for the Goals).

i. Seminar on SDGs -Embracing the change and its dynamics

The seminar on Sustainable Development Goals (SDG) focused on the integration of advanced technologies to achieve the 2030 Agenda. It explored the application of AI and IoT in sustainable agriculture, innovations in renewable energy, and the development of smart cities. Emphasis was placed on data-driven approaches for monitoring and evaluating SDG progress. The discussions highlighted the use of blockchain for enhancing transparency in supply chains and recent advancements in water purification technologies. The seminar successfully provided actionable insights and fostered cross-sector collaboration toward scalable and sustainable solutions. This initiative supported SDG 4 (Quality Education), SDG 9 (Industry, Innovation & Infrastructure), SDG 13 (Climate Action), and SDG 17 (Partnerships for the Goals).



2. National MoUs

Sl. No.	Organisation with which MoU is signed	Name of the Institution	Year of Signing	Duration (Years)
1	IBM Skillbuild for Academia Access	Karunya Institute of Technology and Sciences	2023	2
2	Miles Education Private Limited	Karunya Institute of Technology and Sciences	2023	3
3	CAD Solutions	Karunya Institute of Technology and Sciences	2023	11 Months
4	Garuda Aerospace Private Ltd.	Karunya Institute of Technology and Sciences	2023	3
5	Transylvania University of Brasov, Romania	Karunya Institute of Technology and Sciences	2023	4
6	Tunga Aerospace Pvt. Ltd.	Karunya Institute of Technology and Sciences	2023	3
7	HLL Lifecare ltd., Thiruvananthapuram	Karunya Institute of Technology and Sciences	2023	1
8	Freedom Opthalmic	Karunya Institute of Technology and Sciences	2023	11 Months
9	Space Zone India (P) Ltd.	Karunya Institute of Technology and Sciences	2023	3

10	ST Advanced Composites Industries (P) Ltd	Karunya Institute of Technology and Sciences	2023	3
11	ETS India Private Ltd., Haryana	Karunya Institute of Technology and Sciences	2023	2
12	EU Member States (Erasmus +)	Karunya Institute of Technology and Sciences	2024	3
13	NSE Academy	Karunya Institute of Technology and Sciences	2024	1
14	KPR College of Arts Science and Research, Coimbatore	Karunya Institute of Technology and Sciences	2024	11 months
15	Australian Catholic University (ACU), Sydney, NSW	Karunya Institute of Technology and Sciences	2024	5
16	Phoenix360 Solutions Private Limited	Karunya Institute of Technology and Sciences	2024	1
17	IIT Palakkad Technology I-Hub Foundation, Palakkad	Karunya Institute of Technology and Sciences	2024	1
18	Zoho Corporation Pvt. Ltd.	Karunya Institute of Technology and Sciences	2024	1
19	ICAR – National Bureau of Agriculturally Important Microorganisms (NBAIM)	Karunya Institute of Technology and Sciences	2024	3
20	TMI Systems, Banglore	Karunya Institute of Technology and Sciences	2024	2
21	SUEZ Projects Private Limited	Karunya Institute of Technology and Sciences	2024	5

3. International MoUs

Name of the International Institution/University	Signed with	Modus Operandi	Signed on	Validity
Leeds Beckett University	KITS	Joint academic programs Joint initiative in research Faculty exchange Student exchange semester abroad opportunities	27 Feb 2024	3 Years

Australian Catholic University	MBA CSE	Unilataral or bilateral study abraod programmes Faculty exchange Collaborative curriculum development Research collaboration Joint course development short term academic programmes Joint participation in international funded project	23 Feb 2024	5 Years

4. Research Collaboration Agreement

भारतीय गैर न्यायिक

बीस रुपये

Rs.20

रु.20

TWENTY RUPEES

INDIA

INDIA NON JUDICIAL

RESEARCH COLLABORATION AGREEMENT

This RESEARCH COLLABORATION AGREEMENT (RCA) is executed on this ... day of November 2002.

Between

Kalrunya Institute of Technology and Sciences (Deemed to be University), Karunya Nagar, Coimbatore - 641 114, represented by its Registrar, Prof. Dr. R. Elijah Blessing, (herein after referred to as KITS), (which expression unless repugnant to the context and meaning shall mean and include his assigns, legal representative, nominee, successor in office, administrator, executor etc.) of the ONE PART

and

Suez Projects Pvt. Ltd., a company incorporated under the Companies Act, 1956 and having their registered office at A 1/132, Safdarjung Enclave, New Delhi – 110029, India, represented by its Project Director, Mr.Amit Neogi, (herein after referred to as SUEZ) (which expression unless repugnant to the context and meaning shall mean and include his assigns, legal representative, nominee, successor in office, administrator, executor etc.) of the OTHER PART.

RECITALS:

(A) WHEREAS, SUEZ is engaged in research, design and development and consultancy in the field of Environmental and Water Resources Engineering and Technology.

(B) WHEREAS, KITS is a reputed institution which offers many Engineering courses in various disciplines and is also contributing to the rapidly growing scientific and technological knowledge and professional excellence in technology by undertaking various research and consultancy activities.

(C) WHEREAS, both SUEZ and KITS, now, recognizing the importance of research and development in the areas of Environmental and Water Resources Engineering, appreciating the need for creation of large reservoir of highly qualified manpower in all fields related to Environmental and Water Resources Engineering. Desiring to enhance their efforts by joining their expertise and resources, intend to form a Synergistic Framework for promoting development and growth of excellent quality manpower in the fields of Engineering, Technology and Science with a focus on Environmental and Water Resources.

Now, therefore in consideration of the mutual promises made herein and of good and valuable consideration, the receipt and sufficiency of which both SUEZ and KITS hereby acknowledge, SUEZ and KITS hereby agree as under:

NOW THEREFORE in consideration of the mutual promises set forth herein and rights obtained thereby, the Parties agree as follows:

1. DEFINITIONS

1.1 In this Agreement and in the Schedules to this Agreement, unless the context otherwise requires, the following expressions shall have the following meanings:

"Agreement" - means this Agreement and its Schedules, as well as any Riders.

"Own Knowledge" - means any and all technical and/or scientific information, knowledge, materials, Know-How and/or any and all other type of information, in any form whatsoever, whether patentable or not, and/or whether actually patented or not, and all the related rights, belonging to a Party or held by the latter prior to the effective date of the Agreement and/or developed or acquired by the party in parallel of the performance of this Agreement.

Page 2 of 17

APPENDIX 2:

BACKGROUND:
Burst reduction is a key topic identified for performance improvement as an objective by SUEZ globally as part of SPOT 2030.

SCOPE of WORK:

The pilot study will initially be taken up to evaluate the technology and its suitability in the local context of Indian Utilities.
Two independent projects, namely Coimbatore 24/7 and Kolkata (Cossipore WLM project) will be the use case to investigate and study the transient behavior of high-pressure networks by installation of the high frequency pressure logging devices directly on the network.

Key Role of Partner:
Specialized procurement support to the project team (2 or more devices as defined by the project requirements)

Technical support in evaluation of technology

SCOPE Matrix:

Actions	SUEZ India/ SUEZ CTD	Partner
Funding of the pilot study	•	
Managing all Procurement process of Devices including Imports as necessary for the pilots		•
Handover of Devices to SUEZ		•
Initial Testing & configuration of devices	•	
Deployment plan for installation using Hydraulic network Model analysis	•	
Field feasibility & Installation of Devices	•	
Managing Data Centre	•	
Study, Analysis & recommendations	•	•
Review & Evaluation of Results		•
Technical review of technology applications & comparative analysis		•
Handover of Devices after completion of the study to SUEZ		•
FINAL Report	•	•

Page 17 of 17

University participation in international collaboration on gathering or measuring data for the SDGs

Karunya Institute of Technology and Sciences (KITS) demonstrates a strong global commitment to SDG 17 – Partnerships for the Goals through high-impact collaborations, international research networks, and data-driven sustainability initiatives. The institution actively participates in global scientific programs such as NASA's AERONET, contributing validated aerosol and climate datasets; collaborates with SUEZ (France) through a state-of-the-art Industrial Water Lab and real-time water quality monitoring system; and operates an ICT-enabled Solar Power Plant Data Logging System to strengthen SDG-linked renewable energy analytics. During 2023 and 2024, KITS produced 2,355 publications, accumulating 13,164 citations and achieving a strong Field-Weighted Citation Impact (FWCI) of 1.34, with 24.4% of its research output involving international collaboration.

With 32 active MoUs and sustained engagement with partners from the USA, France, Germany, Israel, Luxembourg, and the UK, KITS has positioned itself as a global hub for data sharing, knowledge co-creation, and evidence-based decision-making aligned with SDG Target 17.18. The institution's partnerships span climate research, water management, renewable energy, biodiversity, and sustainable development. Notable initiatives include a joint patent with Ben-Gurion University (Israel) on biosynthesis of isopropyl myristate, international mobility programs supporting 41 incoming and 24 outgoing students across 12 countries, and expert-led events such as the French TV

interview on climate change, Wetlands International collaborations, and high-level industry–academia meetings with global agencies.

Through continuous scientific data contribution, interdisciplinary research, training programs, and global academic–industry alliances, KITS advances international cooperation for climate action, clean energy, sustainable water systems, and environmental monitoring. These efforts strengthen the institution's leadership in SDG 17 and reinforce its broader mission of contributing to global sustainability through strong partnerships, transparent data practices, and impactful innovation.

International collaboration on gathering or measuring data for the SDGs

1. AERONET (AErosol RObotic NETwork): A Global Ground-Based Aerosol Monitoring Network

Objective

To demonstrate the institution's participation in international efforts to gather, measure, or share data relevant to the UN Sustainable Development Goals (SDGs).

Lead & Partner Institutions

- **Lead Agency:** NASA Goddard Space Flight Center, USA
- **Collaborators**
    - PHOTONS (University of Lille-1, FRANCE)
    - RIMA (Izaña Atmospheric Research Center and University of Valladolid, SPAIN)
    - NEON (National Ecological Observatory Network, USA)
    - CARSNET (China Meteorogical Administration, CHINA)
    - AeroSpan (CSIRO, AUSTRALIA)
    - AEROCAN (University of Sherbrooke & Meteorological Service of Canada, CANADA)
    - APAC (Asia Pacific AERONET Calibration and Training Center, Taiwan).

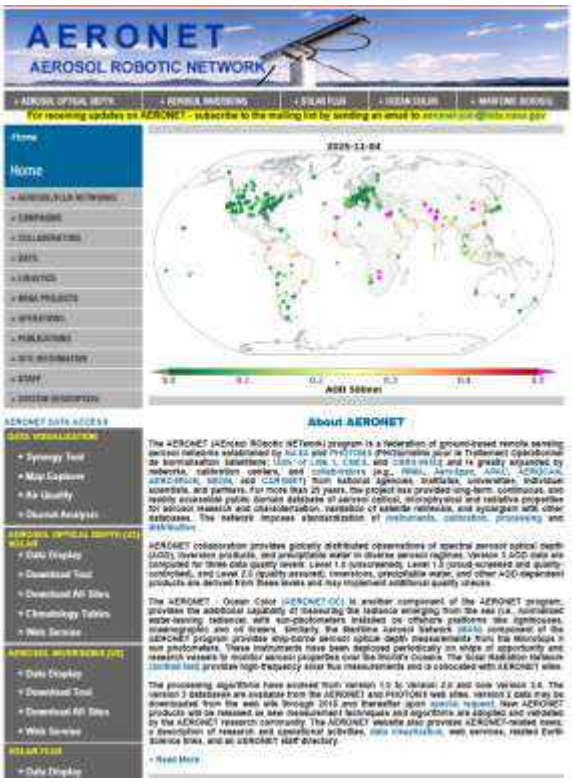


Figure 1 AERONET WEB portal

- **Organizations**

Relevant SDGs Addressed

- SDG 13: Climate Action
- SDG 3: Good Health and Well-being
- SDG 6: Clean Water and Sanitation

Nature and Scope of Collaboration

The AERONET program represents a long-term, international collaboration for the collection, calibration, and dissemination of aerosol optical and microphysical data that are vital for global environmental and climate monitoring.

The network operates hundreds of ground-based sun/sky radiometers globally, using standardized instruments, protocols, and processing algorithms to measure:

- Aerosol Optical Depth (AOD)
- Aerosol Particle Size Distribution
- Refractive Index and Single Scattering Albedo
- Precipitable Water Vapour

These measurements provide high-quality, continuous, and comparable datasets used for validating satellite observations, studying climate forcing, and monitoring air pollution — all directly relevant to tracking progress on SDGs.

Institution's Role

Karunya Institute of Technology and Sciences hosts an AERONET observation site for continuous aerosol data collection, providing validated data to the NASA central database. The institution collaborates with the NASA AERONET initiative by utilizing open-access aerosol datasets for regional climate research, contributing to comparative analysis of aerosol impacts on rainfall patterns and air quality in South India.

Additionally, Karunya promotes SDG-based education and research by integrating AERONET and other global environmental databases into its sustainability curriculum and postgraduate research projects, thereby enhancing data-driven learning and contributing to the global SDG monitoring ecosystem.

Timeline

- Initiated: 1993 (ongoing, global network)
- Institutional Participation:

Outcomes

- Contribution to global data archives for aerosols and atmospheric monitoring hosted by NASA.
- Support for climate and air-quality modelling at global and regional scales.
- Enhanced data transparency and accessibility for academic and governmental agencies.

- Development of standardized data measurement protocols applied worldwide.
- Publications in peer-reviewed journals on aerosol–climate interactions using AERONET datasets.
    - Anitha, M; Kumar, LS (2024). An Analysis of Atmospheric Aerosol Characteristics Using Remote Sensing Data in the Indian Region. *PURE AND APPLIED GEOPHYSICS*, 181(2), 625-654.
    - Anitha M, Kumar LS. Performance Assessment of MODIS Dark Target and Deep Blue Aerosol Retrieval Algorithms Using AERONET Observations: A Case Study over Jaipur, Karunya University, and Broader Indian Regions. Environ Monit Assess. 2025 Nov 1;197(11):1284. doi: 10.1007/s10661-025-14653-8. PMID: 41175151.

2. Solar Power Plant Data Logging and Real-Time Monitoring System

Objective

To implement a fully automated, data-driven system for continuous monitoring and analysis of solar energy generation, contributing to renewable energy optimization, carbon reduction, and sustainability research aligned with the UN Sustainable Development Goals (SDGs).

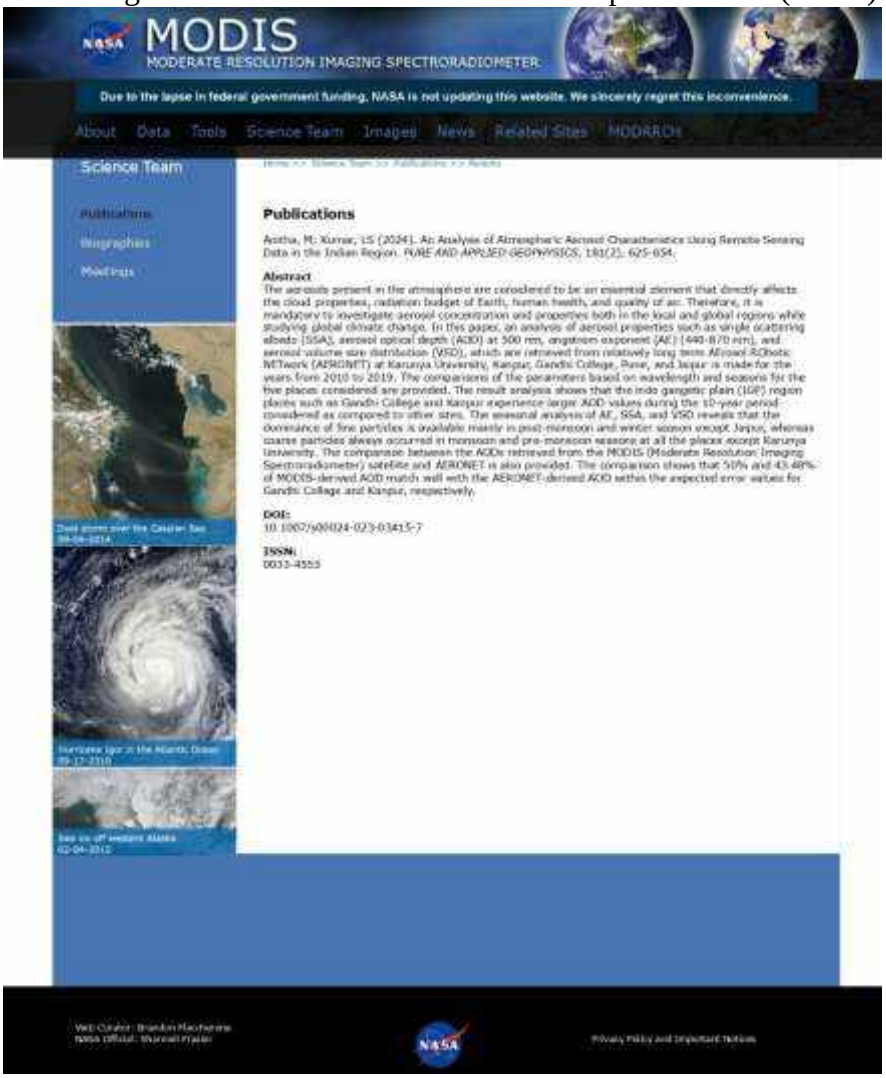


Figure 2 KARUNYA AERONET Data Set Utilized & Published in MODIS WEBPORTAL

Verification / Evidence Links

- Official Website: https://aeronet.gsfc.nasa.gov
- NASA Earth Science Division Project Overview: https://science.gsfc.nasa.gov/earth/projects/97
- AERONET Data Portal: https://aeronet.gsfc.nasa.gov/cgi-bin/webtool_inv_v3
- Related Publication: https://modis.gsfc.nasa.gov/sci_team/pubs/abstract_new.php?id=67220

  https://pubmed.ncbi.nlm.nih.gov/41175151/

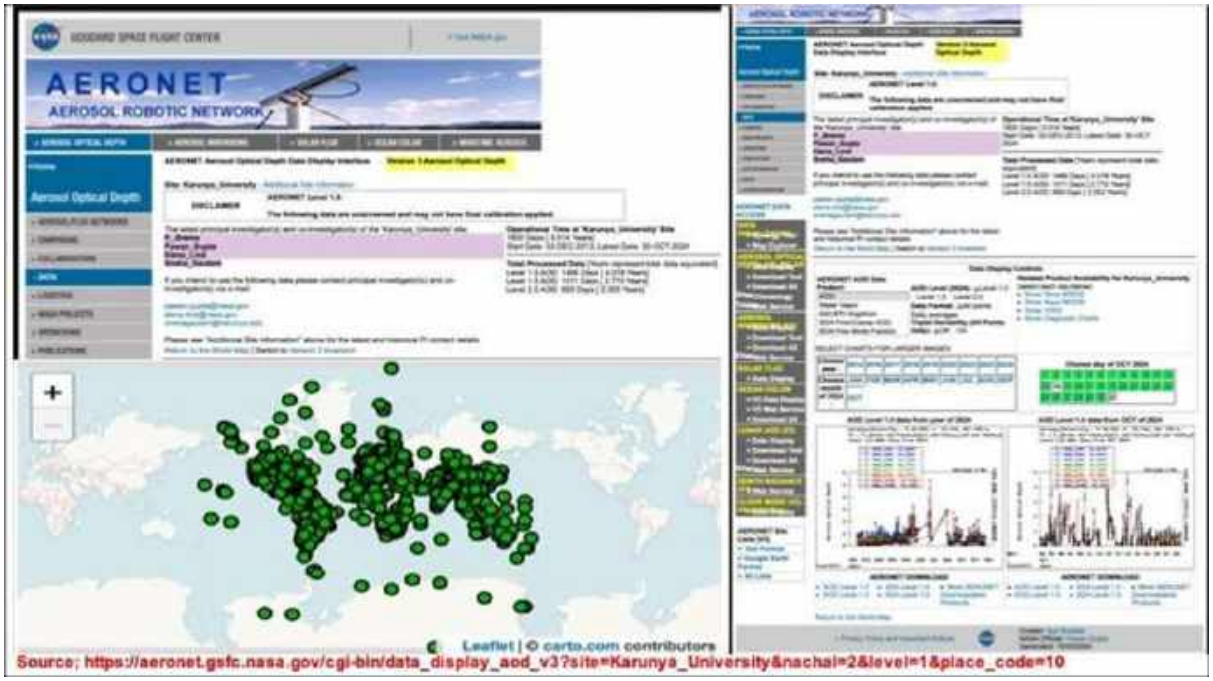


Figure 3 Aeronet_Karunya Data Analytics Data Screen

Alignment with SDG 17.2.3 Requirements

Criterion	Proof
International Collaboration	NASA-led network involving 100+ countries and institutions.
Data Gathering / Measurement	Continuous ground-based aerosol and water vapor measurements.
SDG Relevance	Directly supports SDG 13 (climate), SDG 3 (health), and SDG 6 (environmental sustainability).
Data Accessibility	Open global database for researchers and policymakers.
Institutional Contribution	Participation in global dataset usage, analysis, and dissemination for SDG monitoring.

Summary Statement

Karunya Institute of Technology and Sciences actively participates in the AERONET international collaboration led by NASA, contributing validated aerosol data to the global database and conducting regional climate research in South India. This engagement demonstrates the institution's commitment to international cooperation, data transparency, and evidence-based environmental monitoring in

support of the United Nations Sustainable Development Goals — particularly SDG 13 (Climate Action) under the framework of Target 17.18: Data, Monitoring, and Accountability.

Collaborating Units:

- Division of Electrical and Electronics Engineering (EEE)
- Centre for Renewable Energy and Environment
- ICT and Energy Management Division

External Linkages:

- Data integration with national renewable energy dashboards (MNRE, India)
- Collaborative research on solar analytics with academic and industrial partners

Relevant SDGs Addressed

- SDG 7 – Affordable and Clean Energy
- SDG 9 – Industry, Innovation, and Infrastructure
- SDG 13 – Climate Action

Nature and Scope of the System

The Solar Power Plant Data Logging System at Karunya Institute of Technology and Sciences serves as a comprehensive digital platform for energy monitoring and sustainability research.

Figure 4 KARUNYA SOLAR FARM @ ADMIN Roof TOP

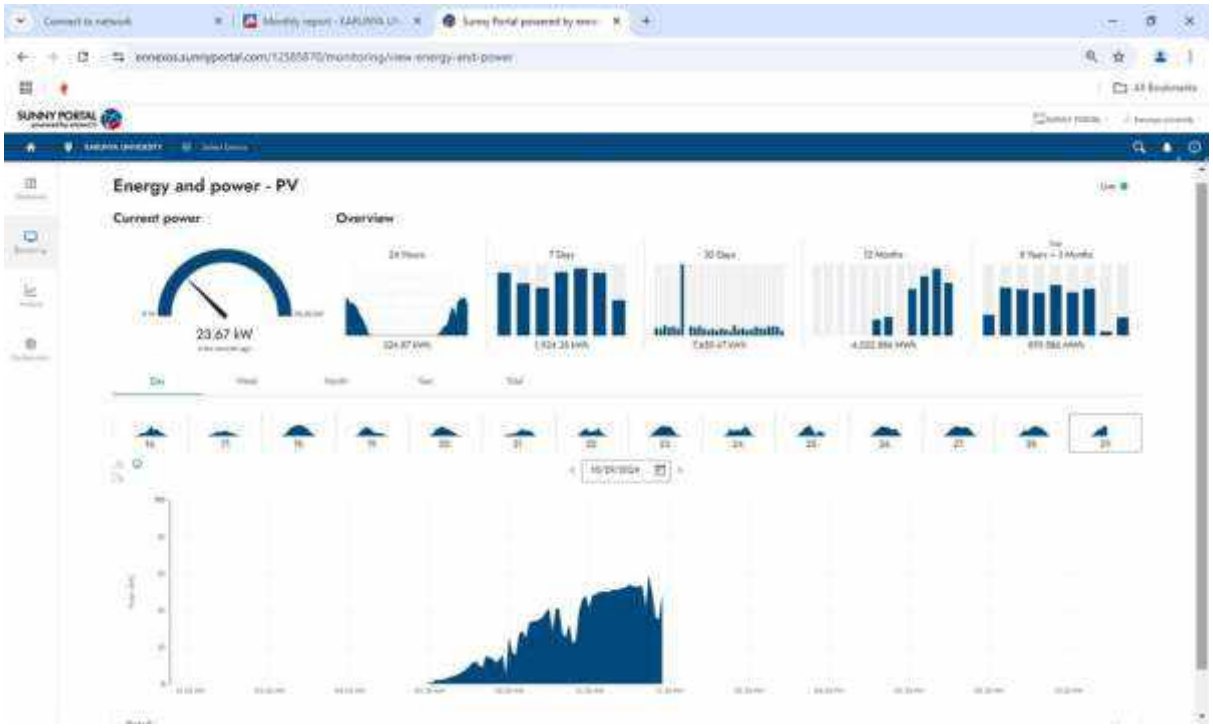


Figure 5 Solar Generation & Distribution Data Analytics Platform

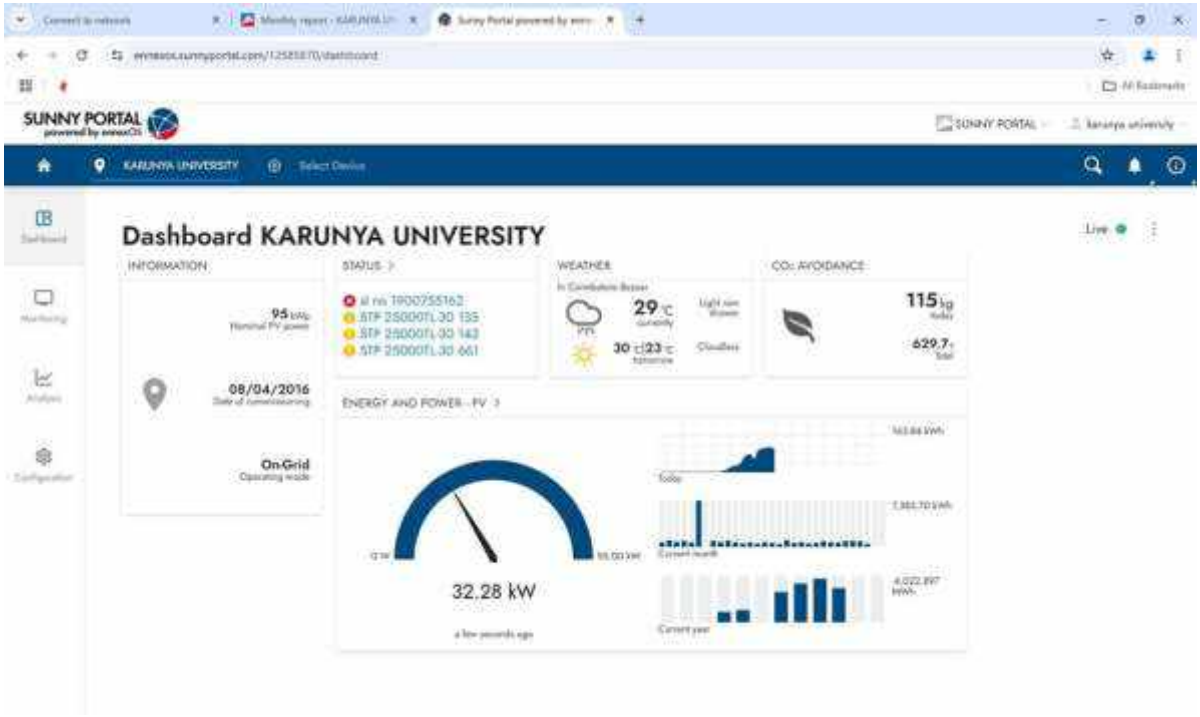


Figure 6 Solar Farm - KARUNYA Dashboard

Key features include:

- Automated Data Logging: Continuous recording of real-time energy generation and system parameters from campus solar installations.
- Digital Dashboards: Live visualization of power generation, efficiency metrics, and carbon offset data.
- Data Analytics: Periodic analysis of performance indicators to identify energy trends and optimize utilization.
- Predictive Maintenance: Automated alerts and analysis for early detection of performance deviations.
- Data Archiving: Secure, long-term storage of energy datasets for research and sustainability reporting.

Institution's Role:

- Operates a fully functional solar power monitoring and data logging system integrated with campus energy infrastructure.
- Hosts a 3 kW solar photovoltaic (PV) system in the Division of Electrical and Electronics Engineering for research and academic purposes.
- Provides real-time data access for students, faculty, and researchers to analyze system performance and sustainability impacts.
- Incorporates solar data analytics into engineering curricula and sustainability-based research projects.
- Contributes to the institution's broader vision of a smart, energy-efficient campus that supports SDG-aligned decision-making and carbon footprint reduction.

Outcomes

- Enhanced Energy Efficiency: Continuous optimization of solar energy generation and load management.
- Carbon Footprint Reduction: Quantifiable decrease in CO_2 emissions through renewable energy substitution.
- Data-Driven Decision Making: ICT-based analytics informing campus energy policies and system upgrades.
- Educational Impact: Integration of real-time data into research, teaching, and innovation projects.
- Sustainability Reporting: Reliable digital records supporting institutional reporting for SDG 7 and SDG 13 metrics.

Verification / Evidence Links

- Institution Website: www.karunya.edu
- Energy Monitoring Dashboard (Internal Access): Campus Solar Data Portal
- Renewable Energy Research Initiatives: Centre for Renewable Energy and Environment, Karunya University
- Government Linkage**:** Ministry of New and Renewable Energy (MNRE), India

Alignment with SDG 17.2.3 Requirements

Criterion	Proof / Evidence
International Collaboration / Data Monitoring	ICT-based solar data monitoring contributing to SDG data frameworks and academic collaborations.
Data Gathering / Measurement	Continuous digital data logging of solar energy output and performance metrics.
SDG Relevance	Supports SDG 7 (Clean Energy), SDG 9 (Innovation), and SDG 13 (Climate Action).
Data Accessibility	Real-time monitoring and archived data accessible for research and institutional reporting.
Institutional Contribution	Academic and operational use of solar data for sustainability research and energy management.

Summary Statement

Karunya Institute of Technology and Sciences has established a comprehensive Solar Power Plant Data Logging and Monitoring System, enabling real-time tracking, analytics, and performance optimization of solar energy generation. Through this initiative, the institution advances renewable energy research, carbon emission reduction, and ICT-driven sustainability education. The project exemplifies Karunya's commitment to integrating data-based decision-making and smart campus innovations in alignment with the UN Sustainable Development Goals, particularly SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action), within the framework of SDG Target 17.18: Data, Monitoring, and Accountability.

3. Karunya University & SUEZ Partnership

Objective

To advance collaborative research, education, and innovation in sustainable water management through the establishment of an industrial-scale water laboratory and real-time water quality monitoring system, supporting the UN Sustainable Development Goals (SDGs) — particularly SDG 6: Clean Water and Sanitation and SDG 17: Partnerships for the Goals.

International Industry Partner:

- SUEZ Group, France – Global leader in sustainable water and waste resource management

Collaborating Units:

- Division of School of Civil Engineering
- Water Institute

Relevant SDGs Addressed

- SDG 6 – Clean Water and Sanitation
- SDG 9 – Industry, Innovation, and Infrastructure
- SDG 11 – Sustainable Cities and Communities
- SDG 17 – Partnerships for the Goals

Nature and Scope of Collaboration

The Karunya–SUEZ partnership integrates academic research, industrial innovation, and technological application to address water distribution and quality management challenges.

Key components include

- Establishment of a state-of-the-art Industrial Water Lab on campus.
- Deployment of a pilot-scale water distribution network embedded with smart sensors and SCADA (Supervisory Control and Data Acquisition) systems for real-time monitoring of flow, pressure, and water quality parameters.
- Joint research and data-sharing framework for water treatment, leakage detection, and smart water distribution optimization.
- Collaborative training and workshops to enhance industry-academia knowledge exchange.

This initiative strengthens data-driven water management practices, supporting India's national water mission goals and the UN 2030 Agenda for Sustainable Development.

Figure 7 MoU Exchange - KARUNYA & SUEZ Water Quality Testing Laboratory Installation & Inauguration Ceremony

Institution's Role:

- Hosts the Industrial Water Research Lab jointly developed with SUEZ.
- Integrates real-time data monitoring systems into research, teaching, and policy studies.
- Conducts hands-on training for postgraduate students in Integrated Water Resources Management (IWRM) through the newly launched M.Tech program.
- Facilitates applied research and student projects on water distribution modelling, treatment efficiency, and sensor-based water quality analysis.
- Promotes community engagement by developing scalable, sustainable solutions for urban and rural water challenges.

Timeline

- Partnership Established: 2024
- Industrial Water Lab Inaugurated: 2024 by Dr. Paul Dhinakaran, Chancellor, Karunya University
- M.Tech. in IWRM Program Launched: 2024 (Ongoing collaboration with SUEZ experts)

Outcomes

- Development of a pilot-scale water distribution network with real-time monitoring.

- Creation of an industry-integrated postgraduate program (M.Tech. IWRM) bridging academic research and field implementation.
- Enhanced capacity building for students and researchers in water systems management.
- Contribution to data-driven innovations in sustainable urban water management.
- Strengthening of industry–academia collaboration for SDG-aligned technological development.

Verification / Evidence Links

- Institution Website: www.karunya.edu
- SUEZ Official Website: https://www.suez.com
- Program Details: M.Tech. in Integrated Water Resources Management (Karunya University)
- Press Release / Event Coverage: Karunya University – News and Media Portal

Alignment with SDG 17.2.3 Requirements

Criterion	Proof / Evidence
International Collaboration	Partnership with SUEZ (France) – a global water management leader.
Data Gathering / Measurement	Real-time water quality and distribution data collection via SCADA-integrated sensors.
SDG Relevance	Directly supports SDG 6 (Clean Water), SDG 9 (Innovation), and SDG 11 (Sustainable Cities).
Data Accessibility	Continuous monitoring data shared for research, training, and system optimization.
Institutional Contribution	Establishment of Industrial Water Lab and launch of M.Tech. IWRM program integrating research, education, and sustainability.

Summary Statement

- Karunya Institute of Technology and Sciences, in collaboration with SUEZ, has established a pioneering Industrial Water Research Laboratory equipped with smart sensors and SCADA-based monitoring systems for real-time water quality and distribution analysis. This partnership combines academic innovation with industrial expertise to promote sustainable water management, education, and research.

- Through the launch of the M.Tech. in Integrated Water Resources Management (IWRM) program, Karunya empowers students to address real-world water challenges with cutting-edge tools and global insights. This collaboration exemplifies the institution's commitment to SDG 6 (Clean Water and Sanitation) and SDG 17 (Partnerships for the Goals) under the framework of Target 17.18 – Data, Monitoring, and Accountability.

4. Key Collaborations and Events

Sl. No.	Event / Activity	Date/Year	Description / Outcome	Nature of Collaboration

1	French TV Interview – CFRT (Le Jour du Seigneur)	27.6.2023	Interview on *"Impact of Climate Change on Water Cycle"* aired for a French television program on climate awareness.	International Media Collaboration / Knowledge Outreach
2	Proposal with World Bank and Alluvium Consulting	20.7.2023	Joint proposal to train India's water leaders on *River Basin Planning* in collaboration with Alluvium Consulting India Pvt. Ltd.	International Institutional & Corporate Partnership
3	Collaboration with University of Waterloo	25.7.2023	Request to host *ICWRER 2025 International Conference on Water Resources and Environment Research* at KITS.	International Academic Research Partnership
4	Industry–Academia Meet (Israel)	24.8.2023	Consultation with Deputy Consul General of Israel for Industry–Academia Meet in Jerusalem.	International Diplomatic and Academic Engagement
5	Wetlands International Collaboration	9.10.2023	Review and feedback on *Vembanad–Kol Wetland Management Plan (Ramsar Site).*	International Environmental NGO Partnership
6	Wetlands International South Asia – Invitation	1.9.2023	Invitation to *World Wetlands Day by "Wetlands International South Asia Society"*.	International Event Participation / Policy Network
7	Appointment to Committee – Wetlands International South Asia	1.9.2023	Dr. James appointed to *Skills & Qualification Matrix Committee* for governing body formation.	International Advisory Committee Membership
8	NASA Collaboration – AERONET Datasets	2024	Extension of NASA–KITS partnership on *Aerosol Research Network (AERONET)* confirmed by NASA HQ.	International Government Scientific Collaboration
9	M.Tech Joint Program with SUEZ India	2024	Initiation of joint postgraduate program on *Integrated Water Resources Management (IWRM).*	Academic–Industry Curriculum Collaboration
10	Collaboration with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH Indo-German Biodiversity Programme (IGBP)	2023	Hydro-Ecology of Point Calimere Wildlife And Bird Sanctuary, Tamil Nadu An Assessment For Integrated Management	An assessment for integrated management https://indianwetlands.in/wp-content/uploads/library/1675678121.pdf

Evidences: SDG Engagement through Collaborations

TV Interview with a French Channel on 'IMPACT OF CLIMATE CHANGE ON WATER CYCLE'.

Stéphanie TESSON <s.tesson@ext.cfrt.tv>
Jun 27, 2023, 6:42 PM
to me

Dear Professor James,

I am contacting you on behalf of Father Ignacimuthu.

I'm editor-in-chief for Le Jour du Seigneur, a French TV Company. We are preparing a series of TV programs on creation care, based on Laudato Si, from Pope Francis. The programs are weekly broadcasts, 26 minutes each Sunday. They include short interviews by Zoom with someone from the South presenting the concrete impacts of climate change in his country.

Our next program will be devoted to water-related issues. I would be very happy to do an interview with you about this topic.

The interview should be very simple and educational to help the French public understand the issues at stake.

Proposal sent to the World Bank – India Office, along with Alluvium Consultants Ltd to Train Water Leaders of India on 'RIVER BASIN PLANNING'.

On Thu, 20 Jul 2023, 6:52 pm Hemanta Sarkar, <hemanta.sarkar@alluviumgroup.in> wrote:
Dear Dr. Chabungbam Rajagopal Singh,

Following several discussions with you, we, are pleased to offer a proposal for **Inspiring and supporting India's water leaders on river basin planning in India**. We are hereby submitting our Proposal, which includes this Technical Proposal and a Financial Proposal.

We are submitting our Proposal with **Karunya Institute of Technology and Sciences (Deemed to be University under Sec.3 of the UGC Act. 1956) (JV Partner)** and **M/s. Alluvium Consulting India Pvt Ltd. (as a sub-consultant)**.

Looking forward to working with you.

Warm Regards,

Hemanta Sarkar | Alluvium Consulting India
P +91 98109 75035

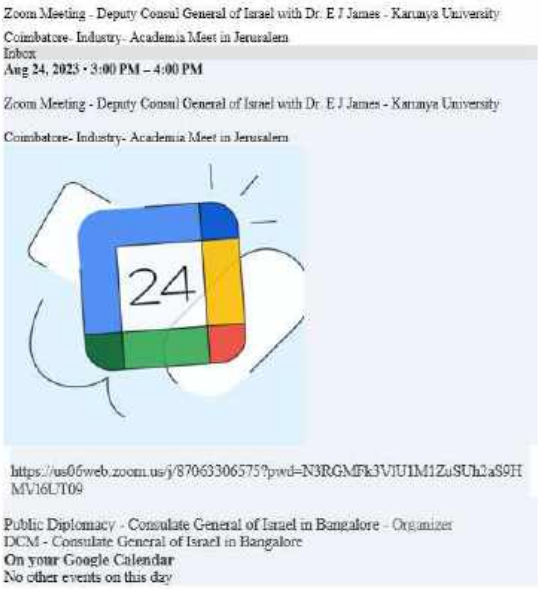
Request from the Water Institute of the University of Waterloo for a Detailed Proposal to Jointly Conduct the International Conference on 'Water Resources and Environment Research' at KITS

---------- Forwarded message ---------
From: **Kumaraswamy Ponnambalam** <ponnu@uwaterloo.ca>
Date: Tue, 25 Jul 2023, 3:42 am
Subject: Formal request for ICWRER 2025 to be held in December 2025 at Karunya University
To: ejjamesm@gmail.com <ejjamesm@gmail.com>
Cc: esther P <esther.jegatha2011@gmail.com>, Keith Hipel <kwhipel@uwaterloo.ca>

Dear Pro Vice Chancellor Professor James,

Thanks for your time and the nice meeting we had recently and your willingness to conduct the conference at the Karunya University. I have attached an almost done proposal to save you much time and some information need to be still filled in by Karunya university which I have left open. Also attached are some other documents regarding the conference organization at the international level currently active.

Industry - Academia Meet in Jerusalem – Preliminary Consultation with DCG of Israel in Bangalore



Collaboration with Wetlands International in Preparing a Management Action Plan for the Vembanad-Kol Wetland – A Ramsar Site

Vembanad Kol IMP final draft report
Inbox

R

Ritesh Kumar <ritesh.kumar@wi-sa.org> Mon, Oct 9, 2023, 8:53 AM

to me

Dear Dr James,

The Vembanad Kol management plan is attached for your kind review and comments.

Sincerely yours

Ritesh Kumar

——— Forwarded message ———
From: **Kalpana Ambastha** <kalpana.ambastha@wi-sa.org>
Date: Thu, 5 Oct 2023 at 6:56 PM
Subject: Vembanad Kol IMP final draft report
To: johncmdoecc <johncmdoecc@gmail.com>, swakprofessionals <swakprofessionals@gmail.com>, Dr P S Hari Kumar <prshari@gmail.com>, Renjith <renjith@cwrdm.org>, Asghar Nawab <asghar.nawab@wi-sa.org>, Ritesh Kumar <ritesh.kumar@wi-sa.org>

Dear Colleagues,

A final draft of the Vembanad Kol IMP is attached for your kind perusal.
An Executive Summary is to be added which we will be doing by this Monday. The detailed action plans with budgets are also attached as a zip file.

Please share your feedback and also advise in case we have missed anything.

Best regards,
–
Kalpana Ambastha
Technical Officer

Committee Constituted by Wetlands International to Identify Skillsets for Wetland Experts

Wetlands International South Asia
Module 003, Ground Floor
NSIC Business Park
Okhla Industrial Area
New Delhi – 110020, INDI Order

Constitution of a committee to prepare Skills and Qualification matrix for Governing Body and Office Bearers for Wetlands International South Asia Society
As per rule 13.2 of the Wetlands International South Asia Society Rules and Regulation, the President was authorised to constitute a committee to prepare a skill and qualification matrix for the approval of the Governing body.
The Society Rules and Regulation stipulate that the Governing Body composition shall reflect diversity in skillsets, disciplinary expertise, regional experience, gender and age and overall having vast expertise in wetland conservation/nature conservation. Subsequently, to operationalize this decision, an amendment to the Rules was effected in September 2023, wherein it was decided that the 'President shall constitute a Committee to prepare a Skills and Qualification Matrix for the Governing Body and Office Bearers. This Skills and Qualification Matrix shall be approved by the Governing Body'. Three months prior to elections, a three-member Screening Committee appointed by the President shall use this Matrix to prepare a list of eligible members for nomination as President and Governing Body members.
1. The President herewith constitutes a Skills and Qualification committee of the following individuals:
1) Dr Asad Rahmani, Founder Member, WISA Society
2) Dr Ajit Pattnaik, Founder Member, WISA Society
3) Prof E J James, Founder Member, WISA Society
4) Ms Archana Chatterjee, Nominated Member, WISA Society

Involvement with the Kerala Forest Research Institute on Forest Hydrology

Pawan Wable <pawan.wable@kfri.res.in> Mar 2, 2024, 11:54 AM

to me, Wable

Dear Sir,

I am forwarding you the mail from our Director for the World Water Day workshop invitation (22 March 2024). Please find the attachment for the invitation letter.

Thanking you,

With kind regards,

Pawan

Pawan S. Wable, PhD
Scientist (Forest Hydrology),
Department of Soil Science,
Sustainable Forest Management Division,
Kerala Forest Research Institute,
Peechi- 680 653, Thrissur, Kerala
Tel: +91-954-789-1559

Collaboration with the NGO - MS Swaminathan Foundation, Chennai – Preparation of Policy Document

Inbox

Pampa MSSRF <pampamssrf@gmail.com> Mon, Mar 25, 2024, 12:00 PM

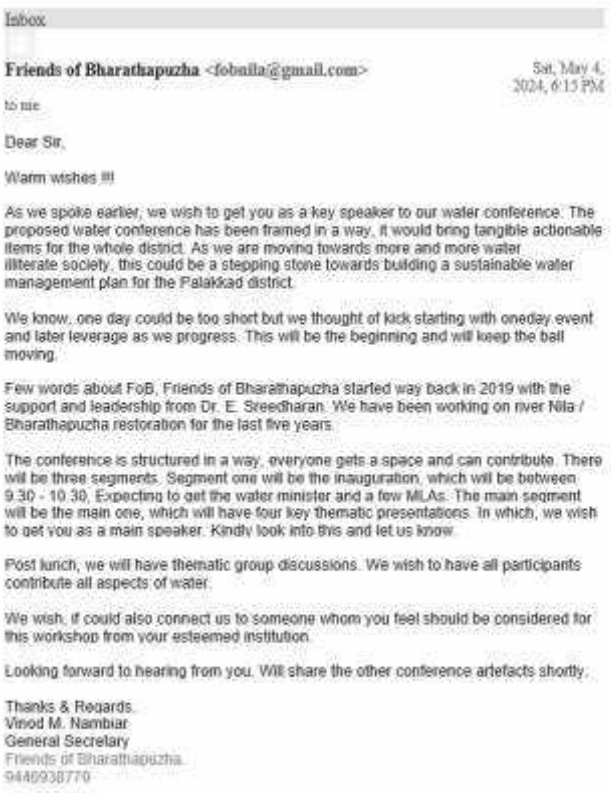
to bcc: me

Dear All,
We are happy to reach out to you with the recent publication titled **Equipping local self governments and development practitioners in managing common pool resources – A case of Pampa River in Kerala State, India** which has come out of the project that all of you were a part of.

Thank you for all your support!

Regards
for the Authors of the Case Study
Team M S Swaminathan Research Foundation

Collaboration with the NGO – the 'Friends of Bharathapuzha' Water conference, 26th May 2024.



Inbox

Friends of Bharathapuzha <fobnila@gmail.com> Sat, May 4, 2024, 6:15 PM

to me

Dear Sir,

Warm wishes !!!

As we spoke earlier, we wish to get you as a key speaker to our water conference. The proposed water conference has been framed in a way, it would bring tangible actionable items for the whole district. As we are moving towards more and more water illiterate society, this could be a stepping stone towards building a sustainable water management plan for the Palakkad district.

We know, one day could be too short but we thought of kick starting with oneday event and later leverage as we progress. This will be the beginning and will keep the ball moving.

Few words about FoB, Friends of Bharathapuzha started way back in 2019 with the support and leadership from Dr. E. Sreedharan. We have been working on river Nila / Bharathapuzha restoration for the last five years.

The conference is structured in a way, everyone gets a space and can contribute. There will be three segments. Segment one will be the inauguration, which will be between 9.30 - 10.30. Expecting to get the water minister and a few MLAs. The main segment will be the main one, which will have four key thematic presentations. In which, we wish to get you as a main speaker. Kindly look into this and let us know.

Post lunch, we will have thematic group discussions. We wish to have all participants contribute all aspects of water.

We wish, if could also connect us to someone whom you feel should be considered for this workshop from your esteemed institution.

Looking forward to hearing from you. Will share the other conference artefacts shortly.

Thanks & Regards,
Vinod M. Nambiar
General Secretary
Friends of Bharathapuzha
9446938770

Invitation to Participate in "Innovations in Underwater Navigation" Seminar and Further Collaboration in the Area with IITT

Inbox

Roshan Karan Srivastav <rosban@iittp.ac.in> Thu, May 30, 2024, 7:58 PM

to Director, me, PRAWIN, RAJESH, vidhyak, nandhakumar@karunya.edu, ku, underwater navi,

Dear Sir,

Greetings from IIT Tirupati Technology Innovation Hub

I am pleased to extend a special invitation for you to participate at our upcoming seminar, "Navigating the Depths: Innovations in Underwater Navigation," hosted by the IIT Tirupati Navavishkar I-Hub Foundation (IITTNiF) in collaboration with the Indian Navy. Scheduled for June 14, 2024, in New Delhi, this event promises to be a groundbreaking assembly of minds in the field of underwater navigation technologies.

Event Highlights:

- Date: June 14, 2024
- Venue:IIT Delhi Research and Innovation Park, New Delhi
- Keynote Speakers: Industry leaders and acclaimed academics
- Sessions Include: Latest advancements in underwater tech, practical applications, and collaborative opportunities.

This seminar is not just a platform to share knowledge but also a unique networking opportunity that will connect you with peers and pioneers in the industry. We are also extending an invitation for you to nominate colleagues or peers from your organization who would benefit from attending this important event.

Nominate and Registration
Link: https://docs.google.com/forms/d/e/1FAIpQLSdpEACmyaDVI7zXoqBJpVt4xsQRNymobIpjpNev1UNGrFPjsg/viewform
Brochure Link: https://drive.google.com/file/d/106qJo0epMpVAukUmm8YbAlnG3-fsrs6I/view?usp=sharing
Website Link: https://sites.google.com/iittp.ac.in/underwater-navigation/home

Interaction with the Farmer NGOs and Groups of Kol Wetland of Thrissur – A Ramsar Site

5. Patent

Field Of Technology

This disclosure relates to generally to isopropyl myristate synthesis and in particular tobiosynthesis of isopropyl myristate using bacteria.

FORM 2 **THE PATENTS ACT, 1970** **(39 of 1970)** **&** **The Patents Rules, 2003** **COMPLETE** **SPECIFICATION** **(See section 10 and rule 13)**
TITLE OF THE INVENTION: Biosynthesis of Isopropyl myristate
APPLICANT(S) **(a)** NAME: **KARUNYA INSTITUTE OF TECHNOLOGY AND SCIENCES** **(b)** NATIONALITY: **INDIA** **(c)** ADDRESS: **KARUNYA NAGAR, COIMBATORE - 641 114, TAMILNADU, INDIA** **(a)** NAME: **ZUCKERBERG INSTITUTE FOR WATER RESEARCH** **(b)** NATIONALITY: **ISRAEL** **(c)** ADDRESS: **BEN-GURION UNIVERSITY OF THE NEGEV, SEDE-BOQER CAMPUS, 84990, ISRAEL**

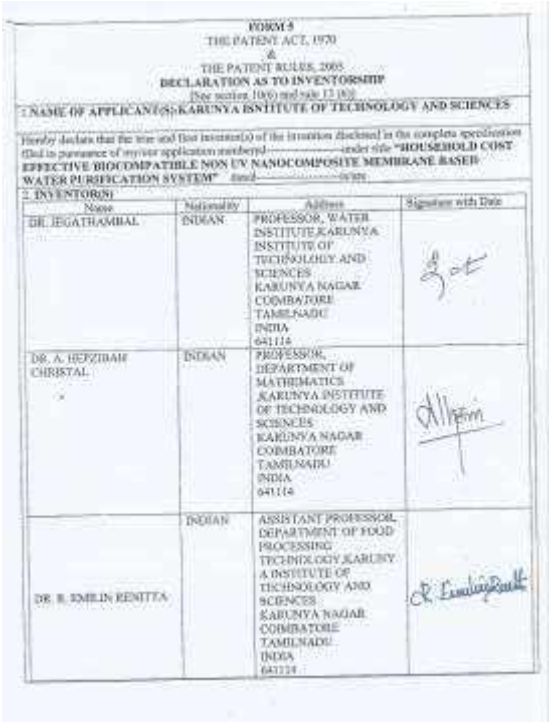
Background

EUROPEAN PATENT PUBLICATION 0383405A1 in Para 0011 describes that isopropyl myristate was prepared by charging myristic acid (98%; 50 kg) and propane-2-ol (13 kg) into a 100 litre stirred tank reactor equipped with heating coils, condenser and vacuum facility. The reactants were heated

with stirring to 60°C and 1 kg lipase enzyme (code SP382, ex NOVO Industries, lipase catalyst from Candida species immobilised on acrylate beads) was added. The reaction was continued at 60°C and 20.000 Pa. pressure by dosing further propane-2- ol at 5 kg/hr to replace the distilling propane-2-ol/water azeotrope until the acid value of the product was 0.5. Excess propane-2-ol was then removed under reduced pressure and the product isopropyl myristate separated from the enzyme by filtration. The resulting product showed excellent colour (10 APHA) and had no odour. Product yield was better than 99%. There are several disadvantages associated with the synthesis of isopropyl myristate as known in prior art and the object of the current disclosure is to ameliorate those defects.

Summary

Embodiments of the present disclosure are related to a biosynthesis of Isopropyl myristate using bacteria and method of purifying arsenic contaminated water using the prepared Isopropyl myristate.



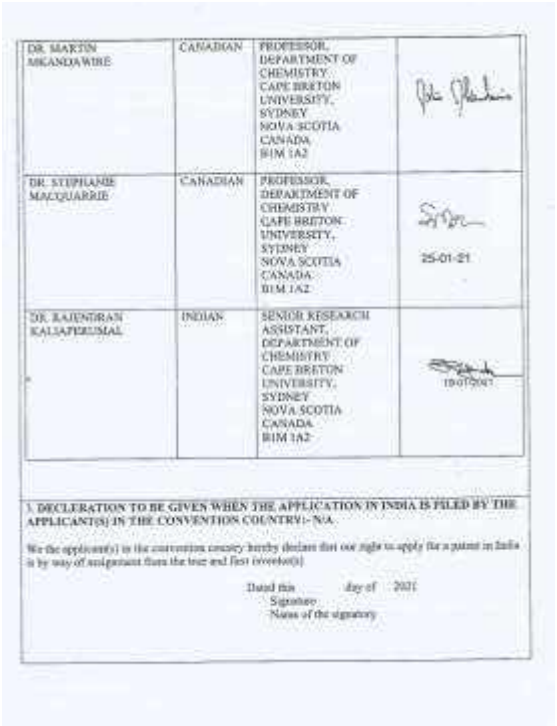
FORM 5
THE PATENT ACT, 1970
&
THE PATENT RULES, 2005
DECLARATION AS TO INVENTORSHIP
[See section 10(6) and rule 13 (6)]

1.NAME OF APPLICANT(S):**KARUNYA INSTITUTE OF TECHNOLOGY AND SCIENCES**

Hereby declare that the true and first inventor(s) of the invention disclosed in the complete specification filed in pursuance of my/our application numbered----------under title **"HOUSEHOLD COST EFFECTIVE BIOCOMPATIBLE NON UV NANOCOMPOSITE MEMBRANE BASED WATER PURIFICATION SYSTEM"** dated----------is/are

2. INVENTOR(S)

Name	Nationality	Address	Signature with Date
DR. JEGATHAMBAL	INDIAN	PROFESSOR, WATER INSTITUTE,KARUNYA INSTITUTE OF TECHNOLOGY AND SCIENCES KARUNYA NAGAR COIMBATORE TAMILNADU INDIA 641114	
DR. A. HEPZIBAH CHRISTAL	INDIAN	PROFESSOR, DEPARTMENT OF MATHEMATICS ,KARUNYA INSTITUTE OF TECHNOLOGY AND SCIENCES KARUNYA NAGAR COIMBATORE TAMILNADU INDIA 641114	
DR. R. EMILIN RENITTA	INDIAN	ASSISTANT PROFESSOR, DEPARTMENT OF FOOD PROCESSING TECHNOLOGY,KARUNYA INSTITUTE OF TECHNOLOGY AND SCIENCES KARUNYA NAGAR COIMBATORE TAMILNADU INDIA 641114	

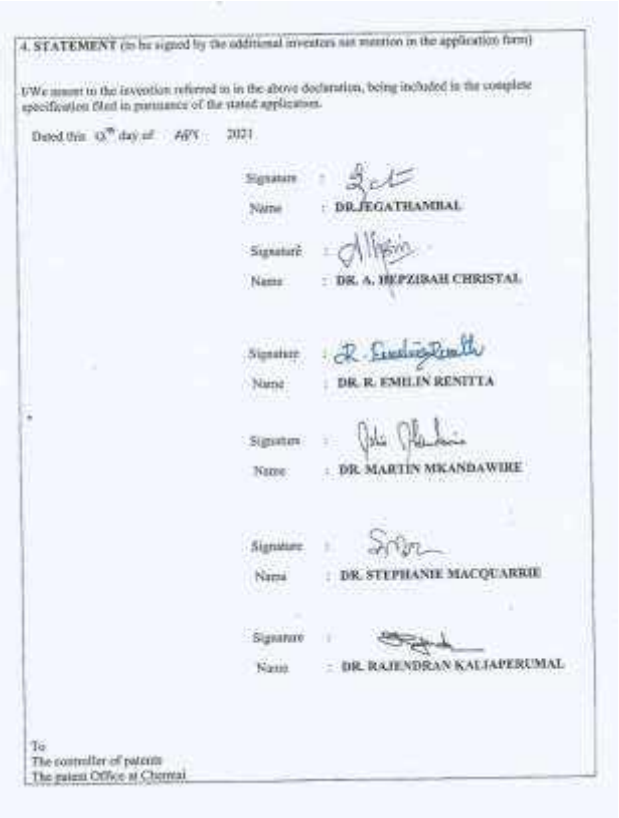


DR. MARTIN MICANDA WIRE	CANADIAN	PROFESSOR, DEPARTMENT OF CHEMISTRY, CAPE BRETON UNIVERSITY, SYDNEY NOVA SCOTIA CANADA B1M 1A2	
DR. STEPHANIE MACQUARRIE	CANADIAN	PROFESSOR, DEPARTMENT OF CHEMISTRY CAPE BRETON UNIVERSITY, SYDNEY NOVA SCOTIA CANADA B1M 1A2	25-01-21
DR. RAJENDRAN KALIAPERUMAL	INDIAN	SENIOR RESEARCH ASSISTANT, DEPARTMENT OF CHEMISTRY CAPE BRETON UNIVERSITY, SYDNEY NOVA SCOTIA CANADA B1M 1A2	19/01/2021

3. DECLERATION TO BE GIVEN WHEN THE APPLICATION IN INDIA IS FILED BY THE APPLICANT(S) IN THE CONVENTION COUNTRY:- N/A

We the applicant(s) in the convention country hereby declare that our right to apply for a patent in India is by way of assignment from the true and first inventor(s)

Dated this day of 2021
Signature
Name of the signatory



4. STATEMENT (to be signed by the additional inventors not mention in the application form)

I/We assent to the invention referred to in the above declaration, being included in the complete specification filed in pursuance of the stated application.

Dated this 03rd day of APY 2021

Signature :
Name : DR.JEGATHAMBAL

Signature :
Name : DR. A. HEPZIBAH CHRISTAL

Signature :
Name : DR. R. EMILIN RENITTA

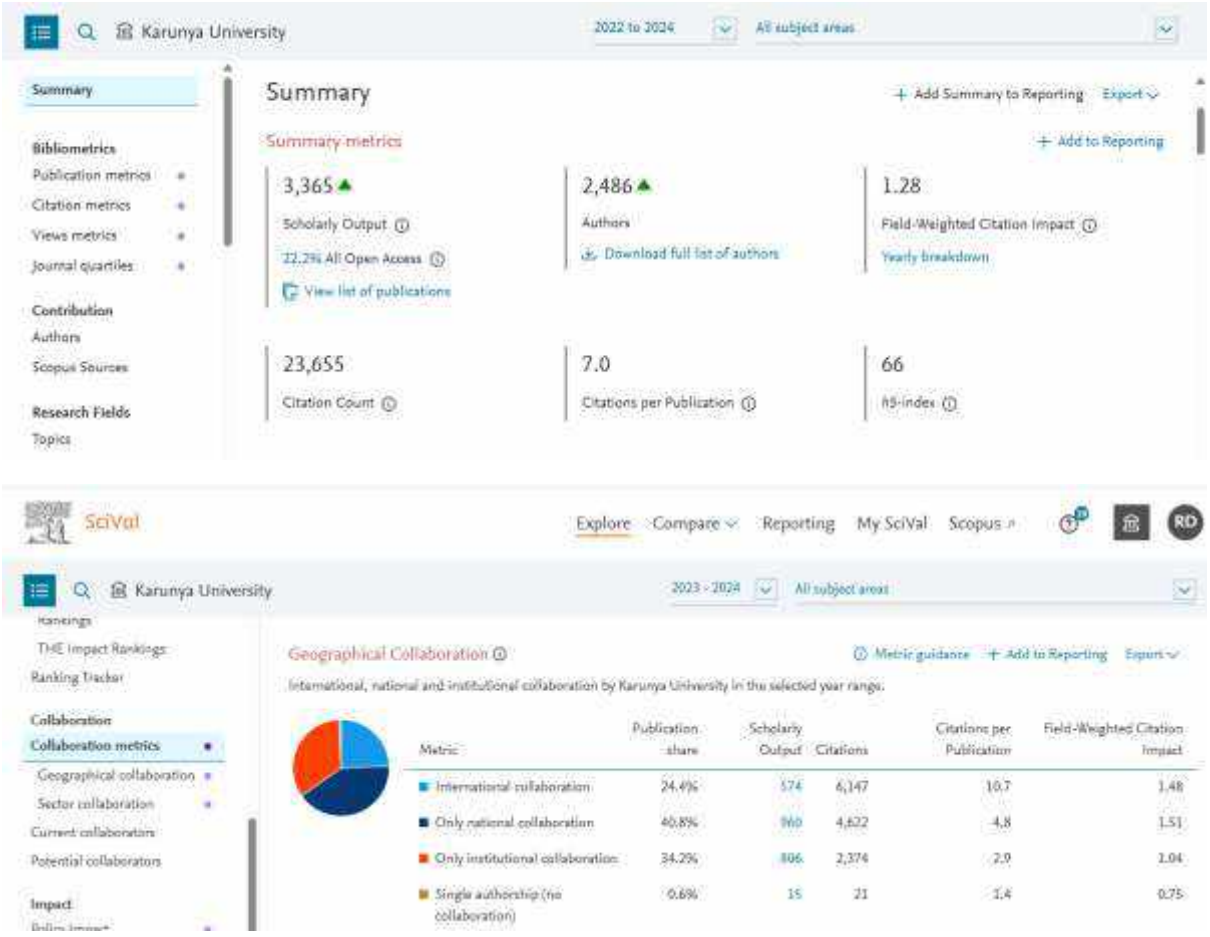
Signature :
Name : DR. MARTIN MKANDAWIRE

Signature :
Name : DR. STEPHANIE MACQUARRIE

Signature :
Name : DR. RAJENDRAN KALIAPERUMAL

To
The controller of patents
The patent Office at Chennai

6. Research Collaborations [Source: SciVal]

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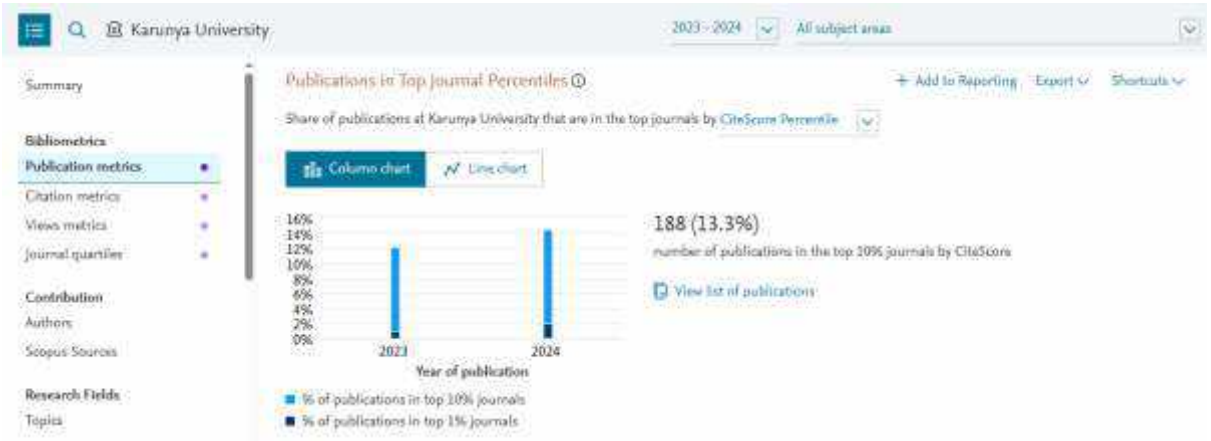
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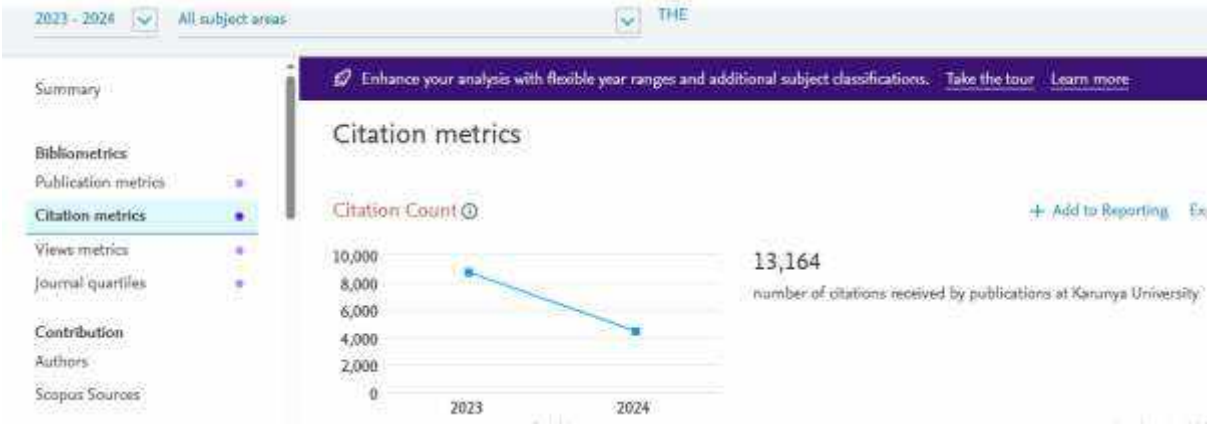
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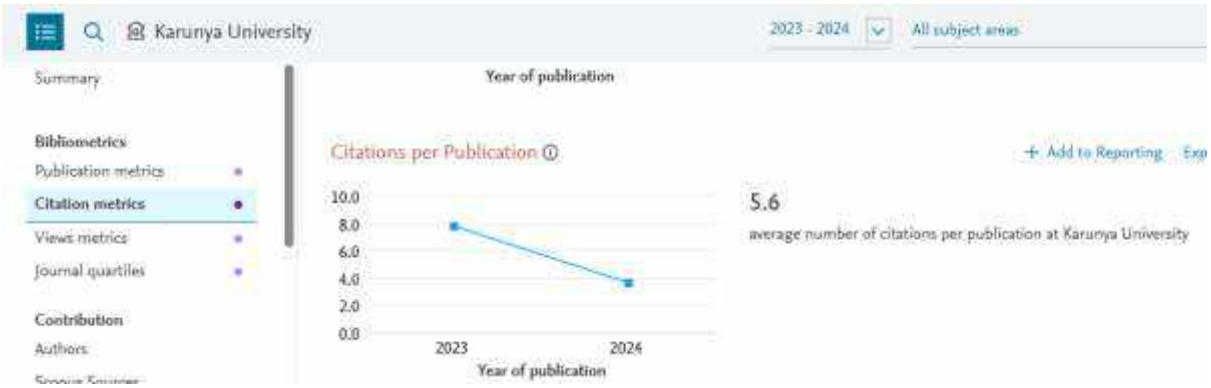
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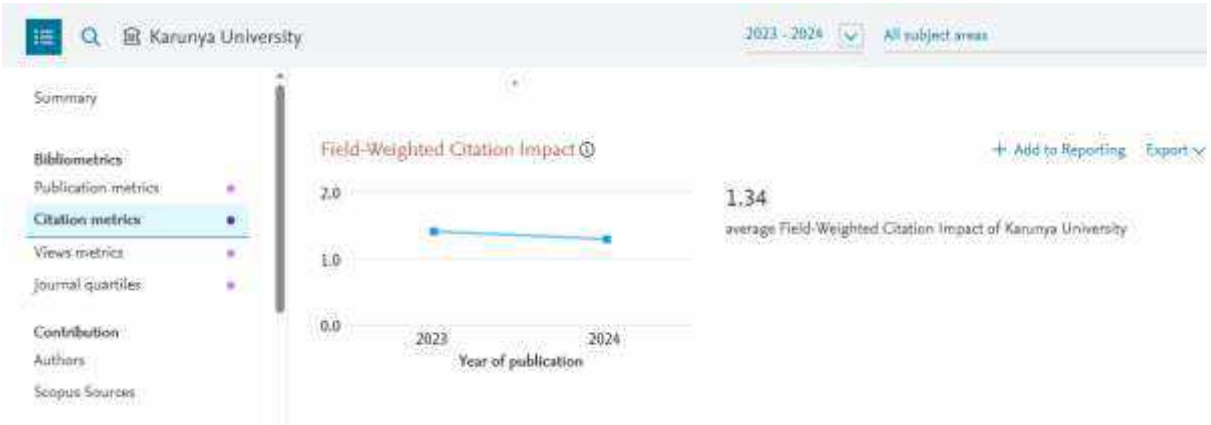
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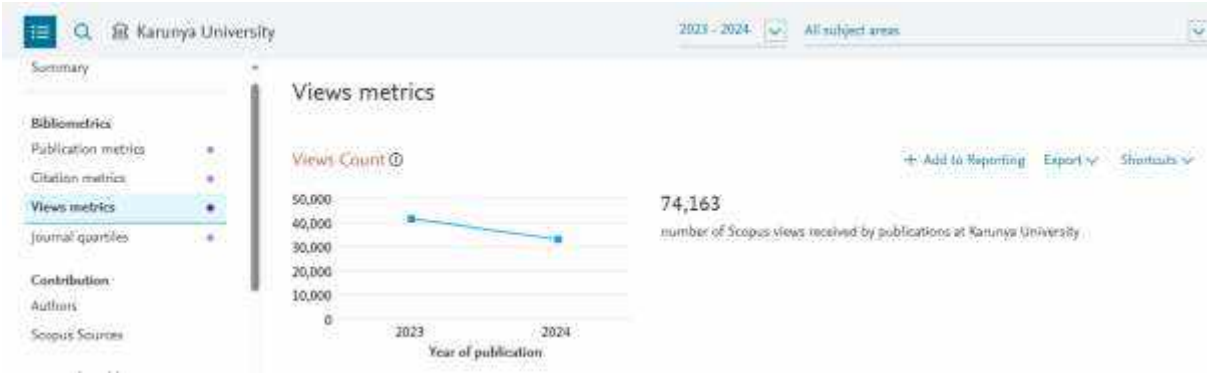
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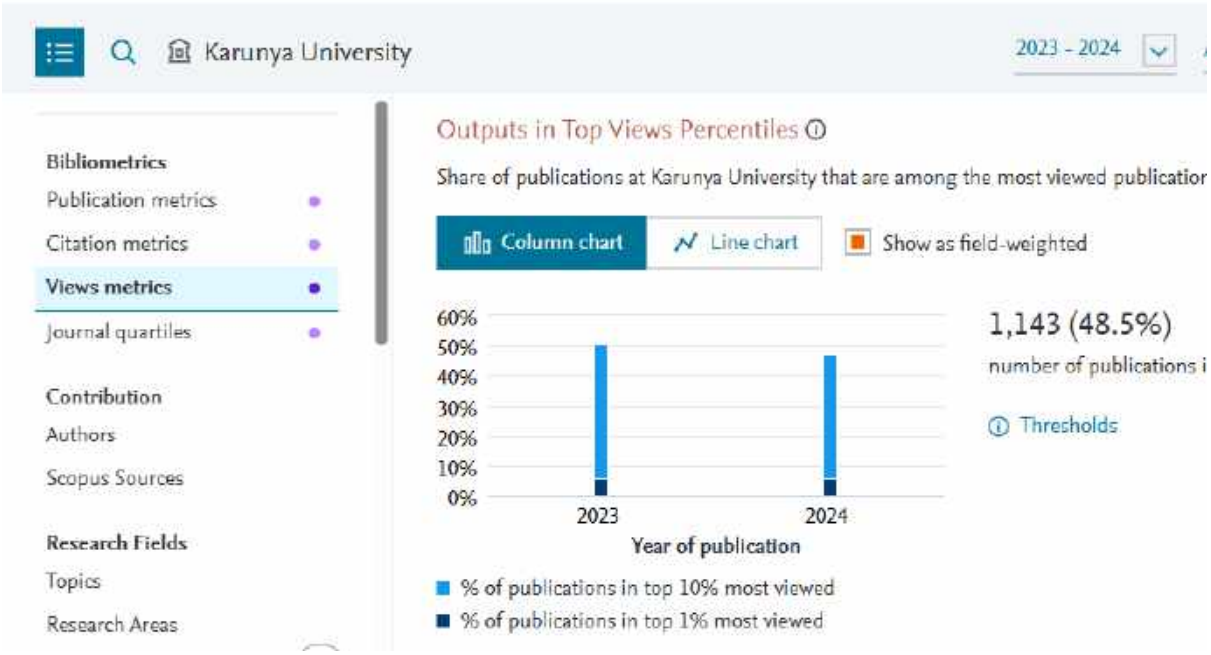
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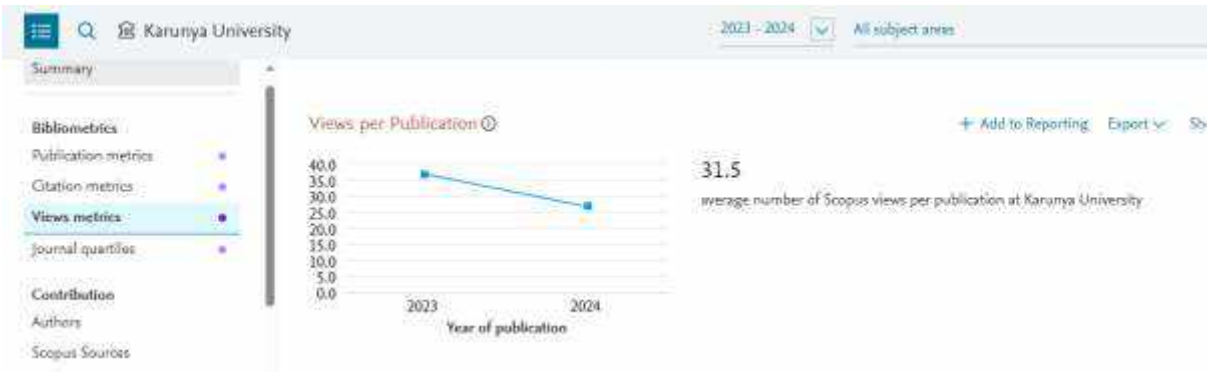
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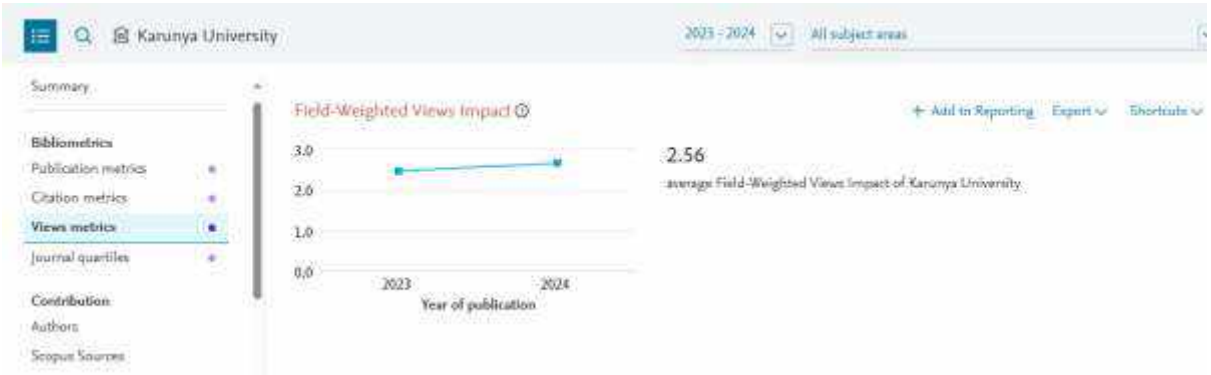
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Q2 (26% - 50%) 360 25.5
Q3 (51% - 75%) 276 19.6
Q4 (76% - 100%) 287 20.3


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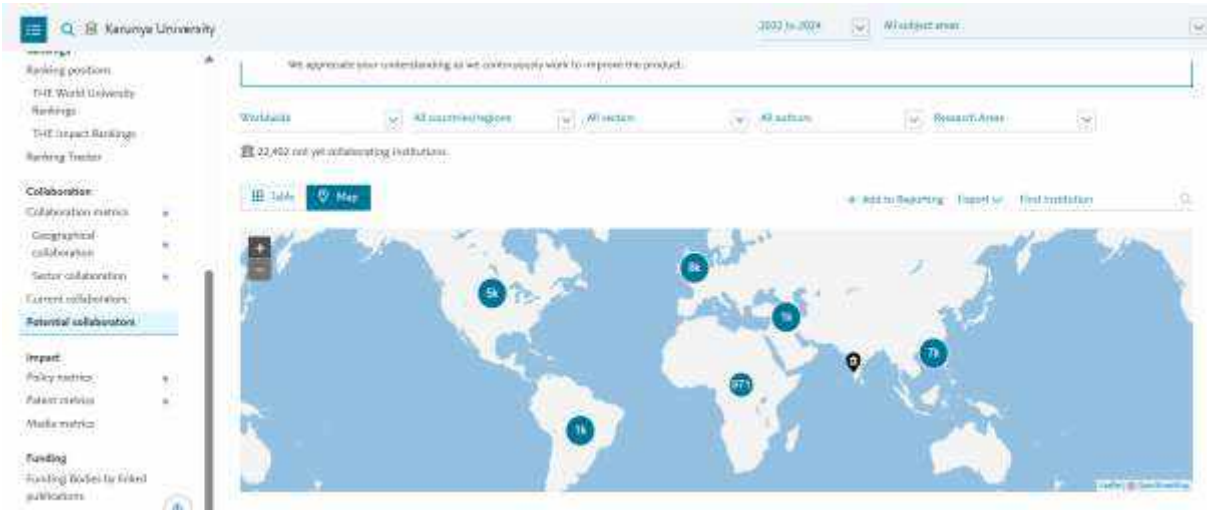
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Ranking positions
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7. International Conferences/ Seminars / Webinars on Sustainability

Sl. No.	Event / Initiative	Date	Details / Highlights	Nature of Collaboration	SDG Mapping
1	2nd International Conference on Frontiers in Chemical Sciences	26.10.2023 & 27.10.2023	Resource persons: 1. Prof. Pierre H. Dixneuf from the University of Rennes, France 2. Prof. Dr. Rene Michael Konigs from RWTH Aachen University, Germany Participants: 200 Researchers	Academia–Research–Collaboration	SDG 9 (Industry, Innovation & Infrastructure) SDG 12 (Responsible Consumption & Production) SDG 17 (Partnerships for the Goals)
2	1st International Conference on Computer Vision and Internet of Things-2023 (ICCVIoT ' 23)	07.12.2023 & 08.12.2023	Resource persons: 1. Dr. Ines Chihi, University of Luxembourg, Luxembourg 2. Dr. Deepak Mishra, Indian Institute of Space Science and Technology, Trivandrum, India 3. Dr. Anastassia Angelopoulou, University of Westminster, UK 4. Dr. Girijesh Prasad, Ulster University, Northern Ireland Total Participants: 58	Academia–Research–Collaboration	SDG 4 (Quality Education) SDG 9 (Industry, Innovation & Infrastructure) SDG 17 (Partnerships for the Goals)
3	U.S. University Delegation Visit	18.2.2024	Hosted experts from 18 U.S. universities to explore collaborations in research, innovation, and Industry 5.0 technologies.	International Academic Partnership	SDG 4 (Quality Education) SDG 9 (Industry, Innovation & Infrastructure) SDG 17 (Partnerships for the Goals)
4	HACCP Level-3 (Highfield Approved) Training Programme	28.2.2024 & 29.2.2024	Conducted with national agencies to strengthen skills in food safety and hygiene management.	Academia–Industry–Skill Development Partnership	SDG 2 (Zero Hunger) SDG 3 (Good Health & Well-being)

					SDG 8 (Decent Work & Economic Growth)
5	Workshop on Real-time Streaming and APIs	23.2.2024	Delivered by NTT DATA (Netherlands) expert on API integration and real-time data processing.	Academia–Global Industry Collaboration	SDG 4 (Quality Education) SDG 9 (Industry, Innovation & Infrastructure) SDG 17 (Partnerships for the Goals)
6	FDP on Applications of AI Techniques in Mechanical Engineering Systems	5.2.2024 to 9.2.2024	Resource Person: Organized with the Technology Mission on Green and Sustainable Manufacturing to promote AI applications in mechanical design and manufacturing.	Academia–Industry–Research Collaboration	SDG 9 (Industry, Innovation & Infrastructure) SDG 12 (Responsible Consumption & Production) SDG 13 (Climate Action)
7	2nd International Conference on Robotics, Automation, and Intelligent Systems,	19.4.2024	Resource persons: 1. Prof Avital Bechar, a Scientist from The Institute of Agricultural Engineering, Agricultural Research Organization, Volcani Center, Israel 2. Dr Joseph Winston, PhD, Head of Remote Handling and Irradiation Experiments Division at Indira Gandhi Centre for Atomic Research (IGCAR), Chengalpattu, Tamil Nadu. Total Participants: 70	Academia–Research–Collaboration	SDG 9 (Industry, Innovation & Infrastructure) SDG 11 (Sustainable Cities & Communities) SDG 17 (Partnerships for the Goals)
8	7th International Conference on Devices, Circuits and Systems - ICDCS'24	23.04.2024 & 24.04.2024	Resource persons: 1. Dr. Anisul Haque (Chairperson, Department of Electrical and Electronic Engineering at East West University, Bangladesh)	Academia–Research–Industry Collaboration	SDG 7 (Affordable & Clean Energy) SDG 9 (Industry, Innovation & Infrastructure)

			2. Dr. Porkumaran (Chairman, IEEE Madras Section, India) 3. Dr. Mustapha Slamani (Distinguish Member of the Technical Staff at Global Foundries, USA) 4. Dr. Subhash Chander (Scientist F, Solid state physics laboratory (SSPL), DRDO, India) 5. Prof. Mario Lanza (Associate Professor, Materials Science and Engineering Program, King Abdullah University of Science and Technology (KAUST), Saudi Arabia) 6. Mr. Wilson Pradeep (DFT lead and architect in Google, Mountain view, California, USA) Total Participants: 64		SDG 17 (Partnerships for the Goals)
9	Seminar on SDGs – Embracing the Change and Its Dynamics	11.06.2024	Focused on AI, IoT, blockchain, and renewable technologies for sustainable solutions and monitoring SDG progress.	Academia–Industry–Policy Dialogue	SDG 4 (Quality Education) SDG 9 (Industry, Innovation & Infrastructure) SDG 13 (Climate Action) SDG 17 (Partnerships for the Goals)

Evidences

a. 2nd International Conference on Frontiers in Chemical Sciences - 26.10.2023 & 27.10.2023

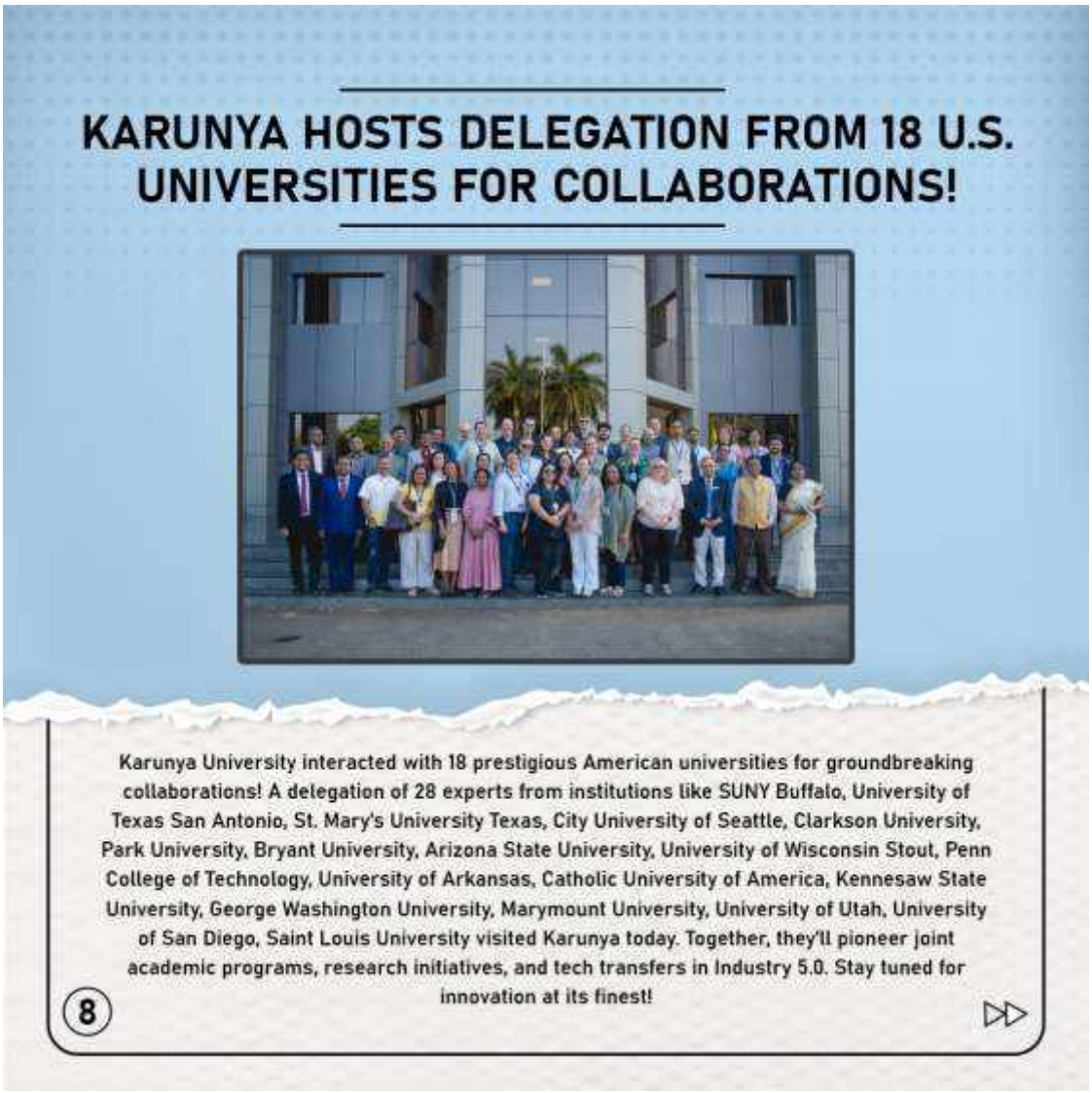
The conference brought together 200 researchers and eminent resource persons including Prof. Pierre H. Dixneuf from the University of Rennes, France, and Prof. Dr. Rene Michael Konigs from RWTH Aachen University, Germany. The event facilitated discussions on sustainable chemical innovations, green chemistry, and advanced materials, promoting cross-border academic collaboration. This initiative aligned with SDG 9 (Industry, Innovation & Infrastructure), SDG 12 (Responsible Consumption & Production), and SDG 17 (Partnerships for the Goals).

b. International Conference on Computer Vision and Internet of Things (ICCVIoT'23)

The ICCVIoT'23 convened global experts including Dr. Ines Chihi (University of Luxembourg), Dr. Deepak Mishra (IIST, Trivandrum), and Dr. Anastassia Angelopoulou (University of Westminster, UK) to explore applications of computer vision, AI, and IoT. With 58 participants, the conference strengthened international research partnerships and encouraged the exchange of technological insights relevant to digital innovation. The initiative supported SDG 4 (Quality Education), SDG 9 (Industry, Innovation & Infrastructure), and SDG 17 (Partnerships for the Goals).

c. KITS Hosts U.S. University Delegation for Global Collaborations

Karunya Institute of Technology and Sciences hosted a high-level delegation of 28 experts from 18 prestigious American universities, including SUNY Buffalo, University of Texas San Antonio, Arizona State University, George Washington University, and Saint Louis University, to explore collaborative opportunities in academic exchange, joint research, and Industry 5.0 innovations. The visit marked a milestone in promoting cross-border knowledge partnerships and advancing SDG 4 (Quality Education), SDG 9 (Industry, Innovation, and Infrastructure), and SDG 17 (Partnerships for the Goals). Through this global engagement, Karunya reaffirmed its commitment to fostering innovation-driven learning and sustainable international cooperation.



d. 2 Days Training Programme - HACCP Level – 3

As part of its commitment to fostering cross-sectoral dialogue and capacity building aligned with the Sustainable Development Goals (SDGs), the Division of Food Processing Technology initiated a two-day HACCP Level-3 (Highfield Approved) training programme. This initiative was designed to strengthen competencies in food safety, hygiene, and quality management, directly supporting SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being), and SDG 8 (Decent Work and Economic Growth). The department engaged with multiple national-level agencies—Aspire Training Research Consulting LLP (Ernakulam), TAK Safe Food Solution Pvt. Ltd. (Tiruppur), SGS Academy (Haryana), HGP Enterprise (Gujarat), and BSI Group India Pvt. Ltd. (Maharashtra)—to explore collaborative partnerships for conducting this internationally recognized certification. Through this initiative, KITS promoted industry–academia interaction, skill enhancement, and knowledge exchange in food technology, contributing to sustainable practices and global workforce readiness.

e. Real-time Streaming and API

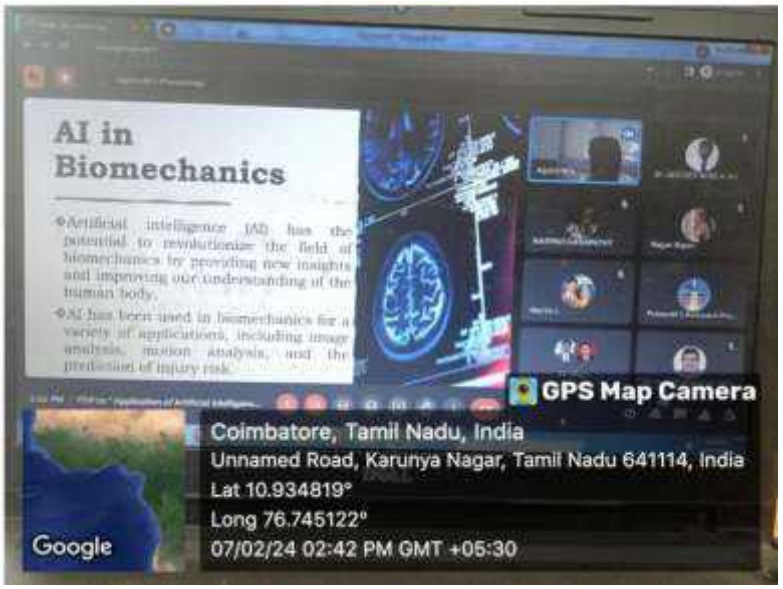
The workshop on "Real-time Streaming and APIs" aimed to provide participants with an in-depth understanding of real-time data integration and API technologies that drive modern digital ecosystems. The session was conducted online by Mr. Enoch Easudoss, Technical Manager at NTT DATA, Amsterdam, The Netherlands. A total of 55 students specializing in Data Science and Artificial Intelligence participated actively in this interactive learning event.

Mr. Enoch Easudoss emphasized the crucial role of Application Programming Interfaces (APIs) as enablers of seamless data communication and innovation across industries. The session explored a wide spectrum of API types—REST, SOAP, RPC, and WebSocket—highlighting their structure, purpose, and practical applications. Participants were introduced to essential concepts such as REST API semantics, pagination strategies, OpenAPI specifications, and endpoint querying techniques, providing a holistic understanding of API development and integration. This academic–industry partnership supported SDG 4 (Quality Education), SDG 9 (Industry, Innovation & Infrastructure), and SDG 17 (Partnerships for the Goals).

f. Faculty Development Programme on Applications of Artificial Intelligence Techniques in Mechanical Engineering Systems

The Division of Mechanical Engineering organized a five-day Faculty Development Programme (FDP) on *"Applications of Artificial Intelligence (AI) Techniques in Mechanical Engineering Systems"* in collaboration with the Technology Mission on Green and Sustainable Manufacturing, aimed at enriching faculty with advanced knowledge of AI-driven innovations and sustainable practices. The programme focused on how AI has transformed mechanical systems through predictive maintenance, design optimization, robotics, automation, supply chain efficiency, and quality control. Experts highlighted how AI algorithms analyze sensor data to forecast equipment failures, simulate design variations for optimization, and improve decision-making in manufacturing and logistics, thereby enhancing performance, reducing costs, and supporting sustainability. Sessions also addressed the role of AI in energy efficiency, defect detection, and simulation-based design, enabling engineers to develop safer, more reliable, and resource-efficient systems. The FDP included technical

sessions on AI in additive manufacturing, biomechanics, automobile engineering, and advanced research such as dry ice hybrid lubri-cooling for titanium alloys. By fostering academic–industry collaboration and promoting AI applications in sustainable manufacturing, the programme contributed to advancing **SDGs**, reinforcing the institution's commitment to innovation-driven learning and sustainable technological development. The event contributed to SDG 9 (Industry, Innovation & Infrastructure), SDG 12 (Responsible Consumption & Production), and SDG 13 (Climate Action).



g. International Conference on Robotics, Automation and Intelligent Systems (ICRAINS' 24)

The conference featured distinguished experts such as Prof. Avital Bechar from the Volcani Center, Israel, and Dr. Joseph Winston from IGCAR, India, who shared insights on robotics and automation for sustainable technologies. With 70 participants, the event promoted interdisciplinary research and global partnerships. It addressed SDG 9 (Industry, Innovation & Infrastructure), SDG 11 (Sustainable Cities & Communities), and SDG 17 (Partnerships for the Goals).

h. International Conference on Circuits, Devices and Systems (ICDCS'24)

ICDCS'24 brought together experts from Bangladesh, Saudi Arabia, the USA, and India to discuss advances in electronics, nanotechnology, and semiconductor systems. The conference emphasized innovation in sustainable device design and intelligent systems development, enhancing research-industry synergy. It aligned with SDG 7 (Affordable & Clean Energy), SDG 9 (Industry, Innovation & Infrastructure), and SDG 17 (Partnerships for the Goals).

i. Seminar on SDGs -Embracing the change and its dynamics

The seminar on Sustainable Development Goals (SDG) focused on the integration of advanced technologies to achieve the 2030 Agenda. It explored the application of AI and IoT in sustainable agriculture, innovations in renewable energy, and the development of smart cities. Emphasis was placed on data-driven approaches for monitoring and evaluating SDG progress. The discussions highlighted the use of blockchain for enhancing transparency in supply chains and recent advancements in water purification technologies. The seminar successfully provided actionable insights and fostered cross-sector collaboration toward scalable and sustainable solutions. This initiative supported SDG 4 (Quality Education), SDG 9 (Industry, Innovation & Infrastructure), SDG 13 (Climate Action), and SDG 17 (Partnerships for the Goals).

8. National MoUs

Sl. No.	Organisation with which MoU is signed	Name of the Institution	Year of Signing	Duration (Years)
1	IBM Skillbuild for Academia Access	Karunya Institute of Technology and Sciences	2023	2
2	Miles Education Private Limited	Karunya Institute of Technology and Sciences	2023	3
3	CAD Solutions	Karunya Institute of Technology and Sciences	2023	11 Months
4	Garuda Aerospace Private Ltd.	Karunya Institute of Technology and Sciences	2023	3
5	Transylvania University of Brasov, Romania	Karunya Institute of Technology and Sciences	2023	4
6	Tunga Aerospace Pvt. Ltd.	Karunya Institute of Technology and Sciences	2023	3
7	HLL Lifecare ltd., Thiruvananthapuram	Karunya Institute of Technology and Sciences	2023	1
8	Freedom Opthalmic	Karunya Institute of Technology and Sciences	2023	11 Months
9	Space Zone India (P) Ltd.	Karunya Institute of Technology and Sciences	2023	3

10	ST Advanced Composites Industries (P) Ltd	Karunya Institute of Technology and Sciences	2023	3
11	ETS India Private Ltd., Haryana	Karunya Institute of Technology and Sciences	2023	2
12	EU Member States (Erasmus +)	Karunya Institute of Technology and Sciences	2024	3
13	NSE Academy	Karunya Institute of Technology and Sciences	2024	1
14	KPR College of Arts Science and Research, Coimbatore	Karunya Institute of Technology and Sciences	2024	11 months
15	Australian Catholic University (ACU), Sydney, NSW	Karunya Institute of Technology and Sciences	2024	5
16	Phoenix360 Solutions Private Limited	Karunya Institute of Technology and Sciences	2024	1
17	IIT Palakkad Technology I-Hub Foundation, Palakkad	Karunya Institute of Technology and Sciences	2024	1
18	Zoho Corporation Pvt. Ltd.	Karunya Institute of Technology and Sciences	2024	1
19	ICAR – National Bureau of Agriculturally Important Microorganisms (NBAIM)	Karunya Institute of Technology and Sciences	2024	3
20	TMI Systems, Banglore	Karunya Institute of Technology and Sciences	2024	2
21	SUEZ Projects Private Limited	Karunya Institute of Technology and Sciences	2024	5

9. Functional International MoUs

S No	Name of the International Institution/University	Modus Operandi	Signed on	Validity
1	Tel Aviv University, Israel	Visiting Students Cooperative Research Coordination of Exchange	19 March 2023	3 Years
2	The Hebrew University of Jerusalem, Israel	Exchange of Faculty Exchange of Students Joint research, lectures and training Joint Conferences	23 January 2023	5 Years

		Exchange of Research Materials		
3	Illinois Institute of Technology, Chicago, USA	Mobility of faculty, scholars, and students between Institutions Joint teaching, research, or cultural activity Student services and support Faculty/staff professional development Program-based partnership s Joint development of ongoing and new curricula and academic projects Collaboration in academic publications and other materials of mutual interest	20 January 2023	1 Year
4	Leeds Beckett University	Joint academic programs Joint initiative in research Faculty exchange Student exchange semester abroad opportunities	27 Feb 2024	3 Years
5	Australian Catholic University	Unilataral or bilateral study abraod programmes Faculty exchange Collaborative curriculum development Research collaboration Joint course development short term academic programmes Joint participation in international funded project	23 Feb 2024	5 Years
6	Ben-Gurian University of the Negev, Israel	Exchange of Students Exchange of Faculty Exchange in Research Joint Lectures, Seminars, research projects Exchanging papers and journals Fcilitating, assisting and developomg other academic activities may be of joint intertest	01 June 2008	Reviewed once in every 3 years
7	The Brandenburg University of Technology, Germany	Exchange of Students and Scientists Granting of tuition waivers and	20 July 2010	Renewed automatically for 5 years unless eiter

		exemption from registration fees		party terminates the agreement
8	Bar-Ilan University, Israel	Visiting academic Staff Visiting students Cooperative research	28 May 2018	MoU may be terminated at any time by either party provided the notice of termination
9	Agricultural Research Organization, Israel	Precision Farming, Biological control, Micro Irrigation, Plant Biotechnology, Food Processing, Wasterwater reuse	28 May 2018	5 Years
10	Vilnius University, Lithuania	Exchange of Faculty and Students Joint research projects Collaborating international workshops and conferences Exchange of materials	03 January 2020	5 Years
11	Cape Breton University, Canada	Visits and informal exchanges of faculty, scholars and administrators PG education and training Organize joint conferences, meetings Exchange academic materials Student exchange during academic year or summer terms Joint research	20 April 2020	5 Years

10. University Participation in International Academic Mobility and Collaborative Internships (SDG 17 – Partnerships for the Goals)

KITS continues to strengthen its global footprint through extensive international academic mobility programs, fostering mutual learning, cultural exchange, and research collaboration. In alignment with Sustainable Development Goal 17 – Partnerships for the Goals, the institution has actively engaged with partner universities, industries, and research organizations across Europe, Asia, Africa, and the Middle East to promote student exchange and global knowledge integration.

International Student Exchange Overview

The University witnessed a significant increase in global engagement, with both incoming and outgoing student exchanges reflecting its growing international reputation.

2023: **9** incoming students and **10** outgoing students participated in exchange and internship programs.

2024: **32** incoming students and **14** outgoing students were hosted or placed in partner institutions worldwide.

These exchanges were facilitated through memoranda of understanding (MoUs), collaborative projects, and research internships, enabling students to gain exposure to advanced technologies, cross-disciplinary learning environments, and diverse socio-cultural contexts.

Incoming Students (2024)

In 2024, KITS welcomed 32 international students representing 19 universities from 12 countries, including Iran, Germany, Switzerland, Austria, Spain, Jordan, Tunisia, Kenya, Serbia, Czech Republic, and Bangladesh.

These students pursued research internships and academic projects under faculty mentorship at KITS across domains such as environmental engineering, artificial intelligence, and sustainable technologies.

Prominent partner institutions include:

- Islamic Azad University, Iran
- University of Lausanne, Switzerland
- Brno University of Technology, Czech Republic
- University of Bayreuth, Germany
- Johannes Kepler University, Austria
- ZHAW, Switzerland
- University of the Basque Country, Spain
- Hussein Technical University, Jordan
- National Institute of Applied Sciences and Technology (INSAT), Tunisia
- University of Belgrade, Serbia
- Universidad Politécnica de Madrid, Spain
- National University of Bangladesh, Bangladesh, among others.

These collaborations reflect KITS's commitment to global research partnerships and data-driven learning environments contributing to international capacity building and SDG data cooperation.

Outgoing Students (2024)

In the same year, 14 students from KITS participated in international internships, research training, and academic immersion programs across 21 countries. These placements were facilitated in collaboration with academic, industrial, and research partners, providing real-world exposure in areas such as robotics, renewable energy, mechatronics, computer science, and sustainable development.

Notable host institutions and organizations include:

- ProgressSoft Corporation, Jordan
- Babilon-Mobile, Tajikistan
- Iran University of Science and Technology (IUST), Iran
- Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST), UAE
- Paul Scherrer Institut Forschungsstrasse, Switzerland
- King Mongkut's Institute of Technology, Thailand
- Leibniz-Centre for Agricultural Landscape Research (ZALF), Germany
- Western Norway University of Applied Sciences, Norway
- Technische Universität Dresden, Germany

- Fraunhofer IDMT, Germany
- NXP Semiconductors Austria GmbH, Austria
- AKOObooks Audio Ltd., Ghana
- University of La Frontera, Chile

National Examination Council of Tanzania, among others.

Through these partnerships, students engaged in interdisciplinary projects, contributing to data collection, analysis, and innovation aligned with SDG indicators — particularly in sustainable engineering, digital technology, and resource management.

Impact and Alignment with SDGs

These international exchanges have significantly:

- Strengthened institutional capacity for global research and data collaboration.
- Enhanced cross-cultural competencies and international employability among students.
- Supported the measurement and reporting of SDG progress, particularly in SDG 4 (Quality Education) and SDG 17 (Partnerships for the Goals).
- Contributed to global data-sharing networks and sustainable innovation platforms.
- Through its growing international mobility ecosystem, Karunya Institute of Technology and Sciences continues to exemplify a globally connected university committed to the advancement of education, research, and sustainable development.

Collaboration for SDG Practice

Karunya Institute of Technology and Sciences (KITS) demonstrates a strong commitment to **Sustainable Development Goal 17 – Partnerships for the Goals**, emphasizing the importance of global collaboration in education, research, and innovation. The University has developed a robust framework for international engagement through partnerships with academic institutions, research organizations, industries, and intergovernmental agencies. These collaborations are focused on co-creating sustainable solutions aligned with the United Nations' 2030 Agenda for Sustainable Development.

Research Collaboration and Scholarly Impact [Source: SciVal]

KITS has significantly enhanced its international research footprint through high-impact collaborations. According to the recent *Times Higher Education (THE) Impact Rankings data (2025)*, the University achieved a **24.4% rate of international collaboration** across **574 scholarly publications**, with **6,147 total citations** and an **average of 10.7 citations per publication**. The University's **Field-Weighted Citation Impact (FWCI) of 1.48** exceeds the global benchmark (1.00), reflecting the quality and global relevance of its research outputs.

Over the past five years, KITS's scholarly productivity has grown steadily—from **3,869 research outputs during 2019–2023** to **4,476 publications between 2020–2024**, representing an upward trajectory in both quantity and quality of research contributions. This growth is supported by active participation in global scientific networks, joint research programs, and multi-institutional publications addressing climate resilience, sustainable engineering, digital innovation, and environmental sustainability.

Major International Collaborations [Source: SciVal]

KITS maintains strategic partnerships with over 22 leading international universities and institutions, including:

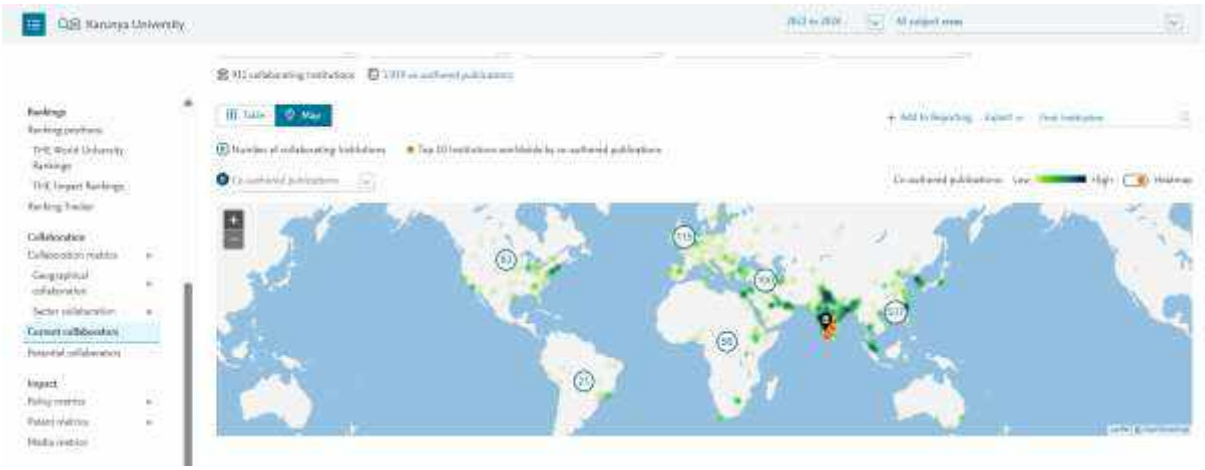
- **National Kaohsiung University of Science and Technology, Taiwan**
- **Budapest University of Technology and Economics, Hungary**
- **King Saud University, Saudi Arabia**
- **Clemson University, USA**
- **University of Malaya, Malaysia**
- **Bar-Ilan University and Ben-Gurion University of the Negev, Israel**
- **Vilnius University, Lithuania**
- **Cape Breton University, Canada**
- **Tel Aviv University, Israel**
- **Illinois Institute of Technology, USA**

These collaborations foster mutual research, faculty exchange, co-guided Ph.D. programs, curriculum innovation, and joint publications, enabling faculty and students to work on global sustainability projects.

1. International collaboration - Research Publications

Metric	Publication Share	Scholarly Output	Citations	Citations per Publication	Field-Weighted Citation Impact
International collaboration	245.4%	574	6,147	10.7	1.48

i. Geographical Locations



ii. Collaborators

S No	Institution	Country/Region
1	National Kaohsiung University of Science and Technology	Taiwan
2	Budapest University of Technology and Economics	Hungary
3	King Saud University	Saudi Arabia
4	University of Oradea	Romania
5	National Cheng Kung University	Taiwan

6	Clemson University	United States
7	Menoufia University	Egypt
8	Yeungnam University	South Korea
9	Tunghai University	Taiwan
10	University of Central Florida	United States
11	University of Malaya	Malaysia
12	Fundación Centro Tecnolóxico da Carne	Spain
13	University of Vigo	Spain
14	Addis Ababa Science and Technology University	Ethiopia
15	Yonsei University	South Korea
16	Purdue University Fort Wayne	United States
17	East Carolina University	United States
18	King Mongkut's University of Technology Thonburi	Thailand
19	University of Gävle	Sweden
20	King Khalid University	Saudi Arabia
21	City University of Hong Kong	Hong Kong
22	The University of Electro-Communications	Japan
23	National Science and Technology Development Agency Thailand	Thailand
24	Wolaita Sodo University	Ethiopia
25	Noakhali Science and Technology University	Bangladesh
26	University of Tabuk	Saudi Arabia
27	Zayed University	United Arab Emirates
28	Bangladesh Agricultural University	Bangladesh
29	Chulalongkorn University	Thailand
30	University of Waikato	New Zealand
31	Thuyloi University	Viet Nam
32	Kasetsart University	Thailand
33	National Chin-Yi University of Technology Taiwan	Taiwan
34	Silpakorn University	Thailand
35	Suranaree University of Technology	Thailand
36	Universiti Teknologi Malaysia	Malaysia
37	Nanjing University of Aeronautics and Astronautics	China
38	Taif University	Saudi Arabia
39	Gyeongsang National University	South Korea
40	Swinburne University of Technology	Australia
41	Universiti Putra Malaysia	Malaysia
42	Asian Institute of Medicine, Science & Technology	Malaysia
43	Ohio State University	United States
44	University of Massachusetts Boston	United States
45	Kafkas University	Turkey
46	Xi'an Jiaotong University	China
47	Polytechnic University of Valencia	Spain
48	Prince Sattam Bin Abdulaziz University	Saudi Arabia
49	Korea Institute of Industrial Technology	South Korea
50	Sultan Qaboos University	Oman
51	University of Westminster	United Kingdom

52	Sun Yat-Sen University	China
53	Debre Tabor University	Ethiopia
54	Instituto Tecnológico de Tijuana	Mexico
55	Institute of Animal Reproduction and Food Research of the Polish Academy of Sciences	Poland
56	Polish Academy of Sciences	Poland
57	Islamic Azad University	Iran
58	University of Extremadura	Spain
59	University of Hertfordshire	United Kingdom
60	COMSATS University Islamabad	Pakistan
61	HITEC University	Pakistan
62	Cairo University	Egypt
63	Recep Tayyip Erdogan University	Turkey
64	IHE Delft Institute for Water Education	Netherlands
65	ESSCA School of Management	France
66	Polytechnic University of Turin	Italy
67	University of Turin	Italy
68	Prince Mohammad Bin Fahd University	Saudi Arabia
69	Ural Federal University	Russian Federation
70	Universidad de Tarapacá	Chile
71	Arba Minch University	Ethiopia
72	Al Jouf University	Saudi Arabia
73	Ton Duc Thang University	Viet Nam
74	Bangladesh Council of Scientific and Industrial Research	Bangladesh
75	Purdue University	United States
76	American University in Cairo	Egypt
77	Mettu University	Ethiopia
78	Southern Marine Science and Engineering Guangdong Laboratory - Guanzhou	China
79	University of Vaasa	Finland
80	Ambo University	Ethiopia
81	Princess Nourah Bint Abdulrahman University	Saudi Arabia
82	Tomsk State University	Russian Federation
83	Edith Cowan University	Australia
84	University of Rijeka	Croatia
85	Bar-Ilan University	Israel
86	Imam Khomeini International University	Iran
87	Kyung Hee University	South Korea
88	Sanaa University	Yemen
89	Sunway University	Malaysia
90	National Taiwan University	Taiwan
91	Kiel University	Germany
92	Ningbo University	China
93	Kaohsiung Medical University	Taiwan
94	Michigan State University	United States
95	Kebri Dehar University	Ethiopia
96	Council for Scientific and Industrial Research	South Africa

97	Tshwane University of Technology	South Africa
98	University of West Attica	Greece
99	Chaoyang University of Technology	Taiwan
100	American University of the Middle East	Kuwait
101	Southern University and A&M College	United States
102	Universiti Tun Hussein Onn Malaysia	Malaysia
103	Dong-A University	South Korea
104	King Abdulaziz City for Science and Technology	Saudi Arabia
105	University of Pretoria	South Africa
106	Çankiri Karatekin University	Turkey
107	Islamia University	Pakistan
108	Makerere University	Uganda
109	Aurel Vlaicu University of Arad	Romania
110	Vasile Goldiș Western University of Arad	Romania
111	Sindh Madressatul Islam University	Pakistan
112	Jiangsu University	China
113	Dijlah University College	Iraq
114	University Of Anbar	Iraq
115	Hawassa University	Ethiopia
116	South China University of Technology	China
117	Daffodil International University	Bangladesh
118	Haramaya University	Ethiopia
119	Abu Dhabi Polytechnic	United Arab Emirates
120	Kyungpook National University	South Korea
121	Assiut University	Egypt
122	Najran University	Saudi Arabia
123	University of Science and Culture	Iran
124	Western Sydney University	Australia
125	University of Johannesburg	South Africa
126	University of Warwick	United Kingdom
127	Instituto Tecnológico de Sonora	Mexico
128	University of Sri Jayewardenepura	Sri Lanka
129	Czech Technical University in Prague	Czech Republic
130	King Mongkut's University of Technology North Bangkok	Thailand
131	University of Seville	Spain
132	Accenture	United States
133	California State University Fullerton	United States
134	Kuwait College of Science and Technology	Kuwait
135	Shaheed Benazir Bhutto University	Pakistan
136	Deakin University	Australia
137	Zagazig University	Egypt
138	Al-Imam Muhammad Ibn Saud Islamic University	Saudi Arabia
139	Universidade de São Paulo	Brazil
140	Chonnam National University	South Korea
141	Northeastern University China	China
142	Molloy University	United States
143	Silesian University of Technology	Poland

144	INRAE	France
145	Université d'Orléans	France
146	Bangladesh Atomic Energy Commission	Bangladesh
147	Jeonbuk National University	South Korea
148	Lanzhou University	China
149	Soonchunhyang University	South Korea
150	Florida Gulf Coast University	United States
151	Jimma University Ethiopia	Ethiopia
152	Dongguk University	South Korea
153	Dhofar University	Oman
154	International Rice Research Institute	Philippines
155	Agricultural Research Center, Giza	Egypt
156	Pusan National University	South Korea
157	University of Houston	United States
158	Higher Colleges of Technology	United Arab Emirates
159	Pohang University of Science and Technology	South Korea
160	Universitas Hasanuddin	Indonesia
161	National Dong Hwa University	Taiwan
162	University of Technology Sydney	Australia
163	Peng Cheng Laboratory	China
164	Sookmyung Women's University	South Korea
165	University of Windsor	Canada
166	Universidade Federal Fluminense	Brazil
167	NYU Tandon School of Engineering	United States
168	New York University	United States
169	Al-Farahidi University	Iraq
170	Henan Normal University	China
171	University of Alberta	Canada
172	Leibniz University Hannover	Germany
173	Selcuk University	Turkey
174	Al-Amarah University College	Iraq
175	Université du Québec à Trois-Rivières	Canada
176	Abant Izzet Baysal University	Turkey
177	Ruder Boskovic Institute	Croatia
178	Chung-Ang University	South Korea
179	Georgia Institute of Technology	United States
180	Northeastern State University	United States
181	University of Salento	Italy
182	Rawalpindi Medical College	Pakistan
183	King Abdulaziz University	Saudi Arabia
184	Free University of Berlin	Germany
185	Incheon National University	South Korea
186	University College London	United Kingdom
187	University of Management and Technology	Pakistan
188	King Faisal University	Saudi Arabia
189	Universidade Federal de Viçosa	Brazil
190	University of Helsinki	Finland

191	University of Illinois at Chicago	United States
192	China Medical University Taichung	Taiwan
193	Al-Turath University College	Iraq
194	Northwest University China	China
195	Shanghai Jiao Tong University	China
196	Princess Sumaya University for Technology	Jordan
197	Beni-Suef University	Egypt
198	National University of Singapore	Singapore
199	Amity University Dubai	United Arab Emirates
200	Al-Safwa University College	Iraq
201	Future University in Egypt	Egypt
202	Imam Ja'afar Al-Sadiq University	Iraq
203	National Central University	Taiwan
204	Toronto Metropolitan University	Canada
205	Universidade Estadual de Campinas	Brazil
206	Universidade Federal Rural do Rio de Janeiro	Brazil
207	Uskudar University	Turkey
208	Jazan University	Saudi Arabia
209	Curtin University	Australia
210	Kyungil University	South Korea
211	Southeast University, Nanjing	China
212	Liverpool John Moores University	United Kingdom
213	Technical University of Madrid	Spain
214	Kuwait University	Kuwait
215	Umm Al-Qura University	Saudi Arabia
216	Cracow University of Technology	Poland
217	Kerman Graduate University of Advanced Technology	Iran
218	University of Texas at Austin	United States
219	Applied Science Private University	Jordan
220	Imperial College London	United Kingdom
221	Charles Darwin University	Australia
222	Asian University for Women	Bangladesh
223	Sylhet Agricultural University	Bangladesh
224	University of North Carolina at Chapel Hill	United States
225	Manchester Metropolitan University	United Kingdom
226	Near East University	Turkey
227	People's Friendship University of Russia	Russian Federation
228	Amol University of Special Modern Technologies	Iran
229	Esfarayen University of Technology	Iran
230	KTH Royal Institute of Technology	Sweden
231	Konkuk University	South Korea
232	Mansoura University	Egypt
233	National Institute of Advanced Industrial Science and Technology	Japan
234	National Sun Yat-sen University	Taiwan
235	Taiz University	Yemen
236	Technological University Dublin	Ireland

237	Tokyo University of Science	Japan
238	University of Sulaimani	Iraq
239	University of Tsukuba	Japan
240	West University of Timisoara	Romania
241	Universiti Malaysia Pahang Al-Sultan Abdullah	Malaysia
242	Abu Dhabi University	United Arab Emirates
243	Institute for Space Sciences	Romania
244	Khalifa University of Science and Technology	United Arab Emirates
245	National Institute for Laser, Plasma and Radiation Physics	Romania
246	Children's Memorial Hospital	United States
247	China University of Geosciences, Beijing	China
248	Ferdowsi University of Mashhad	Iran
249	Illinois Institute of Technology	United States
250	Marshall University	United States
251	Northwestern University	United States
252	University of Adelaide	Australia
253	University of Staffordshire	United Kingdom
254	Yildiz Technical University	Turkey
255	University of Leeds	United Kingdom
256	Agricultural Research Organization of Israel	Israel
257	Technion-Israel Institute of Technology	Israel
258	Ionian University	Greece
259	University of Thessaly	Greece
260	Stellenbosch University	South Africa
261	University of Sharjah	United Arab Emirates
262	Cankaya University	Turkey
263	National Technical University of Athens	Greece
264	Ulster University	United Kingdom
265	Federal University of Technology, Akure	Nigeria
266	National Taipei University of Technology	Taiwan
267	Nepal Agricultural Research Council	Nepal
268	Tribhuvan University	Nepal
269	Kessler Foundation	United States
270	Qassim University	Saudi Arabia
271	Al-Muthanna University	Iraq
272	Cardiff University	United Kingdom
273	Israel Ministry of Agriculture and Rural Development	Israel
274	Macquarie University	Australia
275	University of Southern California	United States
276	University of the Faroe Islands	Faroe Islands
277	Wenzhou-Kean University	China
278	Koszalin University of Technology	Poland
279	Universidad Católica de la Santísima Concepción	Chile
280	University of Hail	Saudi Arabia
281	University of Plymouth	United Kingdom
282	Sumy State University	Ukraine

283	Zhejiang Provincial Center for Disease Control and Prevention	China
284	Kano University of Science and Technology	Nigeria
285	National University of Sciences and Technology Pakistan	Pakistan
286	MOH Holdings Pte Ltd.	Singapore
287	University of Carthage	Tunisia
288	University of Valladolid	Spain
289	University of the Basque Country	Spain
290	Al Yamamah University	Saudi Arabia
291	Innopolis University	Russian Federation
292	Nanyang Technological University	Singapore
293	National Research Foundation	South Africa
294	University of Jendouba	Tunisia
295	University of Minnesota Twin Cities	United States
296	University of South Africa	South Africa
297	University of Strathclyde	United Kingdom
298	Vietnam National University, Hanoi	Viet Nam
299	iThemba Laboratory for Accelerator Based Sciences	South Africa
300	Institut national des sciences appliquées Lyon	France
301	Suffolk University	United States
302	Tsinghua University	China
303	University of Guelph	Canada
304	Chungbuk National University	South Korea
305	International Islamic University Chittagong	Bangladesh
306	Korea University	South Korea
307	McGill University	Canada
308	National Yunlin University of Science and Technology	Taiwan
309	Nelson Mandela University	South Africa
310	Universiti Malaysia Kelantan	Malaysia
311	University of Sfax	Tunisia
312	Université de Bretagne Occidentale	France
313	Abu Dhabi Health Services Company	United Arab Emirates
314	Couger Inc.	Japan
315	Higher College of Technology	Oman
316	Universiti Sains Malaysia	Malaysia
317	Xinxiang University	China
318	Flemish Institute for Technological Research	Belgium
319	Halic University	Turkey
320	King Mongkut's Institute of Technology Ladkrabang	Thailand
321	Providence University Taiwan	Taiwan
322	Universidad Nacional San Agustín de Arequipa	Peru
323	University of Michigan, Ann Arbor	United States
324	American University in the Emirates	United Arab Emirates
325	Universidade Federal do Rio de Janeiro	Brazil
326	Al-Mustaqbal University College	Iraq
327	Alexandria University	Egypt
328	Bahrain Polytechnic	Bahrain

329	Ondokuz Mayis University	Turkey
330	Shenyang Normal University	China
331	Suleyman Demirel University	Turkey
332	Universiti Teknologi Petronas	Malaysia
333	Babol Noshirvani University of Technology	Iran
334	Delft University of Technology	Netherlands
335	Guangxi University for Nationalities	China
336	Mehmet Akif Ersoy University	Turkey
337	University of Cambridge	United Kingdom
338	Al Musanna College of Technology	Oman
339	Tianjin University	China
340	Universiti Malaysia Terengganu	Malaysia
341	Aksum University	Ethiopia
342	Benha University	Egypt
343	Brunel University London	United Kingdom
344	Durban University of Technology	South Africa
345	Duy Tan University	Viet Nam
346	Henan Polytechnic University	China
347	Huazhong Agricultural University	China
348	Institute of Science Tokyo	Japan
349	International Livestock Research Institute	Kenya
350	International Telematic University Uninettuno	Italy
351	Royal Commission for Jubail and Yanbu	Saudi Arabia
352	Technical University of Munich	Germany
353	Trinity College Dublin	Ireland
354	Universidade do Estado do Amazonas	Brazil
355	University of Antwerp	Belgium
356	University of Saskatchewan	Canada
357	University of Surrey	United Kingdom
358	Université de Tunis El Manar	Tunisia
359	China University of Mining and Technology	China
360	South Eastern University of Sri Lanka	Sri Lanka
361	University of Georgia	United States
362	University of Oxford	United Kingdom
363	University of Queensland	Australia
364	Howard University	United States
365	Istanbul University - Cerrahpaşa	Turkey
366	University of Rome La Sapienza	Italy
367	Boston Children's Hospital	United States
368	Harvard University	United States
369	Northeastern University	United States
370	Universidade Federal do Paraná	Brazil
371	Wollega University	Ethiopia
372	International Islamic University Malaysia	Malaysia
373	Middle East University, Jordan	Jordan
374	University of Calgary	Canada
375	University of Luxembourg	Luxembourg

376	Alstom	Switzerland
377	INTI International University	Malaysia
378	Khulna University of Engineering and Technology	Bangladesh
379	King Fahd University of Petroleum and Minerals	Saudi Arabia
380	Kunming University of Science and Technology	China
381	Mälardalen University	Sweden
382	National Tsing Hua University	Taiwan
383	RAS - Boreskov Institute of Catalysis, Siberian Branch	Russian Federation
384	Russian Academy of Sciences	Russian Federation
385	UCB S.A.	Belgium
386	Universidade Católica Dom Bosco	Brazil
387	Universiti Geomatika Malaysia	Malaysia
388	Universiti Tunku Abdul Rahman	Malaysia
389	University Northern Colorado	United States
390	University of Nizwa	Oman
391	University of Reading	United Kingdom
392	University of Texas at El Paso	United States
393	Université de Maroua	Cameroon
394	Arizona State University	United States
395	Cape Peninsula University of Technology	South Africa
396	Duke University	United States
397	George Mason University	United States
398	Karlsruhe Institute of Technology	Germany
399	New Uzbekistan University	Uzbekistan
400	University of California at Berkeley	United States
401	University of Fujairah	United Arab Emirates
402	University of Oklahoma	United States
403	Valdosta State University	United States
404	AMA International University	Bahrain
405	Aswan University	Egypt
406	Ataturk University	Turkey
407	Chang'an University	China
408	China University of Mining & Technology, Beijing	China
409	Comenius University	Slovakia
410	De Montfort University	United Kingdom
411	Erzurum Technical University	Turkey
412	Jigjiga University	Ethiopia
413	Leibniz Institute for Catalysis	Germany
414	Mahasarakham University	Thailand
415	Manipal Academy of Higher Education, Dubai	United Arab Emirates
416	National University of Kaohsiung	Taiwan
417	National University of Lesotho	Lesotho
418	New Jersey Institute of Technology	United States
419	Sakarya University of Applied Sciences	Turkey
420	Swedish University of Agricultural Sciences	Sweden
421	Tallinn University of Technology	Estonia
422	Technical University of Denmark	Denmark

423	Universidad Internacional Menéndez Pelayo	Spain
424	University of Galway	Ireland
425	Wollo University	Ethiopia
426	Worcester Polytechnic Institute	United States
427	Wuhan University of Technology	China
428	Örebro University	Sweden
429	University of Craiova	Romania
430	The Islamic University, Najaf	Iraq
431	Lebanese American University	Lebanon
432	University of Lagos	Nigeria
433	Jeju National University	South Korea
434	National Penghu University of Science & Technology	Taiwan
435	Universidade Estadual do Norte Fluminense	Brazil
436	University of Khorfakkan	United Arab Emirates
437	Agency for Science, Technology and Research, Singapore	Singapore
438	Ankara University	Turkey
439	Arab Academy for Science, Technology and Maritime Transport	Egypt
440	Ashland University	United States
441	Boston University	United States
442	City of Hope National Med Center	United States
443	Dilla University	Ethiopia
444	Fundação Oswaldo Cruz	Brazil
445	Gh. Asachi Technical University	Romania
446	Haiphong University	Viet Nam
447	Iowa State University	United States
448	Maharishi International University	United States
449	Marquette University	United States
450	National Chung Cheng University	Taiwan
451	National Chung Hsing University	Taiwan
452	Qatar University	Qatar
453	Shaqra University	Saudi Arabia
454	Singidunum University	Serbia
455	Stefan Cel Mare University	Romania
456	Superior University	Pakistan
457	Texas Tech University Health Sciences Center El Paso	United States
458	UCSI University	Malaysia
459	United Arab Emirates University	United Arab Emirates
460	University of Dhaka	Bangladesh
461	University of Idaho	United States
462	University of Kassel	Germany
463	University of Memphis	United States
464	National University of Science & Technology (by Merger of Caledonian College of Engineering and Oman Medical College)	Oman
465	Ruhr University Bochum	Germany
466	University of Indonesia	Indonesia
467	University of Teramo	Italy

468	Adama Science and Technology University	Ethiopia
469	Asia University Taiwan	Taiwan
470	Botho University	Botswana
471	CSIC	Spain
472	CSIC - Biological Research Center	Spain
473	Chengde Medical University	China
474	Eastern University	United States
475	Hanyang University	South Korea
476	Hongik University	South Korea
477	Imam Abdulrahman Bin Faisal University	Saudi Arabia
478	Korea Maritime and Ocean University	South Korea
479	Leeds Teaching Hospitals NHS Trust	United Kingdom
480	Monash University Malaysia	Malaysia
481	Nottingham Trent University	United Kingdom
482	Prince Sultan University (PSU)	Saudi Arabia
483	Rutgers - The State University of New Jersey, Newark	United States
484	Saint Peter's University	United States
485	Sharif University of Technology	Iran
486	Sungkyunkwan University	South Korea
487	Universidad Autonoma de Coahuila	Mexico
488	Universidad Internacional de La Rioja	Spain
489	University of Jeddah	Saudi Arabia
490	University of Pisa	Italy
491	University of Texas Health Science Center at Houston	United States
492	Vietnamese Academy of Science and Technology	Viet Nam
493	Craiova University of Medicine and Pharmacy	Romania
494	Lincoln University (of Pennsylvania)	United States
495	Lincoln University College	Malaysia
496	Tallinn University	Estonia
497	Afyon Kocatepe University	Turkey
498	Ain Shams University	Egypt
499	Amity University, Tashkent	Uzbekistan
500	Anderson University	United States
501	Asia Pacific University of Technology and Innovation	Malaysia
502	Bahar Dar University	Ethiopia
503	California Institute of Technology	United States
504	Concordia University	Canada
505	Creighton University	United States
506	Düsseldorf University of Applied Sciences	Germany
507	Escuela Superior Politécnica de Chimborazo	Ecuador
508	Federal University, Lokoja	Nigeria
509	Friedrich Schiller University Jena	Germany
510	Global Foundries, Inc.	United States
511	Harbin Institute of Technology	China
512	Heriot-Watt University	United Kingdom
513	Kennesaw State University	United States
514	Lebanese French University	Iraq

515	Mae Fah Luang University	Thailand
516	Massachusetts Institute of Technology	United States
517	Samsung	South Korea
518	San Jose State University	United States
519	Shandong Normal University	China
520	Southern Federal University	Russian Federation
521	Suez Canal University	Egypt
522	The University of Hong Kong	Hong Kong
523	Transilvania University of Brasov	Romania
524	United Nations Children's Fund	United States
525	Universidad Católica Santo Toribio de Mogrovejo	Peru
526	Universidad Continental	Peru
527	Universidade Estadual Paulista Júlio de Mesquita Filho	Brazil
528	Universidade Federal do Piauí	Brazil
529	Universidade Regional do Cariri	Brazil
530	Universidade de Fortaleza	Brazil
531	Universiti Brunei Darussalam	Brunei Darussalam
532	Universiti Sultan Zainal Abidin	Malaysia
533	University of Georgia Griffin Campus	United States
534	University of Leicester	United Kingdom
535	University of Lisbon	Portugal
536	University of Maryland, College Park	United States
537	University of Minho	Portugal
538	University of Ottawa	Canada
539	University of Pittsburgh	United States
540	University of Porto	Portugal
541	University of Tehran	Iran
542	University of Ulsan	South Korea
543	Wenzhou Medical University	China
544	Yiwu Central Hospital	China

iii. Ranking Tracker

2. International collaboration - Project

Dr. N. Anand is leading a prestigious international research project titled “Strategies for Improving the Performance of Concrete under Extreme Fire Conditions”, funded by the Ministry of Innovation and Technology of Hungary through the National Research, Development and Innovation Fund. This collaborative project, conducted in partnership with the Budapest University of Technology and

Economics, spans from December 19, 2024, to December 19, 2027, with a sanctioned grant of €56,800. The project aims to develop advanced concrete formulations and structural strategies capable of withstanding high-temperature and fire-related stresses, ensuring safety and resilience in civil infrastructure. Through innovative material design, thermal analysis, and performance testing, Dr. Anand's work contributes to enhancing the fire endurance and sustainability of modern construction materials, addressing critical challenges faced in urban infrastructure and disaster mitigation.

Through its international collaboration on the *Evaluation of Ecosystem Services in the Context of Climate Change - Kol Wetlands, India* project, funded by the Ramsar Regional Center - East Asia (non-governmental agency), Karunya Institute of Technology and Sciences is advancing best practices for achieving the Sustainable Development Goals (SDGs). With a funding support of ₹7.98 lakh, this project focuses on assessing ecosystem services within the Kol Wetlands in the context of climate change impacts. Insights gained from this research aim to guide sustainable ecosystem management, biodiversity conservation, and climate adaptation strategies, contributing directly to SDG targets related to environmental sustainability, climate action, and ecosystem preservation.

Name of the Project	Name of the Funding agency	Funds provided
Strategies for Improving the Performance of Concrete under Extreme Fire Conditions	Ministry of Innovation and Technology of Hungary through the National Research, Development and Innovation Fund	€56,800
Evaluation of Ecosystem Services in the Context of Climate Change - Kol Wetlands, India	Ramsar Regional Center - East Asia	7.98 Lakh
Design of 2 TPD Rotary Kiln Gasification Pilot Plant with high CV syngas Production	Techurja	10 Lakh

3. German Collaboration

Dr. E. J. James and a team of experts successfully completed a project titled "Hydro-Ecological Assessment for Integrated Management of Point Calimere Ramsar Site", commissioned by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The project focuses on assessing and enhancing the ecological and hydrological balance of the Point Calimere wetland ecosystem to support sustainable environmental management practices.

CONTRACT FOR CONSULTING FIRMS AND OTHER SERVICE PROVIDERS

giz

Contract no.: 83341685
Project: Wetlands Management für Biodiversitäts- und Klimaschutz
Processing no.: 16.9020.5-001.00
Processed by: Sanjay Dhar
Telephone:

Based on the General Terms of Contract (local) the present Contract is concluded between the
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, represented by

German Development Cooperation
GIZ Office New Delhi
46, Paschimi Marg
Vasant Vihar
NEW DELHI - 110 057, INDIA

(referred to hereinafter as "GIZ")

and

. Karunya Institute of Technology

641114 Coimbatore, Tamil Nadu
India
.

(referred to hereinafter as "Contractor").

giz

1. **Purpose of the Contract**

   Contract for Hydro-ecological assessment for integrated management of Point Calimere Ramsar site

2. **Terms of Reference**

   The Contractor undertakes to perform the services listed in the Special Agreement (Annex 1).

3. **Assignment of Personnel**

   In order to perform the services, it is anticipated that during the period from 16.12.2019 to 30.09.2020, the Contractor shall assign the following experts:

   Dr. E. J. James & Other Experts as Experts

4. **Reports/Appraisals**

   Reporting/Submission of the study/The handover of work is governed by the Special Agreement (see Annex 1).

5. **Remuneration**

   For the performance of services, the Contractor shall be remunerated as follows:

   Dr. E. J. James & Other Experts
   Expert
   2,330,000.00 INR x up to 1.0 Expert day/s
   lump sum up to 2,330,000.00 INR
   Professional fee to Experts, Ref. Spl. Agr

   Per diem/ daily allowance
   1,000.00 INR x up to 200.0 Day/s
   lump sum up to 200,000.00 INR
   Per diem for 200 days, at INR 1,000/day.

   Accommodation
   800,000.00 INR x up to 1.0 Night/s
   against provision of evidence up to 800,000.00 INR
   Stay for 200 nights on actuals, upto max. of INR 800,000

Special Agreement

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Contract no:	83341685
Project:	Wetlands Management für Biodiversitäts- und Klimaschutz
Project no:	16.9020.5-001.00
Contractor:	. Karunya Institute of Technology

1. Terms of Reference

Wetlands exist as transitional ecosystems at land and water interface which are represented by various types including lakes, marshes, reservoirs, mangroves, lagoons, estuaries etc. As highly productive ecosystems, wetlands are vital for hydrological cycle and support rich biological diversity. Globally, wetlands are threatened by reclamation and degradation through drainage and landfill, pollution, hydrological alteration, over-exploitation, and climate change resulting in loss of biodiversity and disruption in ecosystem benefits to the society.

Wetlands in India are integral to biodiversity conservation, water and food security, and climate protection. MoEFCC, in partnership with GIZ, is implementing a Technical Cooperation project "Wetlands management for biodiversity and climate protection" with funding support from the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) under the International Climate Initiative (IKI). The goal of the project is to strengthen the institutional framework and enhance capacities for an ecosystem-based integrated management of wetlands of international importance (Ramsar sites) in India.

The project is implemented in close cooperation with the NPCA of the MoEFCC with an overall objective to establish an integrated management approach at four Ramsar sites (namely, Pong, Renuka, Bhitarkanika and Point Calimere). In order to facilitate project implementation, Wetland Research and Training Centre, Chilika Development Authority (CDA) has been identified as a resource centre in partnership with the respective State Wetlands Authorities and site level management institutions. Wetlands International South Asia (WISA) is the technical partner in project implementation.

Deutsche Gesellschaft für
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Chairman of the Supervisory Board
Martin Jäger, State Secretary

Management Board
Tanja Gönner (Chair)
Dr Christoph Beier (Vice-Chair)
Thorsten Schäfer-Gümbel

Commerzbank AG Frankfurt am Main
BIC (SWIFT): COBADEFFXXX
IBAN: DE45 5004 0000 0588 9555 00

Three main output areas define the implementation approach of the project:

- Integrated management planning for 4 pilot Ramsar sites based on biodiversity, ecosystem services and climate change risks.
- Capacity development of national, state and site level stakeholders for integrated wetland management.
- Development of a wetland monitoring system, including an instrument to track management effectiveness.

1.2 Context of the assignment

Coastal wetlands represent some of the most productive ecosystems and provide important ecological services such as flood attenuation, water and carbon storage, shoreline stabilization, and wildlife habitat. Coastal wetlands also act as a natural filter that improves water quality before it reaches the ocean. Hydrological processes are the major driver of coastal wetlands function, affecting wetland formation, structure, productivity and ecosystem services provisioning. Hydrological variations of coastal wetlands are strongly influenced by -1) coastal processes (i.e., tide, sea level rise (SLR), and saltwater intrusion), 2) near-shore climate and 3) hydrological processes from adjacent upland terrestrial ecosystems. These hydrological conditions affect numerous abiotic factors, including nutrient availability, soil oxygen, and salinity in both coastal and inland wetlands, which in turn determine the biota that establish in a wetland. On the other hand, these biotic components can alter the hydrology and other physicochemical features of the wetland. Maintaining the hydrological regime of a wetland and its natural variability is therefore necessary to maintain the ecological characteristics of the wetland, including biodiversity and ecosystem services.

1.3 Objectives and Scope of the Assignment

Point Calimere Ramsar site covering an area of 38,500 ha comprises of Point Calimere Wildlife Sanctuary (2147 ha), Panchanadikulam Wetland (8097 ha), Thalainayar Reserved Forest (1236 ha), Muthupet Mangroves (11900 ha) and unsurveyed salt swamp (15120 ha)[1]. Except the Thalainayar Reserved Forest, the remaining constituents are parts of the Great Vedaranyam Swamp. The Ramsar Site is a mix of salt swamps, mangroves, backwaters, mudflats, grasslands and Tropical Dry Evergreen Forest. It supports nearly 257 species of birds, 119 of them waterbirds, including vulnerable species. The site serves as the breeding ground for many commercially important species of fish, as well as for prawns and crabs. Many fishermen and agriculturalists are dependent on the wetland for their livelihood. The spread of *Prosopis*, salinisation of groundwater and changes in inflow of freshwater, are all seen as threats to the wetland.

The hydrology of Point Calimere wetland Ramsar site is dynamic owing to daily, seasonal, and interannual changes in water levels caused by tides, river flow, and

[1] https://www.forests.tn.gov.in/pages/view/Ramsar-Site-Of-TN

Collaboration with NGOs for SDGs

At Karunya Institute of Technology and Sciences (KITS), partnerships form the cornerstone of its mission to advance the United Nations Sustainable Development Goal 17 – Partnerships for the Goals. The University's commitment to fostering inclusive and equitable growth is reflected through its vibrant ecosystem of collaborations that unite academia, community, industry, and global organizations to create meaningful social impact.

The Centre for Community Academia Collaboration (CCAC) serves as the institutional hub for social outreach and community engagement, transforming academic expertise into sustainable development practices. Through the adoption of 14 villages in the Thondamuthur block of Coimbatore District, CCAC has implemented a wide range of community-based initiatives such as Remedial Education Centres, Women Empowerment through Self-Help Groups, Vocational Training in Poultry and Vermicomposting, and Livelihood Promotion Programs. These initiatives empower rural and tribal communities while nurturing the spirit of participatory development and knowledge sharing.

In partnership with Samiti for Education, Environment, Social and Health Action (SEESHA), KITS extends its outreach across India by offering vocational and entrepreneurial training, computer literacy programs, and skill-based courses such as tailoring, jute product making, beautician training, and Tally ERP. These initiatives directly contribute to the empowerment of women, youth, and differently-abled individuals, thereby advancing SDG 1 (No Poverty), SDG 4 (Quality Education), SDG 5 (Gender Equality), and SDG 8 (Decent Work and Economic Growth).

The University also fosters robust academic and professional collaborations through international and national conferences organized by its departments and Professional Societies. Events such as the International Conference on Computer Vision and Internet of Things (ICCVIoT'23), International Conference on Robotics, Automation and Intelligent Systems (ICRAINS'24), and HACCP Level-3 Training Programme demonstrate KITS's commitment to SDG 9 (Industry, Innovation & Infrastructure) and SDG 17 (Partnerships for the Goals) by facilitating cross-border academic exchange, research innovation, and global cooperation.

Further extending its partnership model, KITS promotes student volunteering and civic engagement through its National Service Scheme (NSS), National Cadet Corps (NCC), Rotaract Clubs, and other student-led organizations. Over hundreds of extension activities including health and eye camps, awareness rallies, orphanage visits, environmental campaigns, and skill development programs—students engage directly with marginalized communities, developing leadership, empathy, and social responsibility.

Together, these initiatives exemplify KITS's holistic approach to sustainable partnerships—where education, research, and compassion converge to build resilient communities, nurture innovation, and drive progress toward the United Nations Sustainable Development Goals.

I. Centre for Community Academia Collaboration

The Centre for Community Academia Collaboration (CCAC) at KITS serves as the social outreach wing, dedicated to transforming academic knowledge and learning into meaningful benefits for rural and tribal communities. The University has adopted 14 villages in the Thondamuthur block of Coimbatore district, Tamil Nadu, as part of its community engagement initiatives.

To uphold Sustainable Development Goal (SDG) 4 – Quality Education, CCAC emphasizes that education empowers the mind, fuels imagination, fosters dignity, and paves the way for prosperity. It opens avenues for individuals to contribute meaningfully to a progressive and healthy society. In pursuit of this mission, several impactful educational and community-oriented activities have been undertaken to ensure inclusive and equitable quality education for all.

a) **Remedial Education Centres**

The CCAC has established 14 free Remedial Education Centres across 14 identified locations, benefiting around 220 students from underprivileged and tribal communities. Through these centres, students receive academic support and essential school supplies to enhance their learning experience. To promote effective teaching and ensure a comfortable learning environment, CCAC has also provided whiteboards, floor mats, and recreational kits, enabling students to learn efficiently and engage in productive leisure activities.

b) **Mushroom Cultivation**

As a part of women empowerment mushroom cultivation shed has been inaugurated in pachinampathy village it is CSR project implemented to empower the economically backward women and their self-sustain the mushrooms will be harvest by the villagers and sale it to the local people as per their need.

c) **Women Empowerment: Self Help Groups**

CCAC ensures and promotes voluntary associations of people who share a common concern and come together to support each other in addressing it. These groups typically focus on personal, social, or economic issues, so that the CCAC has took initiative and provide a platform for individuals to connect with others. We have formed 4 groups in different tribal villages. This peer support can be incredibly empowering as members share their experiences, offer empathy, and provide practical advice and encouragement. Participation in self-help groups can help individuals develop a sense of empowerment and control over their lives. By actively engaging in problem-solving within the group, members can gain confidence and self-esteem.

d) **Poultry and Vermi compost training**

The CCAC, in association with the School of Agricultural Sciences, organized a training program on poultry farming and vermicomposting to promote sustainable livelihood practices among rural communities. Around 30 participants from the villages of Sadivayal, Sevegapathy, Porethy, Pachinampathy, and Moongilmadaikuttai took part in the program. The sessions were conducted by expert faculty members, providing participants with practical insights and hands-on learning opportunities. The interactive discussions also allowed villagers to clarify their doubts and enhance their understanding of modern agricultural techniques.

		
Education Center	**Self Help Group**	**Poultry and Vermi compost**

II. Samiti for Education, Environment, Social and Health Action (SEESHA)

KITS in association with SEESHA offers a range of vocational training courses designed to empower people by helping them develop skills for economic independence. Conducted across India through SEESHA's vocational training centers, these programs teach skills such as tailoring, computer proficiency, bag making, and soft toy manufacturing. Some of these initiatives are conducted in partnership with respected government agencies like Jan Shikshan Sansthan.

Key Areas of SEESHA's Impact:

- Child & Youth Development
- Women Empowerment
- Elderly Care
- Support for Differently-Abled Individuals
- Health Outreach Projects
- Disaster Relief & Rehabilitation

SEESHA provides training, technical, and financial assistance to women aspiring to start entrepreneurial ventures, supporting them in setting up small businesses like petty shops, tiffin centers, and tailoring shops. For deserving participants who complete the tailoring program, SEESHA also provides free sewing machines.

Additionally, training on financial literacy—covering topics like savings and banking—is offered to help women manage both family and business finances effectively.

Programs Empowering Women and Supporting Sustainable Development

SEESHA's skill-training programs go beyond vocational education by offering follow-up support, such as self-employment guidance, job placement assistance, better access to markets and credit, SHG (self-help group) formation, and microfinancing for start-ups.

SEESHA Learning Centres: SEESHA currently operates 40 learning centres across vulnerable communities in India, offering a safe and supportive environment with after-school learning programs for nearly 3,000 children from underprivileged backgrounds. These centres aim to provide quality education and improve learning outcomes among children from deprived families. During this quarter, two new learning centres were established at Pakkiripalayam and Maligaimedu villages in Cuddalore district, benefiting 168 underprivileged children. In the Tamil Nadu HSC (+2) and 10th board examinations held in May, all 162 students from SEESHA Learning Centres across the state successfully passed with outstanding results. The toppers acknowledged that SEESHA's guidance and support played a crucial role in helping them achieve academic excellence despite challenging family circumstances.

SEESHA School Kit Project: Many children from disadvantaged families struggle to access quality education due to a lack of basic learning resources, limiting their ability to reach their full potential. To address this, SEESHA has been providing school kits each academic year, helping students begin their educational journey with joy and confidence, free from the worry of inadequate supplies. This year, the SEESHA School Kit Project aims to support 25,000 underprivileged students in their pursuit of quality education. The promotion and procurement of the school kits are currently in progress.

Tally ERP Prime Training: SEESHA's Tally ERP Prime training program for underprivileged youth and women focuses on upskilling to enhance employability and create sustainable livelihood opportunities among vulnerable communities. Beyond providing technical training, SEESHA also supports students in securing job placements, bridging the gap between education and employment. So far, over 160 students have been successfully trained and 20 students are currently undergoing training at the Vanagaram Skill Training Centre. Impressively, more than 50 graduates of the program have already secured well-paying positions in reputed firms, reflecting SEESHA's impact on empowering lives through skill development.

SHG & Seed Money Funding:

1. Self-Help Groups are formed in several field projects across India with the aim of helping disadvantaged women and creating sustainable Community-Based Organisations.

2. Each aspiring entrepreneur from the group is provided seed money to start micro-enterprises related to the training, with the funding support from the SEESHA-supported SHG.



Jute products-making courses in association with RSETI: SEESHA, in association with RSETI [Rural Self Employment Training Institutes], has been conducting vocational skill training programs such as jute bag-making, making of incense sticks & home-based products, Agarbati & wax products making in Cuddalore in an effort to create sustainable livelihoods and foster economic empowerment among rural youth & women from families primarily living below the poverty line (BPL). In this quarter, 70 women living below poverty line were trained in Cuddalore & Arakkonam project locations to make jute-based products. During the 13-day jute products making programme, students have learned to stitch a variety of items, including ladies' purses, handbags, office files, shopping bags, pencil pouches, keychains, dining table sets, mats, and wedding bags, etc.


Tailoring Training: In collaboration with DXC Technologies, SEESHA operates a tailoring training centre at Karunya Nagar, empowering 60 women from economically disadvantaged backgrounds through skill-based education offered in two daily batches. The program enables participants, particularly from rural and tribal communities, to gain financial independence by stitching garments such as skirts, churidars, and blouses for local customers. Notably, several trained women have formed a small cooperative group, collectively taking tailoring orders to sustain a steady source of income and promote community-based entrepreneurship.

Silk Thread Jewellery Making: SEESHA also trains women in crafting silk thread jewellery, which has gained popularity across India. This skill is particularly attractive for young women, and 8-9 participants have already started earning from their creations. Silk thread jewellery making is a flexible skill that allows women of all experience levels to create attractive, on-trend accessories. By equipping women with in-demand vocational skills and follow-up support, SEESHA is contributing to sustainable development and enhancing women's empowerment in communities across India.

Aari Work Training: Aari work is a specialized form of embroidery that involves stretching fabric tightly over a wooden frame and using a pen-like needle, similar to a crochet hook, to create intricate designs. Known for its delicate and fine threadwork, Aari embroidery features various types of zigzag stitching, making it a sought-after art form for its exquisite detail and craftsmanship. To receive certificates, trainees are required to complete record work, album work, and pass both theoretical and practical exams conducted by the trainer.

Beautician Training: The beautician courses cover a comprehensive range of skills, including personal grooming, makeup, skin treatment, hair styling, and nail art. After completing their cosmetology training, participants can either work as beauticians in established salons or start their own salons, helping clients enhance their appearance. Cosmetology offers a rewarding career path for individuals with a keen aesthetic sense.

Seed Money Beneficiaries: Among a group of 10 women, 5 were selected to receive ₹10,000 each as seed money to support their entrepreneurial ventures. Two of the beneficiaries, Mrs. Shyla (owner of Ever Bright Boutique) and Mrs. Rameshwari (owner of Susana's Beauty Parlour), have successfully established shops in Sappani Madai village, each earning approximately ₹500 daily from their businesses.

Started a new shop – Everbright boutique (tailor and aari shop) & Susana's beauty parlour at sapani madai road

Computer Training: Providing computer training in rural areas boosts academic performance and fosters a greater interest in learning. By developing computer skills, students adapt to modern learning approaches, gaining both knowledge and new abilities. SEESHA launched this initiative last month, beginning with 10 students from the rural community around Karunya Nagar.

Free Learning Centre for Underprivileged Children: SEESHA's Child Learning Centres aim to support first-generation learners in tribal and rural areas where access to quality education is limited. The children who attend these free evening learning centres come from impoverished families, many of whose parents are uneducated and unable to assist with schoolwork or assignments. With the support of volunteers, SEESHA operates 8 child learning centres across various rural villages in the Thondamuthur block. Even during the pandemic surge, these centres remained operational, benefiting over 290 children.

Alandurai Learning centre

Kallipalayam Learning centre

C

Thennamanallur Learning centre

To empower women from marginalized communities, support their income generation, and fulfill the entrepreneurial aspirations of underprivileged women, SEESHA, in collaboration with its CSR funding partner, DXC Technology India, has been offering training courses in various in-demand trades across multiple project locations in India.

III. Involvement of Professional Societies

i. a. 2nd International Conference on Frontiers in Chemical Sciences - 26.10.2023 & 27.10.2023

The conference brought together 200 researchers and eminent resource persons including Prof. Pierre H. Dixneuf from the University of Rennes, France, and Prof. Dr. Rene Michael Konigs from RWTH Aachen University, Germany. The event facilitated discussions on sustainable chemical innovations, green chemistry, and advanced materials, promoting cross-border academic collaboration. This initiative aligned with SDG 9 (Industry, Innovation & Infrastructure), SDG 12 (Responsible Consumption & Production), and SDG 17 (Partnerships for the Goals).

b. International Conference on Computer Vision and Internet of Things (ICCVIoT'23)

The ICCVIoT'23 convened global experts including Dr. Ines Chihi (University of Luxembourg), Dr. Deepak Mishra (IIST, Trivandrum), and Dr. Anastassia Angelopoulou (University of Westminster, UK) to explore applications of computer vision, AI, and IoT. With 58 participants, the conference strengthened international research partnerships and encouraged the exchange of technological insights relevant to digital innovation. The initiative supported SDG 4 (Quality Education), SDG 9 (Industry, Innovation & Infrastructure), and SDG 17 (Partnerships for the Goals).

c. 2 Days Training Programme - HACCP Level – 3

As part of its commitment to fostering cross-sectoral dialogue and capacity building aligned with the Sustainable Development Goals (SDGs), the Division of Food Processing Technology initiated a two-day HACCP Level-3 (Highfield Approved) training programme. This initiative was designed to strengthen competencies in food safety, hygiene, and quality management, directly supporting SDG 2 (Zero Hunger),

SDG 3 (Good Health and Well-being), and SDG 8 (Decent Work and Economic Growth). The department engaged with multiple national-level agencies—Aspire Training Research Consulting LLP (Ernakulam), TAK Safe Food Solution Pvt. Ltd. (Tiruppur), SGS Academy (Haryana), HGP Enterprise (Gujarat), and BSI Group India Pvt. Ltd. (Maharashtra)—to explore collaborative partnerships for conducting this internationally recognized certification. Through this initiative, KITS promoted industry–academia interaction, skill enhancement, and knowledge exchange in food technology, contributing to sustainable practices and global workforce readiness.

d. International Conference on Robotics, Automation and Intelligent Systems (ICRAINS' 24)

The conference featured distinguished experts such as Prof. Avital Bechar from the Volcani Center, Israel, and Dr. Joseph Winston from IGCAR, India, who shared insights on robotics and automation for sustainable technologies. With 70 participants, the event promoted interdisciplinary research and global partnerships. It addressed SDG 9 (Industry, Innovation & Infrastructure), SDG 11 (Sustainable Cities & Communities), and SDG 17 (Partnerships for the Goals).

e. International Conference on Circuits, Devices and Systems (ICDCS'24)

ICDCS'24 brought together experts from Bangladesh, Saudi Arabia, the USA, and India to discuss advances in electronics, nanotechnology, and semiconductor systems. The conference emphasized innovation in sustainable device design and intelligent systems development, enhancing research-industry synergy. It aligned with SDG 7 (Affordable & Clean Energy), SDG 9 (Industry, Innovation & Infrastructure), and SDG 17 (Partnerships for the Goals).

IV. Student Volunteering through Extension Activities

Karunya Institute of Technology and Sciences (KITS) empowers students to contribute meaningfully to society through various extension activities focused on community development. Initiatives such as tuition centers, medical and eye-checkup camps, health and hygiene campaigns, and field sensitization programs on masonry and bar bending for local communities allow students to address key needs in rural areas. With over 116 events organized, these programs not only enhance students' practical skills and social awareness but also foster a sense of responsibility, enabling them to make a lasting, positive impact on underserved communities.

Tuition Centre

Medical & Eye-Checkup Camps

Sensitization Program on Field Practices in Masonry and Bar Bending for Local Community

Health and Hygiene Campaign

Eye camp

V. Outreach activities beyond campus

KITS is strongly committed to advancing educational outreach initiatives that extend learning beyond the campus and foster meaningful engagement with society. The institution actively encourages students to participate in a wide range of outreach programs and competitions that promote learning, innovation, and social responsibility. Through these initiatives, students apply their academic knowledge to solve real-world challenges in rural and underserved communities, driving sustainable and impactful change. To date, over 100 outreach events have been conducted, offering transformative experiences that cultivate leadership, empathy, and a lifelong dedication to community development.

Sl. No.	Name of the Activity	Organising Unit	Year of the Activity	Number of Students Participated in such Activities
1	Independence day Parade	NCC	2023	37
2	Mime on "Say No to Ragging"	NCC	2023	9
3	Interactive Session with CMDE Atul Kumar Rastogi	NCC	2023	31
4	110 Kovai Terriers Territorial Army Visit	NCC	2023	39
5	75th Republic Day Celebration	NCC	2024	39
6	Central Reserve Police Force (CRPF) Educational Visit	NCC	2024	37
7	Special talk on National Youth day	NCC	2024	39
8	"ARISE,AWAKE,AND REALISE"(Poetry, short story and short film Competition)	NCC	2024	21
9	Utshaa Udgam	NCC	2024	4
10	Passing Out Parade	NCC	2024	7
11	Drug awareness Rally	NSS	2023	26
12	Resume Building workshop	NSS	2023	200
13	SIP-2023 (5 Days)	NSS	2023	870
14	Independence day Sweet Distribution at 12 Govt. Schools	NSS	2023	10
15	Mega Blood Donation Camp	NSS	2023	180
16	AR&VR Workshop	NSS	2023	150
17	Orphanage Visit / Kings Kids Home, Coimbatore	NSS	2023	80
18	Republic Day Parade	NSS	2023	12
19	Orphanage Visit/ Sevalayam , Thaliyur	NSS	2024	80
20	Various Activities	NSS	2024	870
21	Inauguration and Orientation	MUSIC	2023	166
22	Workshop on Music Genres	MUSIC	2023	164
23	Workshop on "Role of Audio in Music"	MUSIC	2023	162
24	Musicorum 3.0 (Battle of the Bands)	MUSIC	2023	145
25	Trinity Music Theory Examination	MUSIC	2023	23

26	Workshop on "Musical Scales, Chords and Progressions"	MUSIC	2024	131
27	Talent Hunt	MUSIC	2024	131
28	Closing Ceremony	MUSIC	2024	92
29	Planning for the year	JOURNALISM	2023	115
30	GD on Education is Empowerment	JOURNALISM	2023	85
31	Lecture on The Price of Silence	JOURNALISM	2023	87
32	Regional Science Centre and Science Museum visit	JOURNALISM	2023	96
33	Reporting on Campus Events	JOURNALISM	2024	82
34	Awareness on NDLI	JOURNALISM	2024	75
35	Covering the Continued Electoral Bond Issue and Journalism Club Improvement Discussion	JOURNALISM	2024	82
36	Inauguration ceremony	KALA	2023	115
37	Crafted Wonders - Celebrations of Art and creativity	KALA	2023	101
38	Best out of waste and Cook without fire.	KALA	2023	94
39	Brushes and Bright Ideas: Face Painting and Lantern Crafting Extravaganza	KALA	2023	102
40	Youth for Quality Bharat Mission 2024 QCI - Quality Council of India (Essay Writing, Mascot Designing and Poster Making)	KALA	2024	76
41	Mandala Magic, Spotlight on Awareness(Drama) and Recreate, Reimagine	KALA	2024	67
42	EcoCraft Extravaganza, Blossom Brilliance and TechTessellation - Women Empowerment	KALA	2024	55
43	Valedictory Function	KALA	2024	42
44	Inauguration of Photography and Video Club	PHOTOGRAPHY	2023	123
45	A photography challenge based on the theme, "Expressions”	PHOTOGRAPHY	2023	120
46	A hands-on workshop on the topic, "Mobile Photography"	PHOTOGRAPHY	2023	104
47	A hands-on session on creating a photo story based on the theme, "Celebrating 37 years of Karunya"	PHOTOGRAPHY	2023	67
48	A Hands-on Session on "AI based Photo Editing"	PHOTOGRAPHY	2024	74
49	A Session on the theme "Candid Photography"	PHOTOGRAPHY	2024	55
50	Board Meeting	ROTARACT TECH	2023	30
51	August Month Blood Donations	ROTARACT TECH	2023	10
52	Gambetto - The Ultimate Chess Competition	ROTARACT TECH	2023	220

53	Scribbles and Giggles	ROTARACT TECH	2023	614
54	Chronicles Crimes	ROTARACT TECH	2023	614
55	Board Meeting - II	ROTARACT TECH	2023	30
56	Sweet Distribution	ROTARACT TECH	2023	800
57	Stationery and Book Distribution	ROTARACT TECH	2023	180
58	Ensemble	ROTARACT TECH	2023	504
59	Board Meeting - III	ROTARACT TECH	2023	35
60	Vishesham	ROTARACT TECH	2023	Virtual
61	Pollution Control Awareness	ROTARACT TECH	2023	200
62	Brain Teasers	ROTARACT TECH	2023	485
63	Tactile Talks	ROTARACT TECH	2023	240
64	Nexus	ROTARACT TECH	2023	437
65	Pink Positive	ROTARACT TECH	2023	120
66	Integrity (The Anti-corruption play)	ROTARACT TECH	2023	200+
67	Crafting Seed Bombs	ROTARACT TECH	2023	60
68	Orphanage Visit	ROTARACT TECH	2023	105
69	Warmth Drive	ROTARACT TECH	2023	30
70	Karam Kodupom	ROTARACT TECH	2023	15
71	Mail to Santa	ROTARACT TECH	2023	25
72	Patriotic Tales	ROTARACT TECH	2024	250
73	MIU TAC TIX	ROTARACT TECH	2024	200
74	Mark your Serene	ROTARACT TECH	2024	150
75	Heist Hounds	ROTARACT TECH	2024	250
76	Republic Treats	ROTARACT TECH	2024	900
77	Honouring Excellence	ROTARACT TECH	2024	150
78	Dressing up Dreams	ROTARACT TECH	2024	6
79	FemFest	ROTARACT TECH	2024	32
80	Kalviyin vannangal	ROTARACT TECH	2024	180
81	Parthenium Eradication	ROTARACT TECH	2024	200
82	Lives through the Lens	ROTARACT TECH	2024	400
83	Vizhipunarvu	ROTARACT TECH	2024	15
84	Her Voice	ROTARACT TECH	2024	220
85	Nalam Seivom	ROTARACT TECH	2024	320
86	Green Bags	ROTARACT TECH	2024	100
87	Water For Peace	ROTARACT TECH	2024	200
88	Doctors Day - Guardians of Life	ROTARACT MANAGEMENT	2023	32
89	Professional Service - Public Speaking	ROTARACT MANAGEMENT	2023	126

90	Independence Day - Building Better India	ROTARACT MANAGEMENT	2023	75
91	Community Project - Oldage Home Visit	ROTARACT MANAGEMENT	2023	61
92	Tree Plantation - Harvest Haven	ROTARACT MANAGEMENT	2023	35
93	Club Service Project - Chandrayan Utsav	ROTARACT MANAGEMENT	2023	126
94	World Mental Health Day - Generation Wellness Webinar	ROTARACT MANAGEMENT	2023	64
95	Community Project - Hygiene Literacy	ROTARACT MANAGEMENT	2023	44
96	Community Project - Swachh Bharat	ROTARACT MANAGEMENT	2023	28
97	Career Guidance Program - Career Compass	ROTARACT MANAGEMENT	2023	83
98	Childrens Day Event - Kutties Galatta	ROTARACT MANAGEMENT	2023	22
99	Energy Consumption Awareness - Watts Next?	ROTARACT MANAGEMENT	2023	15
100	Christmas Day - Season of Sharing	ROTARACT MANAGEMENT	2023	12
101	Professional Services - Unleashing Innovation and Bonding Bonanza	ROTARACT MANAGEMENT	2024	70

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Education for SDGs in the wider community

Karunya Institute of Technology and Sciences (KITS) engages its alumni, local residents, and displaced individuals to support sustainable development and lifelong learning. For alumni, KITS offers workshops, webinars, and mentorship programs to foster career growth and knowledge sharing. It also provides free online resources, including 292 videos and Google Classrooms, making education accessible to all. For local communities, KITS organizes public lectures, community workshops on digital literacy, health awareness, and financial literacy, and collaborative research projects with local organizations, strengthening regional social and economic well-being.

KITS also supports displaced individuals and refugees through language courses, scholarships, and career development programs. In partnership with SEESHA, KITS offers vocational training in skills like tailoring and computer proficiency to empower marginalized communities. These initiatives provide opportunities for economic independence and social integration, promoting inclusivity and diversity. Through these outreach activities, KITS contributes to social equity, lifelong learning, and sustainable development, impacting communities and individuals across India.

1. Alumni Engagement: Karunya Institute of Technology and Sciences actively engages its alumni through various programs aimed at fostering lifelong learning and professional growth. These initiatives include:

- Workshops and Webinars: Skill-based sessions focused on career development, emerging technologies, and leadership help alumni stay competitive in their fields.
- Networking Events: Opportunities for alumni to connect with peers, students, and faculty, fostering knowledge exchange and professional growth.
- Mentorship Programs: Facilitating mentorship opportunities where alumni guide current students or recent graduates, enhancing their own leadership skills while giving back to the university community.
- Public resources (lifelong learning): KITS has produced approximately 292 free online YouTube videos and recordings, created by experienced faculty members as an invaluable resource for students. Each faculty member has also set up a Google Classroom for each course they teach, allowing students enrolled in those courses to access course materials throughout their studies and beyond. These videos span a wide array of subject areas, offering essential insights that aid in grasping and mastering complex concepts. By providing free access to these educational resources, KITS reaffirms its commitment to accessible learning for all, aiming to “Reach the unreached."

These activities benefit alumni by broadening their networks, enhancing their skills, and keeping them updated on current trends and university research, thereby reinforcing their connection to the institution.


Karunya
ALUMNI LECTURE SERIES
ORGANIZED BY KARUNYA ALUMNI CELL &
DIVISION OF MECHANICAL ENGINEERING
"Overseas Opportunities for Mechanical Engineers"
Mr. Samuel Selwyn
B.E. Mechanical (Alumni)
Senior Estates Manager
National Health Service
Glasgow, Scotland, United Kingdom
5th October 2023
at 11.00AM
in MELH002
mech_karunya
@http://karunya.edu/mechanical
@mechkits


Presents
ALUMNI
Lecture
RESOURCE PERSON:
DHANUS RAJ KANAGA RAJ
BATCH : 2016 -2020
TUESDAY
12
MARCH
11 AM
VENUE
FPT GALLERY HALL


Karunya
DEEMED UNIVERSITY
CAIRA
DIVISION OF ROBOTICS ENGINEERING
KARUNYA ALUMNI CELL
Jointly Organizes
ALUMNI LECTURE
Mr. Prasanth Sasikumar
EIE 2008 - 2012
Embedded Software Developer,
Aptiv - Motor Vehicle Manufacturing, Sweden
TOPIC: JOURNEY OF A TECHIE
BME SEMINAR HALL
12 SEPTEMBER 2023
TIME 10.00 AM


DIVISION OF FOOD PROCESSING TECHNOLOGY
ALUMNI INTERACTION
BATCH OF 2006-2010
SHEKHAR SUMAN
Senior Manager - Quality Assurance
NESTLE
ATUL MASIH
Plant In-charge
SARAS DAIRY
16 SEPTEMBER 2023
11 : 00 AM
VENUE: FPT GALLARY HALL (GROUND FLOOR)


DIVISION OF BIOMEDICAL ENGINEERING
ALUMNI LECTURE SERIES
INNOVATIONS AT THE INTERSECTION: BIOMEDICAL ENGINEERING SOLUTIONS FOR ADHD MANAGEMENT
MS. SMIRNAH CURLIN
MENTAL HEALTH PRACTITIONER, AT THE RICHMOND FELLOWSHIP AND PLUS FORTH VALLEY, UK
VENUE: BIOMEDICAL CONFERENCE HALL
MONDAY | 10:00 am
8 january 2024


DIVISION OF
CIVIL ENGINEERING
ALUMNI LECTURE SERIES
'Development of Cellular Foam concrete for construction'
09 JANUARY, 2024
11.30 AM
SPEAKER
Mr. Venkat Veeresh
(OmKaaram Projects & Consultants, Hyderabad)


Karunya INSTITUTE OF TECHNOLOGY AND SCIENCES
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SCHOOL OF ENGINEERING AND TECHNOLOGY
DIVISION OF ELECTRONICS AND COMMUNICATION ENGINEERING
ALUMNI LECTURE SERIES
SKILLS RENAISSANCE - NAVIGATING THE TECH DRIVEN FUTURE
7TH SEPTEMBER 2023
VENUE:FIRST FLOOR ECE SEMINAR HALL
AT 11.30 AM
RESOURCE PERSON:
DR.SUNIL DAVID
ECE ALUMNI
(1989-1993 BATCH)
DIGITAL TECHNOLOGY CONSULTANT -
EX- REGIONAL DIRECTOR - IOT, AT&T,INDIA
FACULTY COORDINATORS:
DR.THUSNAVIS BELLA MARY I
ASSISTANT PROFESSOR &
ALUMNI COORDINATOR-ECE


KSM
KARUNYA SCHOOL OF MANAGEMENT
ORGANISE S
ALUMNI LECTURE SERIES
WEBINAR
RECENT TRENDS IN LEARNING AND DEVELPOMENT
WILLIAM SAMUEL
ALMABAI
SENIOR MANAGER
JOIN US IN ZOOM MEETING
FROM 7PM - 8PM
STAFF COORDINATORS
DR.J. KAVITHA
DR.S.ANNIE
STUDENT COORDINATORS
PRAISAN
PRAVEEN


Karunya
Alumni
Interaction Series
Topic: Food Safety and Quality in Food Industries
Mr.Rashik Aj
18th November 2023
12 pm & 1 pm


DIVISION OF FOOD PROCESSING TECHNOLOGY
Online
ALUMNI LECTURE
18TH APRIL 2024
11 AM
BATCH 2017-2021
FPT GALLERY HALL
MR.KATHAN
R&D SCIENTIST
GENERAL MILLS
USA


DIVISION OF FOOD PROCESSING TECHNOLOGY
PRESENTS
ALUMNI INTERACTION SERIES
Mr.SHAN FRANKLIN.R
BATCH OF 2020-2022
MTech Food Processing Engineering
Intern
Nestle Switzerland
10 October 2023
11AM-12PM
FPT GALLERY HALL
(GROUND FLOOR)


Karunya Alumni Cell
&
School of Agricultural Sciences
Jointly organizes
Alumni Webinar Series 2023
on
Agriculture for Competitive Exams
Ms. M.JAYASREE B.Sc.(Hons.) Agri
(Alumna of Karunya)
Tamil Nadu Chief Minister's Fellow
Special Programme Implementation Department,
Secretariat, Chennai
28 Oct, 2023
3.00 PM TO 4. 00 PM
Join Zoom Meeting
Meeting ID: 995 2643 9687
Passcode: 572111
scan for participation
Contact Details
Dr. C. Varaprasad (7382700091)
Dr. S. Praveena (9585736885)


DIVISION OF
CIVIL ENGINEERING
ALUMNI LECTURE SERIES
'Regulation and licensure in Civil Engineering'
22 MARCH, 2024
11.00 AM
SPEAKER
ER.T.Thilak Ranjith
Proprietor
TR Associates
Co-ordinator Ms.Roshini Praveen
Mr.Cyril J


DIVISION OF FOOD PROCESSING TECHNOLOGY
ALUMNI LECTURE
MONDAY
5TH FEBRUARY
2024
TIME
11:00AM -12:00PM
SPEAKER
FOOD SAFETY AUDITOR - FSSAI
FPT GALLERY HALL
GROUND FLOOR


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KSM
NBA
KARUNYA SCHOOL OF MANAGEMENT
ORGANIZES
ALUMNI LECTURE SERIES
Webinar On
Employability Skills
28-10-2023
7.00 PM -8PM
Online Mode
DR.D. RANJITHAM
BATCH -1998-2000
HEAD,MANAGEMENT STUDIES
MARIA ARTS AND SCIENCE COLLEGE
VALLIYOOR ,TIRNELVEL.
FACULTY COORDINATORS
Dr.S.Annie Priyadharshini
Dr.J.Kavitha Selvaranee
STUDENT COORDINATOR
Swetha Steffi


KARUNYA INSTITUTE OF TECHNOLOGY & SCIENCES
SCHOOL OF AGRICULTURAL SCIENCES
ALUMNI WEBINAR SERIES - II
on
Masters in Abroad - Scope for Agriculture Students
Mr.Robin Wilson Robert
Agribusiness
Development Associate,
Agrisound, York, UK
17 FEB , 2024
@2.30 PM
Venue : Agri Seminar Hall
Join Zoom Meeting
Meeting ID: 922 6031 0059
Passcode: 653967
scan here
Contact details
Dr.S.Praveena Katharine, 9585736885
Dr.B.Balaganesh, 8778045931


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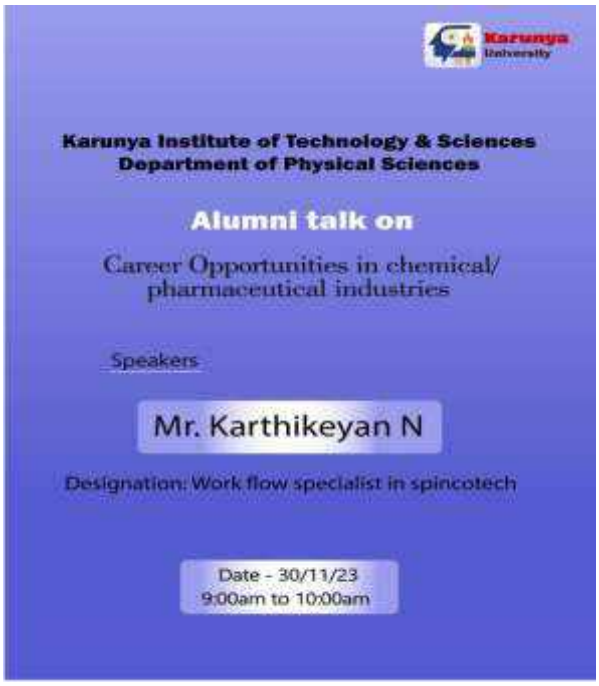
DIVISION OF COMPUTER SCIENCE AND ENGINEERING
PRESENTS
ALUMNI LECTURE SERIES
NETWORK
Security
THE INFRASTRUCTURE ON DEMAND
SPEAKER:
Mr. NIRMAL DANIEL
Cloud Design Engineer
Vodafone, Qatar
ZOOM LINK
02:30 PM to 03:30 PM (IST)
23
FEBRUARY
2024
ZOOM QR:
CONTACT:
Mrs. SNEHA GEORGE (+91 96555 96394)

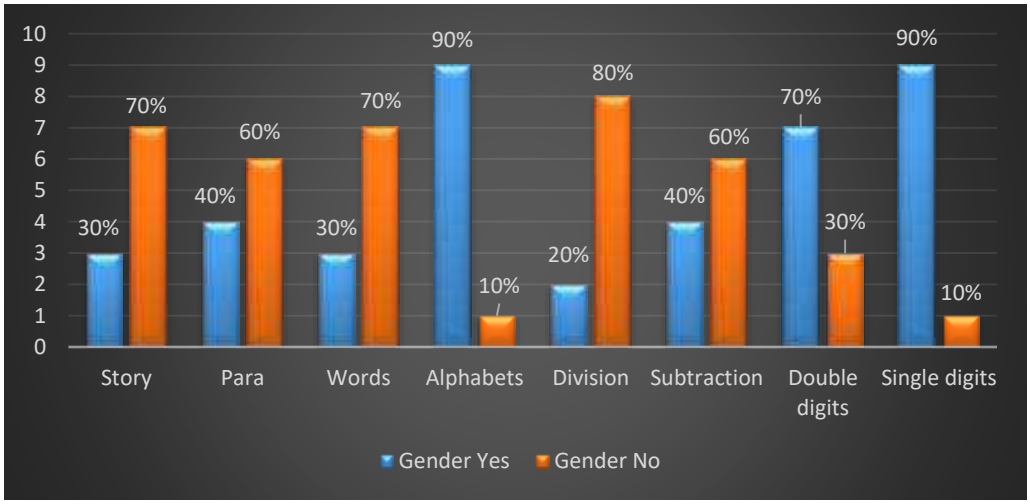

Karunya University
Karunya Institute of Technology & Sciences
Department of Physical Sciences
Alumni talk on
Career Opportunities in chemical/
pharmaceutical industries
Speakers
Mr. Karthikeyan N
Designation: Work flow specialist in spincotech
Date - 30/11/23
9:00am to 10:00am

2. Local Residents: Karunya Institute of Technology and Sciences engages with local communities through various educational outreach programs aimed at improving the region's social and economic well-being.

Education

To ensure the sustainable development goal no 4 quality education. Education liberates the intellect, unlocks the imagination and is fundamental for self-respect. It is the key to prosperity and opens a world of opportunities, making it possible for each of us to contribute to a progressive, healthy society. Learning benefits every human being and should be available to all.

1. Education Status of Tribal Children in Operation Area



In order to evaluate the level of education in the tribal community, a basic survey using the ASER Module was carried out. The survey covered a variety of topics, including alphabets, vocabulary, stories spoken in the mother tongue, and basic math problems that could be solved by fifth-graders. According to the study, children perform at a poor level because only 30% of them can tell a tale, and only 20% of them can perform fundamental division in math. Thirty percent of kids are able to read the words, and forty percent of students are capable of comprehending the paragraph. To address this issue CCAC has took initiative and start remedial education as age appropriate learning in selective villages.

Remedial Education Centres

As there are vulnerable communities living near Karunya University, the Centre for Community Academia and Collaborations renders its helping hand on behalf of the institution. The CCAC division has organised 14 free remedial education centres in the 14 vulnerable areas, 220 students of the downtrodden and tribal community were getting benefits in terms of education and also by getting their school work kits. In the sense of effective teaching and the comfort of the students, the CCAC division provided white board sets, mats, and a few playing kits for them to use in their leisure time.

Collaborative programs with Education Department

Block Level event

The government middle school students were to participate in a block-level cultural event, therefore the block-level education administration asked Karunya Institute of Technology and Sciences to provide refreshments for the occasion. The cultural festival that took place on October 18 and 19, 2023, at Sri Ranganathanm Engineering College was a huge success. The occasion showcased the abilities, customs, and diversity of the Government Middle & Higher Secondary School pupils in an effort to highlight the unique cultural fabric of our society. The Centre for Community Academia and Collaborations provided 2000 water bottles and 1500 sets of Sweet & Kaaram. We had the opportunity to connect with the participants and establish a strong rapport with Education Department.

Hand Wash Awareness Program

Our core areas are health, water, food, and energy, with a focus on the health and hygiene of the surrounding community. Future generations, from the division of the Centre for Community Academia & Collaborations, organised several hand washing campaigns in and around the community. There were pachinampathy and perumalkoilpathy community children, as well as the program was conducted 4 Schools in thondamuthur block whereas Panchayat union Primary School, Valayankutai, Panchayat Union Middle school, Irrutupallam, Panchayat Union Primary School Perumalkovilpathy, and Panchayat Union Primary Seengapathy Govt Residential School nearly 185 children has participated in the program and practiced the hand wash techniques at school level and community. As a reminder of the programme for the children, we distributed a hygiene kit consisting of soap, comb, coconut oil, nail cutter, and biscuit.

Supporting Government School

As regular intervention with the Iruttupallam government middle school, the head mistress of the school gave a request letter to our centre for community academia and collaboration division regarding the need for kindergarten tables for their kindergarten class. From our side, we raised the purchase request for 5 tables as per our university norms, and we received the 5 tables. We provided the table to the kindergarten class of Iruttupallam government middle school in the presence of the head mistress of the school. Before there were only chairs were present in the class, the toddlers had difficulty in writing, after we supported with the tables the students were happy and they study and write using the table very comfortably. The students and teachers of the school were very happy, so these kinds of interventions will be carried out by the CCAC division.

Children's Day – Recreation Activity

Children's Day is a special celebration dedicated to honouring and cherishing the joy and innocence of childhood. Children are usually treated with extra love and attention, and communities come together to emphasize the importance of nurturing, protecting, and educating the younger generation. It's a time when everyone reflects on the happiness and well-being of children, emphasizing their right to a carefree and vibrant upbringing. Children's Day serves as a reminder that every child deserves to be celebrated and encouraged to dream big. On behalf of CCAC, KITS, we conducted a drawing competition with the theme "My Family." The division CCAC provided papers and crayons for the drawing competition and asked the tuition teachers to explain the importance of the family. At the end of the week, the children were brought to a park and given some recreational activities.

Installation of Hand wash station

A follow up of awareness on Hand hygiene, the CCAC has move forward with installation of hand wash station in 5 government schools. As a part of self-hygiene CCAC has raised awareness on hand hygiene in 5 schools in order to practice the hand wash in regular the division has donated 5 portable hand wash stations and 6 dustbins to the schools in order to maintain the good rapport and keep the children from communicable diseases. Through this activity 431 students going to get benefitted.

3. Displaced People and Refugees: Karunya Institute of Technology and Sciences is committed to supporting displaced individuals and refugees by providing inclusive educational opportunities and fostering a sense of belonging.

Skill Development Program

In line with the mission of Karunya Institute of Technology and Sciences (KITS) to contribute to society, the Center for Community Academia Collaborations and the Division of Mechanical Engineering jointly organized a two-day skill development program for economically backward tribal youth on August 16th and 17th, 2023. 10 Tribal youths were participated in the training and gained knowledge about two wheeler engine assembly and 3D printing, which will encourage them to self-sustain.

Mushroom Cultivation

As a part of women empowerment mushroom cultivation shed has been inaugurated in pachinampathy village it is CSR project implemented to empower the economically backward women and their self-sustain the mushrooms will be harvest by the villagers and sale it to the local people as per their need.

Self Help Groups

CCAC ensures and promotes voluntary associations of people who share a common concern and come together to support each other in addressing it. These groups typically focus on personal, social, or economic issues, so that the CCAC has took initiative and provide a platform for individuals to connect with others. We have formed 4 groups in different tribal villages. This peer support can be incredibly empowering as members share their experiences, offer empathy, and provide practical advice and encouragement. Participation in self-help groups can help individuals develop a sense of

empowerment and control over their lives. By actively engaging in problem-solving within the group, members can gain confidence and self-esteem.

Poultry and Vermi compost training

The division of the Center for Community Acdemia and Collaborations organized a training program in the field of poultry and vermicompost in collaboration with the school of agricultural sciences. Around 30 members from the villages of Sadivayal, Sevegapathy, Porethy, Pachinampathy, and Moongilmadaikuttai participated. The sessions were carried out by the respective faculty members. The participants interacted with the faculty members and cleared their doubts.

KITS in association with SEESHA offers a range of vocational training courses designed to empower people by helping them develop skills for economic independence. Conducted across India through SEESHA's vocational training centres, these programs teach skills such as tailoring, computer proficiency, bag making, and soft toy manufacturing. Some of these initiatives are conducted in partnership with respected government agencies like Jan Shikshan Sansthan.

Key Areas of SEESHA's Impact:

- Child & Youth Development
- Women Empowerment
- Elderly Care
- Support for Differently-Abled Individuals

- Health Outreach Projects
- Disaster Relief & Rehabilitation

SEESHA provides training, technical, and financial assistance to women aspiring to start entrepreneurial ventures, supporting them in setting up small businesses like petty shops, tiffin centres, and tailoring shops. For deserving participants who complete the tailoring program, SEESHA also provides free sewing machines. Additionally, training on financial literacy—covering topics like savings and banking—is offered to help women manage both family and business finances effectively.

https://www.seesha.org/images/July2024-Q2Newsletter.pdf

Assessment of the Literacy and Knowledge on Sustainability

KITS has a system for assessing literacy and knowledge on sustainability.

1. Nonacademic credits for participation in awareness programs and activities related to SDGs – Centre for Extension Activities
2. Enrolment of faculty and students in one of the 25 Technology Missions aligned towards SDGs.
3. Activities through Ministry of Education's Innovation Cell for incubation and startups in thematic areas of SDGs
4. Experiential Learning Programme (ELP) and Rural Agricultural Work Experience (RAWE) for gaining knowledge and acquiring skills in environmental sustainability.
5. Project based and skill-based learning.

4.3.7 Community and Service Learning: Social work forms an integral part of a comprehensive education system. Considering the importance of these activities in a university environment and also taking into cognizance the focal areas of the University namely Water, Food, Healthcare & Sustainable Energy addressing the livelihood issues of people, the students shall involve in extension and Service learning to earn credits. For the students of B.Sc. (Hons) Agriculture RAWE & ELP will be considered equivalent to Community Development & Service learning. This Program shall be prepared and approved in advance by the statutory bodies of KITS.

S.No.	Program	Semesters	Credit
1	B.Tech.	II, III, IV, V, VI & VII	1 per Semester
2	M.Tech.	I & II	1 per Semester
3	B.Sc. (Hons) Agriculture	VII – RAWE VIII – ELP (2 modules)	20 Credits 10+10 Credits
4	B.A., B.Sc., B.Com., B.Sc.(Hons) Optometry	II, III, IV & V	1 per Semester
5	M.A., M.Sc., MBA	I & II	1 per Semester

Those involved in NCC shall also be eligible for two credits during the entire Program. This is applicable for all UG and PG Programs.

Link: https://www.karunya.edu/iqac/sustainability

1. Nonacademic credits for participation in awareness programs and activities related to SDGs – Centre for Extension Activities

The Centre for Extension Activities (CEA) aligns its educational and community engagement initiatives with the Sustainable Development Goals (SDGs), utilizing a comprehensive assessment methodology to gauge and enhance knowledge on sustainability among students and faculty. This methodology, centered on practical involvement in sustainability-focused projects and activities, underscores the commitment to fostering a culture of responsibility towards achieving global sustainability targets.

1.1 SDG-Oriented Objectives and Assessment Methodology

- **Enhancing Sustainability Literacy**: Through targeted research and outreach, the CEA aims to deepen understanding of societal needs in food, energy, water, and healthcare, directly supporting SDGs 2, 6, 7, and 3. The assessment of knowledge gained is facilitated by activities that measure the impact of these initiatives on participants understanding of sustainability issues.

- **Community Development and Support**: Initiatives to develop local villages and engage with underprivileged communities in association with Centre for Community Academia, contribute to SDGs 1, 10, and 11. The effectiveness of these efforts is evaluated through participatory appraisals, tracking improvements in socioeconomic status, natural resource management, and overall well-being of the target communities.

- **Empowerment Through Skill Development**: In association with Food Processing Engineering, vocational training and co-curricular activities are conducted aiming at personal and professional growth addresses SDGs 4 and 8.

- **Innovation for Sustainable Solutions**: Projects and activities designed to produce innovative solutions in the form of papers, products, patents, and consultancy works contribute to SDG 9. The assessment involves tracking the number and quality of outputs that directly address sustainability challenges.

1.2 Implementation Strategies with a Focus on SDGs

- **Sustainability in Extension Activities**: The CEA ensures that all non-academic activities, whether through clubs or individual initiatives, are aligned with sustainability goals, enhancing students' and faculty engagement with environmental, social, and economic sustainability challenges.

- **Policy Framework Incorporating SDGs**: Policies **governing non-academic credits**, club activities, and community engagement are crafted to encourage active participation in sustainability-focused activities to measure and improve sustainability literacy and impact.

- **Registration and Participation Policies**: Policies encouraging the registration of students and faculty for sustainability-centric clubs and activities are implemented, aiming to broaden the community's involvement in sustainability efforts.

- **Structured Orientation and Action Plans**: Orientation programs introduce participants to the SDGs and the role of the CEA's activities in achieving these goals. Action plans for clubs and groups are designed with clear sustainability targets.

Link for more details: https://www.karunya.edu/cea

EXTENSION ACTIVITIES		
Sl. No.	**Name of the Club**	**Link**
1	NCC	https://docs.google.com/spreadsheets/d/1jJm-NsOqkuj1Y3EICfUPk2dP2eZqY8r9sBLZEcswOqY/edit?usp=sharing
2	NSS	https://docs.google.com/spreadsheets/d/13hWbRFFn9CEyXnVFvY2UrVDK_JqzznIJ5ATgqBl3S1Y/edit?gid=605991918#gid=605991918
3	Rotract - Tech Unit	https://docs.google.com/spreadsheets/d/1zbYWimPxCcBPd2airfhYXPkO1KeOR7YZcynxc7hw9AM/edit?usp=sharing
4	Rotract - KSM Unit	https://docs.google.com/spreadsheets/d/1yn8hP-WYlyeb7jUID6VhTsCcNg7l-DsGnlsxPO3SCQo/edit?usp=sharing
5	Photography & Video	https://docs.google.com/spreadsheets/d/1J9jx_fVsX-eeR-Y6QKiiWR1SEOPq11ClzV6dNSd9HX4/edit?usp=sharing
6	Music	https://docs.google.com/spreadsheets/d/1dKCnhwydGxLxqFAWZQ462oFdOs0YdmhR7MtlZ9VW6sk/edit?usp=sharing
7	KALA	https://docs.google.com/spreadsheets/d/1e6OtNRDcU6VlhTZqDH3pCPFPEV3Ghd9YtnGdAa9Dyck/edit?usp=sharing
8	Journalism	https://docs.google.com/spreadsheets/d/1sZY-V3QPFkP9FZdw-8YesXHAswr1qufVAcoEAZ2-Ldk/edit?usp=sharing
9	Outreach	https://docs.google.com/spreadsheets/d/1IEnZfC6H8epajK04pzHg5pvR1oF9Bp10eiKIVxDJ03M/edit?usp=sharing

2. Enrolment of faculty and students in one of the 25 Technology Missions aligned towards SDGs

Link: https://karunya.edu/technologymissions

The Technology Missions at KITS are strategically aligned with the United Nations' 17 Sustainable Development Goals (SDGs), demonstrating a comprehensive approach to leveraging technology for global sustainability and well-being. The establishment of Technology Missions at KITS is a forward-thinking approach aimed at integrating emerging areas of science and technology with the United Nations' 17 Sustainable Development Goals (SDGs).

Objectives Aligned with SDGs

1. **Capacity Building**: Enhancing knowledge and skills among faculty and students in cutting-edge technologies, aligning with SDG 4 (Quality Education).
2. **Focused Research Areas**: Leveraging innovative tools in Water, Food, Healthcare, and Renewable Energy sectors, addressing SDGs 2 (Zero Hunger), 6 (Clean Water and Sanitation), 3 (Good Health and Well-being), and 7 (Affordable and Clean Energy).
3. **Innovative Outputs**: Generating projects, publications, products, patents, and consultancy works, contributing to SDG 9 (Industry, Innovation, and Infrastructure).
4. **Global Collaboration**: Partnering with international communities to enhance global scientific and technological exchange, supporting SDG 17 (Partnerships for the Goals).
5. **Societal Impact**: Applying modern technologies to solve critical societal issues, promoting SDGs related to health, nutrition, water treatment, renewable energy, and sustainable technologies.

Contextual Relevance of Technology Missions to SDGs

In the era of Industry 4.0, embracing technologies such as AI, IoT, and Blockchain is crucial, but their application remains limited. Recognizing this gap, KITS has initiated Mission mode operations targeting practical applications in key sectors like Water, Food, Healthcare, and Renewable Energy. This initiative is vital for achieving SDGs, leveraging international collaborations to introduce these technologies in India, thus addressing environmental sustainability and development challenges.

Practices Towards SDGs

KITS has identified 25 Technology Missions focusing on modern technologies relevant to societal needs, specifically targeting: Here's how these missions contribute to achieving the SDGs:

1. Millets for Nutrition Mission (SDG 2, 3, 12)
2. 3-D Printing and Additive Manufacturing (SDG 9, 12)
3. Green and Sustainable Manufacturing (SDG 9, 12, 13)
4. Indigenous and Herbal Medicine (SDG 3, 15)
5. Cyber Security Knowledge Mission (SDG 16)
6. Technology Mission for Rural Development (SDG 1, 8, 9, 10)

7. Smart Intelligent Buildings Mission (SDG 7, 11)
8. Vaccinology for Viral Diseases Mission (SDG 3)
9. Isotope Application Mission (SDG 3, 7, 9)
10. Smart City Mission (SDG 9, 11, 13)
11. Green Energy Technology Mission (SDG 7, 9, 13)
12. Wetland Conservation Mission (SDG 6, 13, 15)
13. Machine Learning Technologies for Societal Problems (SDG 3, 4, 9, 11)
14. Satellite and GIS Application Mission (SDG 9, 11, 13, 15)
15. Smart Vehicle Mission (SDG 9, 11, 13)
16. Drone Technology for Agricultural Mission (SDG 2, 9, 15)
17. Smart Technology for Precision Farming (SDG 2, 9, 12)
18. Technology Mission for Food Security (SDG 1, 2, 12)
19. Robotics in Everyday Life Mission (SDG 3, 8, 9)
20. Water Treatment and Desalination Mission (SDG 3, 6, 14)
21. Small Satellite Technology Mission (SDG 9, 11, 13)
22. Data Analytics & Block Chain Mission (SDG 9, 16, 17)
23. Stem Cell Research Mission (SDG 3, 9)
24. Nanotechnology For Healthcare & Vaccinology Mission (SDG 3, 9)
25. Medical Devices Mission (SDG 3, 9)

Each mission integrates KITS's efforts towards advancing the SDGs, employing interdisciplinary technologies to address global challenges, from health and well-being to environmental sustainability and economic growth. The implementation of these missions has resulted in significant achievements, including awareness programs, research publications, product development, and national and international collaborations, showcasing the effective application of these technologies in solving societal problems and advancing SDGs.

S. No	Technology Mission	Name of the Leader	No. of Faculty Members	No. of Student Members	No. of Papers Published	No. of Patents Filed	No. of Products Developed	No. of Project Submitted to Funding Agencies	No. of Projects Sanctioned by Funding Agencies	No. of Events Conducted	No. of Technology Transfers Made	No. of Incubations/ Startups Initiated
1	Millets for Nutrition Mission	Dr. T.V. Ranganathan	10	120	4	1	2	-	-	-	-	-
2	3-D Printing and Additive Manufacturing	Dr. Wilson Kumar	5	45	-	1	-	-	-	1	-	-
3	Green and Sustainable Manufacturing	Dr. Arul Kirubakaran	9	185	7	-	1	1	1	2	-	1
4	Indigenous and Herbal Medicine	Dr. David Paul Raj R S	6	150	6	2	2	-	-	2	-	1
5	Cyber Security Knowledge Mission	Dr. Esther Daniel	8	134	22	-	-	1	-	2	-	-
6	Technology Mission for Rural Development	Dr. A. Hepzibah Christinal	7	600	-	1	3	-	1	20	-	-
7	Smart Intelligent Buildings Mission	Dr. Gerald	6	90	5	1	-	-	-	4	-	1
8	Vaccinology for Viral Diseases Mission	Dr. M.S.A. Muthukumar Nadar	4	24	1	1	-	8	2	2	-	1
9	Isotope Application Mission	Dr. Khanna	4	4	-	-	-	1	-	-	-	-

S. No	Technology Mission	Name of the Leader	No. of Faculty Members	No. of Student Members	No. of Papers Published	No. of Patents Filed	No. of Products Developed	No. of Project Submitted to Funding Agencies	No. of Projects Sanctioned by Funding Agencies	No. of Events Conducted	No. of Technology Transfers Made	No. of Incubations/ Startups Initiated
10	Smart City Mission	Dr. Merlin Gilbert	6	75	52	3	-	1	1	1	-	-
11	Green Energy Technology Mission	Dr. Prawin Angel	13	20	25	3	-	3	1	1	-	-
12	Wetland Conservation Mission	Dr. Brema	7	22	5	-	-	4	1	2	4	-
13	Machine Learning Technologies for Societal Problems	Dr. K. Martin Sagayam	9	20	45	2	2	2	-	5	-	-
14	Satellite and GIS Application Mission	Dr. Nesasudha. M	9	45	11	-	-	2	2	2	1	-
15	Smart Vehicle Mission	Dr. F. T. Josh	7	274	29	1	-	1	1	1	-	-
16	Drone Technology for Agricultural Mission	Dr. Aldin Justin	10	120	8	-	-	2	-	2	-	-
17	Smart Technology for Precision Farming	Dr. R. Augustine	6	25	4	-	-	-	-	-	-	-
18	Technology Mission for Food Security	Er. Dayanand Peter	8	32	-	-	-	-	1	-	-	-

S. No	Technology Mission	Name of the Leader	No. of Faculty Members	No. of Student Members	No. of Papers Published	No. of Patents Filed	No. of Products Developed	No. of Project Submitted to Funding Agencies	No. of Projects Sanctioned by Funding Agencies	No. of Events Conducted	No. of Technology Transfers Made	No. of Incubations/ Startups Initiated
19	Robotics in Everyday Life Mission	Dr. Subathra	5	50	3	1	1	2	-	5	-	1
20	Water Treatment and Desalination Mission	Dr. S. Kavitha	8	125	141	5	3	4	1	5	1	2
21	Small Satellite Technology Mission	Dr. Ajith Raj	5	110	3	-	1	-	-	1	-	-
22	Data Analytics & Block Chain Mission	Dr. R. Priscilla Joy	10	140	10	-	-	1	-	3	-	-
23	Stem Cell Research Mission	Dr. Annie John	3	6	-	-	-	-	-	-	-	-
24	Nanotechnology For Healthcare & Vaccinology Mission	Dr. Muthu Vijayan Enoch I V	12	72	40	-	2	4	-	2	-	-
25	Medical Devices Mission	Dr. P. Subha Hency Jose	12	86	46	3	3	4	1	2	-	-

3. Activities through Ministry of Education's Innovation Cell for incubation and startups in thematic areas of SDGs - integrate sustainability and innovation into the curriculum, directly aligning with the Sustainable Development Goals (SDGs) by fostering an environment of creativity, entrepreneurship, and social responsibility among students.

Link: https://karunya.edu/kids

SDG-Aligned Objectives and Practices

Fostering Innovation and Entrepreneurship:
KIDS aims to inculcate students with the knowledge and skills necessary for invention, innovation, and the incubation of startups, supporting SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure).

Revitalized Curriculum for Sustainable Development:
The curriculum revision emphasizes product development and industry practices, encouraging students to tackle projects in water, food, healthcare, and renewable energy – areas crucial to achieving SDGs 2 (Zero Hunger), 6 (Clean Water and Sanitation), 3 (Good Health and Well-being), and 7 (Affordable and Clean Energy).

Practical and Socially Relevant Education:
Through the integration of digital and interactive teaching methods, including virtual laboratories and fieldwork in rural areas, KIDS enhances the quality of education (SDG 4) and addresses issues vital for community development and sustainability.

Encouraging Active Participation in Innovation:
Students are motivated to engage in Hackathons, seminars, workshops, and competitions to cultivate skills in product design and development, echoing the innovative spirit of SDG 9. In implementing KIDS, KITS not only adheres to the educational mandates of MHRD, UGC, and AICTE but also actively contributes to the global agenda of sustainable development, preparing students to become leaders in innovation and sustainability.

Sl. No	Incubated project list	Sustainable Development Goals (SDGs)
1	Healo Packs (An eco-friendly Packing)	SDG 12: Responsible Consumption and Production, SDG 9: Industry, Innovation and Infrastructure
2	Millets Chocolate (a supplement rich in high iron and vitamin B12 pearl millets)	SDG 3: Good Health and Well-being, SDG 9: Industry, Innovation and Infrastructure
3	A Herbal Product (Herb-Based Product to Prevent Nit Infestation)	SDG 3: Good Health and Well-being, SDG 9: Industry, Innovation and Infrastructure
4	Nex-Dynamics (An autonomous wheelchair which provides greater independence and mobility to people with physical disabilities to improve their lifestyle.)	SDG 3: Good Health and Well-being, SDG 9: Industry, Innovation and Infrastructure, SDG 11: Sustainable Cities and Communities
5	A Herbal Product (Extraction and Evaluation of Anti-Lice Efficacy of Sphaeranthus Indicus Linn for infestation of lice)	SDG 3: Good Health and Well-being, SDG 9: Industry, Innovation and Infrastructure
6	Automatic Knee Massager (A smart automatic massager that not only massages your joint for pain relief but also measures any imminent risks, spo2 level, daily steps and has coils that cool down the joint in case of any swelling.)	SDG 3: Good Health and Well-being, SDG 9: Industry, Innovation and Infrastructure
7	AI-powered High-performance Mini PC with Liquid Cooling	SDG 3: Good Health and Well-being, SDG 9: Industry, Innovation and Infrastructure, SDG 11: Sustainable Cities and Communities
8	BIOSPARE (developing bionic spares for all organs, ensuring they are affordable and accessible to anyone.)	SDG 3: Good Health and Well-being, SDG 9: Industry, Innovation and Infrastructure
9	Edible Cutlery (Eradicate the consumption of microplastics with a suitable alternative by the presence of one-time-use cutlery)	SDG 3: Good Health and Well-being, SDG 9: Industry, Innovation and Infrastructure
10	Baby Bites (procure sugar substitutes such as the natural sweetening component found in Monk fruits, Miracle fruit, Katemfe fruit for baby foods)	SDG 3: Good Health and Well-being, SDG 9: Industry, Innovation and Infrastructure
11	Banana- Cellulose Based Bio composites	SDG 3: Good Health and Well-being, SDG 7: Affordable and Clean Energy, SDG 9: Industry, Innovation and Infrastructure
12	UV object sanitizer	SDG 3: Good Health and Well-being, SDG 9: Industry, Innovation and Infrastructure

Sl. No	Incubated project list	Sustainable Development Goals (SDGs)
13	Tendon Tissue Engineering in preclinical Sheep model	SDG 3: Good Health and Well-being, SDG 9: Industry, Innovation and Infrastructure, SDG 15: Life on Land
14	Advanced Passive Cooling Solutions	SDG 3: Good Health and Well-being, SDG 9: Industry, Innovation and Infrastructure, SDG 11: Sustainable Cities and Communities
15	Drones and Robotics for environmental applications	SDG 9: Industry, Innovation and Infrastructure, SDG 15: Life on Land
16	Block chain and cyber security for governance	SDG 15: Life on Land, Peace, SDG 16: Justice and Strong Institutions
17	Telegram sentinel monitoring system for TN police	SDG 15: Life on Land, Peace, SDG 16: Justice and Strong Institutions
18	Social media targeted cybercrimes for TN police	SDG 15: Life on Land, Peace, SDG 16: Justice and Strong Institutions
19	Virtual repairing system in a satellite (Repairon)	SDG 9: Industry, Innovation and Infrastructure, SDG 11: Sustainable Cities and Communities, SDG 7: Affordable and Clean Energy
20	Rapha- A medi solution venture	SDG 3: Good Health and Well-being, SDG 9: Industry, Innovation and Infrastructure, SDG 15: Life on Land

4. RURAL AGRICULTURAL WORK EXPERIENCE (RAWE)

To reorient graduates of agriculture and allied subjects for ensuring and assuring employability and develop entrepreneurs for emerging knowledge intensive agriculture, the component envisages the introduction of the program as an essential prerequisite for the award of degree to ensure hands on experience and practical training. These experiences enrich their knowledge on climate science and environmental sustainability. There are two components:

I. Rural Agricultural Work Experience (RAWE)

II. Agro-Industrial Attachment and Plant Clinic (AIA)

- The Rural Agricultural Work Experience (RAWE) helps the students primarily to understand the rural situations, the status of agricultural technologies adopted by farmers, prioritize the farmer's problems and develop skills & attitude of working with farm families for overall development in rural areas.
- The students will undertake this program during the seventh/eighth semester for a maximum duration of 20 weeks with a weightage of 0+20 credit hours in two parts namely RAWE and AIA. RAWE will consist of general orientation and on campus training by different faculty members followed by village attachment/unit attachment in University/ College / KVK or a research station.
- Under AIA, the students would be attached with the agro-industries to get experience of the industrial environment and working. Due weightage in terms of credit hours will be given depending upon the duration of the stay of students in villages/ agro industries.
- At the end of RAWE & AIA, the students will be given one week for project report preparation, presentation and evaluation. The students would be required to record their observations in field and agro-industries daily and will prepare their project report based on these observations.

EXPERENTIAL LEARNING PROGRAMME (ELP)

The Experiential Learning Programme (ELP) is designed to provide hands-on, real-world experience to students through active participation in production, processing, and agribusiness activities. It bridges the gap between theoretical knowledge and practical application by engaging students in project-based learning. This programme fosters entrepreneurial skills, decision-making ability, teamwork, and professional competence. Students are exposed to various enterprises such as seed production, food processing, nursery management, biocontrol agents, sericulture, mushroom production, and value addition of agricultural produce. The module encourages self-employment and prepares students to take on leadership roles in the agriculture sector.

ELP 01 SOIL, PLANT, AND WATER TESTING SERVICES

To increase productivity and reduce the cost of production, timely advice is necessary. For scientific application of fertilizers and to understand the plant health, soil water and plant analysis are indispensable. Through the module appropriate training on soil testing, water quality assessment and plant analysis will be given. This in turn will help students to give recommendations to farmers based on the test result. Thus, farmers will be guided to apply fertilizers based on the results of the testing. This ensures soil quality and crop growth and plant health.

ELP 02 ORGANIC PRODUCTION AND COMPOSTING TECHNOLOGY

The module equips the students with the basic concept of organic farming and organic farming practices. Students will learn about the organic inputs and methods of organic crop cultivation. Students will also be equipped with various organic standards, agencies and certification for organic farming.

ELP 03 COMMERCIAL FLORICULTURE AND LANDSCAPING

Commercial floriculture and landscaping deals with the cultivation of flowers, foliage, climbers, trees. shrubs, cacti, succulents, etc., and with their marketing and production of value-added products from them". There is an increasing demand for indoor plants and other ornamental plants in urban areas. Similarly, there is a huge demand for dry flower products in the export market. Through this module, the undergraduate students are trained to propagate the ornamental plants and supply quality planting materials to the public and create value added products with the practical knowledge acquired over the previous years of their studies

ELP 04 COMMERCIAL NURSERY MANAGEMENT AND PROTECTED CULTIVATION

Quality planting material is one of the most essential inputs for crop production, particularly with reference to horticulture crops which are known for high productivity. Different types of planting materials like seeds, bulbs, rhizomes, corms, suckers and vegetative propagated buds, grafts and layers etc., are used, which may carry sometime virus particles with them. Hence, production of planting material under disease free Phyto-sanitary conditions is vital. Otherwise, anticipated & the potential output cannot be achieved. Hence in the module, the students will be trained on the production of quality plant materials for propagation.

ELP 05 PRODUCTION TECHNOLOGY FOR BIO-AGENTS AND BIOFERTILIZERS

In India excessive use of high-cost inputs like chemical fertilizers had bought impressive gains in food production but a destruction and continuous manipulation of soil including removal of nutrients and depleting microbial life. Entire dependence of chemical fertilizers in crop production is threatening soil biological health due to misappropriate supplement of nutrients. There is a huge decline in soil quality due to very low soil microbial populations which in turn slow down the rates of microbial-mediated decomposition of organic matter and nutrient cycling. Biocontrol agents play an important role in improving plant health in the world which includes microbes and insects [parasitoids, predators]. These biocontrol agents are potentially replacing harmful pesticides, leading to non-chemical method of management of pest and diseases by plant pathogens, improving plant immunity, and/or modifying the environment through the effects of beneficial microorganisms, compounds, or healthy cropping systems. With the increased need and awareness of integrated pest management concepts among the farmers, there is increased emphasis on the utilization of biocontrol agents for the management of pests.

Though their demand is increasing, yet their availability is far from sufficient. They are environmentally safe, cost-effective, sustainable, and can be readily incorporated into integrated pest management (IPM) programs. Entomopathogenic fungi are used as biopesticides in ecological farming as a safe alternative to toxic chemical insecticides which have immense potential in managing pests in agriculture because of their broad host range. This learning will ensure the students develop professional skills and knowledge through hands-on experience in liquid biofertilizer production, mass production techniques of biocontrol agents. Thereby students can gain confidence to start their own enterprise and become entrepreneurs in biofertilizer manufacturing.


ELP 06 MUSHROOM CULTIVATION TECHNOLOGY

Students will learn the facilities required for construction of mushroom shed, cultivation room/ structure and disinfection, maintenance of aseptic condition. Students will be trained in the cultivation techniques for oyster mushroom and milky mushroom from procurement of mother culture to harvesting. Students will be taken for visits to commercial mushroom production unit to understand how a mushroom enterprise is run. Training on value added processing - Grading, packing - marketing and cost economics of mushroom culture will also be imparted to the students.


ELP 07 COMMERCIAL BEEKEEPING

Beekeeping (Apiculture) is an economically viable technology for agricultural diversification. It needs less space with low investment but fetches quick returns and generates employment opportunities. It can be done in farmlands to homestead areas, and it can be practiced by women, men, children, farmers, unemployed youths, and those without any land holdings. Students can enterprise in beekeeping by utilizing their leisure time to earn money. However, adequate knowledge and skills are required for pursuing beekeeping as an enterprise. Hence students will be trained in all aspects of beekeeping from familiarizing themselves with different bee species, site selection, and rearing honeybees to harvesting and marketing of hive products viz., honey, wax, venom, propolis, pollen, and their value-added products. Students will also be trained in preparing project proposals for a bank or government agency.

ELP 08 AGRIBUSINESS MANAGEMENT

Agribusiness management is the application of business management principles to the agricultural industry. It involves managing agricultural enterprises. including production. marketing, and processing of agricultural products. This module facilitates the students with e-commerce websites development called a B2C business model, wherein the sellers can sell their products/services via app. Students are provided with platforms to organize the training and workshops.

ELP 09 BROILER PRODUCTION TECHNOLOGY

The module aims at creating entrepreneurship opportunities for the students and empowering them to set up their own business in Poultry. Students will be trained in how to take care of and handle the birds such as proper feed and vaccinations are also carried out by the students. Through this hands-on training coupled with theoretical backup and expertise from the professors the students look forward to a fruitful semester of learning.


ELP 10 FOOD PROCESSING

Post-Harvest Technology is a sunrise sector which is gaining importance nowadays because of its role in reducing post-harvest loss and its capability to meet the food requirement of growing population.


ELP 11 PRODUCTION TECHNOLOGY OF BIOCONTROL AGENTS

This module provides comprehensive knowledge and hands-on skills related to the production, formulation, quality control, and application of biocontrol agents used in sustainable agriculture. It covers the biological characteristics of key microbial agents (such as *Trichoderma*, *Pseudomonas*, *Bacillus*, *Beauveria*, and *Metarhizium*), their modes of action, mass multiplication techniques, carrier-based and liquid formulations, and regulatory guidelines. Emphasis is placed on eco-friendly plant protection strategies, integration into integrated pest management (IPM) systems, and entrepreneurship opportunities in bio-input production.


ELP 12 COMMERCIAL SERICULTURE

This module imparts practical and theoretical knowledge of sericulture as a profitable agro-based enterprise. It covers the biology and rearing of silkworms, mulberry cultivation, pest and disease management, and post-cocoon processing techniques. Students will learn about the different types of silk (mulberry, tasar, eri, muga), rearing practices under various agro-climatic conditions, and the economics of sericulture. Emphasis is placed on modern technologies, government schemes, and entrepreneurship opportunities in the silk industry.


ELP 13 CROP PRODUCTION AND PROCESSING OF TURMERIC

This module provides comprehensive knowledge and practical skills related to the scientific cultivation and post-harvest processing of turmeric (*Curcuma longa*). It covers agro-climatic requirements, improved varieties, seed material selection, land preparation, nutrient and water management, pest and disease control, and harvesting techniques. The processing segment includes cleaning, boiling, drying, polishing, and value addition. Special focus is given to organic cultivation, quality standards, storage, and marketing strategies. The module equips students to engage in commercial turmeric production and value chain development for income generation and entrepreneurship.


ELP 14 CROP PRODUCTION AND STORAGE OF SMALL ONION

This module focuses on the scientific production and post-harvest management of small onion (*Allium cepa* var. *aggregatum*), an important commercial vegetable crop. It covers climate and soil requirements, variety selection, propagation methods, nutrient and irrigation management, pest and disease control, harvesting, and yield optimization techniques. The module also emphasizes post-harvest handling, grading, curing, and scientific storage methods to minimize losses and extend shelf life. Students will gain insights into market trends, cost-effective production practices, and entrepreneurship opportunities in small onion cultivation and storage.


5. Project based and skill-based learning and assessment:

The knowledge and literacy of the environmental sustainability courses are assessed by project based and skill-based assessment. The guidelines are given in Policy on Blended Learning

- Internal Assessment 3 shall be a Project based or skill based assessment.
  - The evaluation for the students shall be based on testing of skills related to the course through project demonstration and presentation.
  - The HoDs shall prepare the Rubrics for the Assessment and the marks shall be awarded based on these rubrics

An open house shall be organized by the department before or after Internal Assessment 3 displaying the outcome of the project based learning through Products/Prototype/Posters/Video presentations.

Link: https://www.karunya.edu/iqac/sustainability