



**Y.V.N.R. GOVERNMENT DEGREE COLLEGE
KAIKALURU - 521 333, ELURU DIST. A.P.**

(NAAC GRADE "A" CGPA : 3.13)

AFFILIATED TO KRISHNA UNIVERSITY
AN ISO 9001 : 2015 CERTIFIED INSTITUTION



International Webinar on **RESEARCH METHODOLOGY IN ENVIRONMENTAL SCIENCES (IWRMES)**

(Multidisciplinary)

On 30th & 31st JANUARY 2024

**Proceedings of the
International Webinar**



Organized By
**DEPARTMENTS OF CHEMISTRY
PHYSICS, BOTANY, ZOOLOGY**
& In Association with IQAC

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ABOUT THE COLLEGE

Y.V.N.R. Government Degree College, Kaikaluru is a public funded educational institution. This college, popularly known as GDC Kaikaluru is located in the world famous wet land, Ramsar, Kolleru Lake. The college has a unique logo with the citation "Knowledge is Power". The citation depicts the ancient adage the "Knowledge is power". The logo is flagged by rising sun, Kolleru Lake, Kolleru fisher men, and Kolleru birds.

The required knowledge to cope with the current trends in the competitive world is being inculcated to the students at various levels by the institute. The students are benefited with the power to sustain in the community. The rising sun in the logo is the symbol of knowledge. Like the sun shining the institute provides the radiance of knowledge to the community. The other images in the logo i.e. Kolleru birds and of fishermen represent the community in general. All the images in the logo reflect the community that aims at the academic enrichment of the students of our institution.

The college was established in the year 1982. Sri Yerneni Raja Rama Chandar, Yerneni Nagendranath, Yerneni Sitha Devi (Former Education Minister, Govt. of A.P.) and Yerneni family members generously came forward and raised funds from the public for the establishment of this institution. The college development committee secretary Sri Gurajada Narasimha Rao coordinated the activities of the development committee and with in no time with the support of the state government under the Telugu Grameen Kranti Padham, buildings were constructed. With the generous assistance of philanthropists and the elite of the village - Sri Kammlu Vittal Rao, Sri Rama Raju, Sri Naidu, Sri Undukuri Satyanarayana Raj, CPDC members - Sri Gadiraju Bhaskara Varma, Sri Potturi Vijaya Bhaskar, Sri S. Satyanarayana Murthy, Sri Kare Sarat Babu, Sri B.D. Srinivas, Sri G. Chandra Mohan, Sri G. Udaya Sankar and Government funds, additional class rooms were built.

We feel proud to say that our institution has appeared for 3rd cycle of NAAC accreditation during June 2023 and excelled in all criterions and secured 'A' grade with CGPA 3.13 and showed excellent performance when compared to the 2nd cycle of NAAC accreditation wherein we obtained only B⁺ grade. With unity and team spirit all the staff members worked hard under the able guidance of our Principal and our institution secured A grade and stood best among the other government Degree colleges. Its noteworthy to state that all the stakeholders of the institution have contributed their might for the development of the institution particularly the college Governing body i.e. CPDC, donors and industrialists under CSR have played their part in providing better infrastructure. In 2nd cycle of NAAC accreditation our institution secured B⁺ grade and an amount of Rs.2 crore was sanctioned under RUSA 2.0. with that sanctioned funds and with the best efforts of the CPDC a new academic block was constructed apart from upgrading the departmental labs and also established modernized computer lab to meet the ever changing needs of the students. An ISO 9001:2015 Certified Institution.

WEBINAR CO-ORDINATORS

Dr. K.A. EMMANUEL
Dr. P. PAUL DIVAKAR

S.G. Lecturer in Chemistry
S.G. Lecturer in Physics



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Scan for Registration

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Joint Secretaries :

Dr. Y. GNANA PRASUNAMBA, HOD, Department of Botany
Dr. M. VIJAYA KUMAR, Lecturer in Zoology

THEMES :

1. Introduction to Research Methodology
2. Environmental research methods
3. Environmental Ethics Assignments
4. Environmental research methods in Social and Natural Sciences

ABOUT THE WEBINAR

Research methodology is the specific procedures or techniques to identify, select, process, and analyze information about a topic. Environmental research is the scientific study of environmental processes and systems, including the effects of human activity on these systems. Environmental research is a broad field that encompasses topics from air and water quality to climate change. Scientists use a variety of tools and techniques to carry out environmental research, including field studies, laboratory experiments, and computer modelling. Now a days it is very essential for a researcher to know about the Environmental research. Therefore this topic is chosen as a theme to bring awareness among the teaching staff, research scholars and post graduate students.

PLEASE NOTE :

- E-Certificates will be provided to the participants who successfully complete the webinar
- Registration is FREE and Last date for Registration : 20-1-2024
- Webinar will be organised through Zoom App
- Registered participants will get the webinar link to your mail id and to your Whatsapp.
- Online Registration link : <https://forms.gle/Aeh8tBL0XKTxKYHm7> For any queries please contact :

96660 33718, 99850 50696, 98481 50912, 99495 49365, 92472 03460

RESOURCE PERSONS

Inaugural Address : Prof. G. GNANA MANI, Vice Chancellor, Krishna University

Valedictory Address : Dr. C. KRISHNA, RJD, CCE, Rajamahendravaram

SPEAKERS

Dr. ARUL MANIKANDAN, Research Fellow

National University of Ireland, Galway Ireland

Dr. RAJA KUMAR BALLA, Professor,

Department of Chemistry, IIT Madras

Dr. JASWANTH G., Technion Postdoctoral Fellow

Faculty of Civil Engineering, Technion Israel Institute, Israel.

Dr. DOLLA THARUN, Assistant Professor,

"Gitam Deemed to be University, Visakhapatnam"



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The Research or review articles will be published in a book with ISBN No. after peer review, on payment of Rs 1000/- (Your article is eligible for NAAC Accreditation purpose as a book chapter). The papers must be in MS-Word with Times New Roman font. The title of the article (font size 14) names the author-co-author and affiliation details (font size 10), and the Script of the paper must be 12 font size, with 1.5 line spacing. The abstract must contain a maximum of 250 words. The full paper shall not exceed 5 pages. A maximum of four authors are allowed for each article. The soft copy of your Research or review articles can be sent to iqac@yvnrgdc.ac.in. The last date for receiving your Research articles is 29-01-2024. Payment mode: The amount to be sent to Dr. Ramani Jalababu (9949549365) either PhonePe or Google Pay.



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Kaikaluru (Mandal) Eluru Dist., Andhra Pradesh, 521333



International Webinar on Research Methodology Environmental Sciences 30th -31st January 2024.

Day	Time (IST)	Topic	Remarks
Day 1 - 30 January 2024	2.45 PM- 2.55 PM	Welcoming the guests	Dr. K. A. Emmanuel, SG Lecturer in Chemistry, Programme Coordinator.
	2.55-3.00	Prayer and lighting the Lamp	By the Dignitaries
	3.00-3.05	Principal opening marks	Dr. B. Raghunatha Reddy
	3.05-3.10	Theme of the Webinar	Dr.P. Paul Divakar, Lecturer in Physics and Programme Coordinator
	3.10-3.15	Introducing the Honourable Guest	Dr. K. Pankaj Kumar, Lecturer in English.
	3.15- 3.35	Inaugural address by the chief guest (CCE)	Prof. G. Gnanamani, Vice Chancellor, Krishna University, Machilipatnam.
	3.35- 3.40	Introducing the Speaker-1	Dr. M. Vijaykumar, Lecturer in Zoology & Joint Secretary of the International Webinar.
	3.40-4.25	Talk 1 Researching Sustainable Development Goals (SDGs)- Shaping your papers to SDGs by Dr. Dolla , Tharun , Assistant Professor, GITAM Deemed to be University, Andhra Pradesh.	
	4.25 PM- 4.30 PM	Introducing Speaker 2	Sri. K. Ramesh, HOD, Department of Chemistry.
	4.30-5.10	Talk 2 Pollution and its chemistry - a threat to the biosphere. Dr Rajkumar Balla Professor, Department of Chemistry, IIT, Chennai.	
	5.10- 5.15	Closing Remarks and End of Day 1	



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Day 2 - 31 January 2024	2.45 PM - 2.50 PM	Welcoming note for Second day Of International Webinar.	Dr. V. Sandhya, Lecturer in Zoology & Organizing Secretary
	2.50 PM - 2.55 PM	Introducing the speaker 3	Y. Gnana Prasunamba, HOD, Department of Botany & Joint Secretary
	2.55- 3.40	Talk 3 Sustainable biorefining and bioprocessing of marine algae to produce edible and non-edible packaging films to combat plastic pollution By Dr Arul Manikandan Post doctoral Fellow Dublin City University, Dublin Ireland	
	3.40 - 3.45	Introducing the speaker 4	Dr. M. Vijaykumar, Lecturer in Zoology & Joint Secretary of the International Webinar.
	3.45 - 4.20	Talk 4 A Comprehensive Guide to Crafting a Sustainable Research Paper By Dr. Jaswanth G. Technion Post doctoral Fellow, Faculty of Civil Engineering, Technion Israel Institute, Israel.	
		Valedictory	
	4.20- 4.25	Welcoming the guests	Dr. P. Paul Divakar, SG Lecturer in Physics, Programme Coordinator.
	4.25- 4.30	Opening remarks by the principal	Dr. B. Raghunatha Reddy
	4.30- 4.40	Report of the webinar	Dr. R. Jalababu, IQAC Coordinator & Organizing Secretary of the International Webinar.
	4.40- 4.45	Introducing the chief guest	Dr. V. Sandhya, Department of Zoology, Organizing Secretary of the International Webinar
	4.45- 5.00	Valedictory address by Chief guest.	Dr. C. Krishna, Regional Joint Director, CCE, Rajamahendravaram
	5.00- 5.05	Feedback by the participants	
	5.05-5.15	Vote of thanks	Dr. R. Jalababu, IQAC Coordinator & Organizing Secretary of the International Webinar.

PREFACE

Environmental research is the scientific study of environmental processes and systems, including the effects of human activity on these systems. The goal of environmental research is to understand how: the natural world works. human activity affects the environment. Research is a scientific investigation. Investigation means a search for new facts and ideas in any branch of knowledge. Thus, we can say that research is a search for knowledge. Research may be considered as a movement, a movement from the unknown to the known. It is actually a voyage of discovery. Research is carried out for two purposes; one is the discovery of new facts and the second, verification of the old ones. The object of every business organization, of course, is the discovery of new facts, new relationship, and new laws governing the business phenomena. But constant verification of the old concepts is also needed especially in dynamic business environment.

One of the greatest problems that the world is facing today is that of environmental pollution, increasing with every passing year and causing grave and irreparable damage to the earth. Environmental pollution consists of five basic types of pollution, namely, air, water, soil, noise, and light. Air pollution is by far the most harmful form of pollution in our environment. Air pollution is caused by the injurious smoke emitted by cars, buses, trucks, trains, and factories namely sulphur dioxide, carbon monoxide and nitrogen oxides. Chlorofluorocarbons (CFC), released from refrigerators, air-conditioners, deodorants, and insect repellents cause severe damage to the Earth's environment. This gas has slowly damaged the atmosphere and depleted the ozone layer leading to global warming. Water pollution caused industrial waste products released into lakes, rivers, and other water bodies, has made marine life no longer hospitable. Humans pollute water with large scale disposal of garbage, flowers, ashes, and other household waste. In many rural

areas one can still find people bathing and cooking in the same water, making it incredibly filthy. Acid rain further adds to water pollution in the water. Noise pollution, soil pollution and light pollution too are the damaging the environment at an alarming rate. Noise pollution include aircraft noise, noise of cars, buses and trucks, vehicle horns, loudspeakers, and industry noise, as well as high-intensity sonar effects which are extremely harmful for the environment. Soil pollution, which can also be called soil contamination, is a result of acid rain, polluted water, fertilizers etc., which leads to bad crops. Soil contamination occurs when chemicals are released by spill or underground storage tank leakage which releases heavy contaminants into the soil. These may include hydrocarbons, heavy metals, MTBE, herbicides, pesticides, and chlorinated hydrocarbons. Environmental protection is a practice of protecting the natural environment on individual, organization controlled or governmental levels, for the benefit of both the environment and humans. Since the 1960s, activity of environmental movements has created awareness of the various environmental issues. There is no agreement on the extent of the environmental impact of human activity and even scientific dishonesty occurs, so protection measures are occasionally debated. In the light of the aforesaid challenging tasks, we believe that the present International webinar plays a vital role in identifying the thrust areas of research in assessing the pollution depth and evolving the methods for controlling the pollution. No doubt the fruitful deliberations in the webinar would yield the constructive suggestions and guidelines for the further developments in environmental sciences.

Dr. K.A. EMMANUEL
Webinar Co-ordinator
Dept. of Chemistry

Dr. P. PAUL DIVAKAR
Webinar Co-ordinator
Dept. of Physics

ACKNOWLEDGEMENTS

The Two day International Webinar on “Research Methodology in Environmental Sciences” (IRMES-2024) has been made possible with the support of many technical experts, individuals and organizations both in man power and finance. This support is gratefully acknowledged.

We are very much grateful to our Chief Patron Dr.Pola Bhaskar, Commissioner, Collegiate Education, Mangalagiri for his constant encouragement given to us in organizing this type of academic activity for the welfare and development of the college.

We owe a deep sense of gratitude to Dr. R. David Kumar, Joint Director, Commissionerate college Education, Mangalagiri, for his constant Support, valuable guidance in organizing the International webinar in most efficient manner. We are very thankful to Dr. Ch. Krishna, Regional Joint Director, Rajamahendravaram for his precious cooperation in International Webinar.

We are very much grateful to our Chief Guest Prof. G. Gnana Mani, Vice chancellor, Krishna University, Machilipatnam for encouraging us in conducting the International webinar.

Our sincere and special thanks go to Dr. B. Raghunatha Reddy, Principal Y.V.N.R Government Degree College, Kaikaluru, Eluru district for his encouragement, co-operation and meticulous guidance at every stage in organizing and planning the International Webinar and bringing out this book.

We also express our gratitude to Sri. N. Srinivasa Rao HOD. Department of Physics, Sri. K. Ramesh, HOD, Department of Chemistry Dr. R. Jalababu, IQAC Coordinator, Dr. V. Sandhya HOD, Departments of Zoology and Aquaculture Technology, for their timely help in organizing the International Webinar in a successful manner.

We also express our deep sense of gratitude to Dr Arul Manikandan, post doctoral Fellow, Dublin City University, Dublin, Ireland, Dr Dolla Tharun, Assistant professor, Gitam Deemed to be University, Visakhapatnam, Dr. Jaswanth G Technion postdoctoral Fellow, Faculty of Civil Engineering Technion Israel Institute, Isarael, Dr. Raja Kumar Balla , Professor, Department of Chemistry IIT, Chennai, for accepting our invitation and delivered wonderful thought provoking lectures in the International webinar in a successful manner.

Our sincere thanks to Dr. V. Sandhya, HOD, Department of Zoology, Smt. Y. Gnana Prasunamba, Department of Botany, who acted as Rapporteurs of various technical sessions of the International webinar. We owe special thanks to Sri. K. Mahesh, Office Incharge and his staff for their constant support throughout the Webinar. We are very much grateful to my colleagues in the Departments of Commerce, Economics, History and English teaching and non-teaching members individually, for their continuous support in making this event successful.

Finally, we thank all the people by names who were directly and indirectly involved in organizing the International webinar, though we have not mentioned their names due to paucity of space.

We thank one and all.

Dr. K.A. EMMANUEL
Webinar Co-ordinator
Dept. of Chemistry

Dr. P. PAUL DIVAKAR
Webinar Co-ordinator
Dept. of Physics



**Government of Andhrapradesh
Higher Education Department**



Dr Pola Bhaskar IAS

Comissioner Collegiate Education A.P.,
Mangalagiri, Vijayawada



Greetings

I am pleased to know that YVNR Government Degree College, Kakaluru is organizing a Two-Day International Webinar on Research Methodology on Environmental Sciences during 30 th and 31 st January 2024.

Research Methodology is very important for the young minds who want to choose their career in Research. Much importance has to be given research needed not only in science but also in arts and commerce fields.

I congratulate the organizers of the International Webinar for bringing eminent Professors, Scientists, Researchers and academicians across the globe to a common platform. I am sure that this programme would turn out to be successful and deliberations will be useful, which would provide many insights on the topic chosen, Environmental Sciences.

I believe this International Webinar will be a landmark in the history of YVNR Government Degree College, Kaikaluru.

With the best wishes,

Dr Pola Bhaskar IAS



**Government of Andhrapradesh
Higher Education Department**



Dr R. David Kumar Swamy

*Joint Director, Colligate Education,
Vijayawada, A.P.*



Greetings

I am happy to note that the Department of Physics and Chemistry of YVNR Government Degree College, Kaikaluru is organizing a Two-Day International Webinar on Research Methodology in Environmental Sciences during 30 th and 31 st January 2024.

These types of seminars or webinars are very useful for the young faculty and also student young minds. So starting a dialogue and drawing greater attention are a good start. I hope, this webinar is one such type., as the resource persons are with high academic qualification in the field of research.

I hope the deliberations at the webinar will be of great importance and use to help and create general awareness among the students. I congratulate the organizers and the Principal of the college for conducting the webinar.

I wish all the Success.

Dr R. David Kumar Swamy



**Government of Andhrapradesh
Higher Education Department**



Dr. Ch. Krishna RJD, CCE,
Rajamahendravaram



Greetings

I consider it a great privilege to note that YVNR Government Degree College, Kaikaluru is organizing a Two-Day International Webinar on Research Methodology in Environmental Sciences during 30 th and 31 st January 2024.

Research in simple terms refers to the search for knowledge. It is a scientific and systematic search for information on a particular topic or issue. It is also known as the art of scientific investigation. Such investigation mind must be developed in students from their graduation level itself. So the initiation taken up by the college is appreciable.

I believe that it as a memorable and successful event in the history of YVNR GDC Kaikaluru AP India.

I wish all success.

Dr. Ch. Krishna



**Government of Andhrapradesh
Higher Education Department**



Prof. G. Gnana Mani

*Vice - Chancellor
Krishna University*



Greetings

I am very much delighted to know that YVNR Government Degree College, Kaikaluru is organizing a Two-Day International Webinar on Research Methodology on environmental issues during 30 th and 31 st January 2024.

For one who is preparing himself for a career of carrying out research, the importance of knowing research methodology and research techniques is obvious since the same constitute the tools of his trade. The knowledge of methodology provides good training especially to the new research worker and enables him to do better research. It helps him to develop disciplined thinking or a 'bent of mind' to observe the field objectively. Hence, those aspiring for careerism in research must develop the skill of using research techniques and must thoroughly understand the logic behind them.

I hope the talks at the webinar will be helpful and create general awareness on Environmental issues among students. I congratulate the organizers and the Principal of the college for conducting the webinar.

I wish all the success.

Prof. G. Gnana Mani



**Government of Andhrapradesh
Higher Education Department**



Dr. B. Raghunatha Reddy

Principal

Y.V.N.R. Government Degree College

Kaikaluru, Eluru Dist.



Greetings

It gives me an immense pleasure that the Departments of Chemistry, Physics, Zoology, Botany and Aquaculture Technology in association with IQAC of the College organizing an International webinar on Research Methodology in Environmental Sciences on 30 th and 31 st of January 2024.

Now a days the complexity of environmental data is a challenging obstacle for professionals to overcome. Fortunately, innovative computer programs provide us with a solution for achieving precise predictions, constant monitoring, risk evaluations, and other valuable advantages.

I hope the discussions and deliberations during this webinar show a way for the protection of environment while survival unique natural heritage, the role and significance of scientists as well as students.

I wish a grand success.

Dr. B. Raghunatha Reddy

INTRODUCTION

Environmental research is a broad field that encompasses topics from air and water quality to climate change. Environment is living things and what is around them. It includes physical, chemical and other natural forces. Living things do not simply exist in their environment. They constantly interact with it. Organisms change in response to conditions in their environment. In the environment there are interactions between plants, animals, soil, water, temperature, light and other living, and non-living things. Now a day's People afraid of threat of III World war. But there are so many problems which attacking the world in several ways. Terrorism, Unemployment, Financial crisis and Environmental disasters etc., are also other problems which is going to be destroy the world. Out of them Environmental pollution is one of the dangers which now the globe is facing. It is very dangerous than nuclear weapons. Therefore, It is the need of the hour to invent new Research methods in controlling the environmental pollution. It is the responsibility of every Scientist of either Pure sciences or Social sciences to carry more research to protect our environment carefully inorder to give life to future generations.

Inaugural Session:

Prof. G.Gnana Mani, Vice chancellor, Krishna University, Machilipatnam, was the chief guest of the session. He explained the Research methodology in Environmental Sciences in broader sense. It is well said that "all progress is born of curiosity or inquiry" "Doubts are even better than the over confidence". Curiosity leads to invention. Research inculcates systematic thinking and inductive philosophy and also supports development of habits for logical thinking. Environmental problem is one of the great issues at national and international level. As you know, our natural resources are depleting very fast and air, water, and soil are being contaminated. Biological diversity is decreasing and many species are at the verge of extinction. Therefore, research in environmental science has a great opportunity to scientists, researchers and others, who are working on different aspects of environmental science. Research can be a great tool to solve all the environmental problems. As you know that scientists invented LED bulb which is eco-friendly and use less amount of energy as compared to traditional bulb. These bulbs have long durability, therefore generate less amount of solid waste. The invention of LED bulb is results of research. The webinar is thesis-oriented with an individual research project as its core. Dr.B.Raghunatha Reddy, Principal Y.V.N.R.Government Degree College, Kaikaluru, Sri. D.Udayaprakasarao vice Principal, Dr. R. Jalababu, IQAC Coordinator, were present and spoke about the Innovative methods of research in Environmental Sciences.

First Technical session:

The session was chaired by Dr. K.A. Emmanuel, Department of chemistry, Y.V.N.R. Government Degree College, Kaikaluru. Dr. Tharun Dolla Assistant Professor, Gitam Deemed to be University, Visakhapatnam, as lead speaker in this session. Dr. Tharun Dolla on his invited talk mainly focused on Researching Sustainable Development Goals (SDGs)- Shaping your papers to SDGs. In the contemporary landscape of global challenges, the Sustainable Development Goals (SDGs) stand as a beacon for sustainable and inclusive development. This talk delves into the significance of integrating SDGs into research papers, emphasizing the pivotal role researchers play in advancing these universal objectives. The focus is on understanding the core principles of SDGs, their relevance across diverse disciplines, and the practical approaches researchers can adopt to contribute meaningfully to the global pursuit of sustainability.

The SDGs, adopted by all United Nations Member States in 2015, provide a comprehensive framework comprising 17 goals and 169 targets aimed at addressing social, economic, and environmental issues. These goals underscore the interconnectedness of global challenges, emphasizing the need for collaborative efforts to build a more sustainable future. Researchers, as key contributors to knowledge creation and dissemination, have a unique opportunity to align their work with the SDGs, thereby amplifying its impact and relevance.

Second Technical session:

This session chaired by Dr. V. Sandhya, Assistant professor of Zoology Y.V.N.R. Government Degree College, Kaikaluru. Dr. Raja Kumar Balla, Professor, Department of Chemistry, IIT, Chennai, acted as lead speaker in this session. He discussed on the nature given biosphere is highly balanced in all the required essentials for the survival of the life. Unfortunately, it was pushed into the threatened zone by all un-natural human activities. The un-natural human activities include rapid industrialization, deforestation and disturbing the eco system. The rapid industrialization has led to the emissions of all kinds of chemicals to above the tolerance limits into the Earth's atmosphere. These emissions include chlorinated compounds, and they are detrimental to the Earth's ozone layer in the stratosphere. In addition, emissions of volatile organic compounds (VOCs) have significantly influenced the chemical composition of the Earth's atmosphere. The adverse effects caused by the VOCs include climate change, global warming, acidic rains, and ozone formation in the troposphere. The secondary organic aerosols generated in the chemical transformation via their oxidation in the atmosphere have shown severe effects on the health of the humans and rest of the biosphere.

He is also emphasized that, such effects and the remedies will be discussed. In addition, few experimental methods used for the determination of parameters such as global warming potentials will be introduced to the audience.

Third Technical session: (31st January 2024)

This session chaired by Dr. R. Jalababu, Department of chemistry, Y.V.N.R.Government Degree College, Kaikaluru. Dr. Arul Manikandan, Post Doctorol Fellow Dublin City University, Dublin, Ireland. He spoke on Sustainable biorefining and bioprocessing of marine algae to produce edible and non-edible packaging films to combat plastic pollution Globally, annual petroleum-based plastic production reached 360 million tonnes in 2018. The packaging sector, consuming 42% of the global plastic production, emerges as the largest user of petroleum-based plastic. Approximately 22 to 43% of all the polymers end up in landfills, and a significant 10–20 million tons find their way into the oceans each year. Amongst which, the persistent use and improper disposal of single-use plastics contribute substantially to global plastic pollution. However, proper food packaging is inevitable to ensure high food safety and extended product shelf-life. Researchers have explored and developed edible packaging films as they produce no waste. Notably, products like Tetra Pak® enhance food protection and shelf life. The current investigation introduces a compostable combo pack system made of edible-ulvan films and non-edible polyhydroxybutyrate films to enhance food safety and alongside combating the plastic pollution in Ireland. The preparation of edible-ulvan films involves cross linking and plasticization of ulvan using citric acid and xylitol, as confirmed by Fourier transform infrared (FTIR) spectroscopy and differential scanning calorimetry (DSC) analysis. The gut-friendliness of the edible ulvan film was evaluated using Lactobacillus and Bifidobacterium spp. (yoghurt), demonstrating an enhancement in the growth of these beneficial microbiomes while simultaneously inhibiting the activity of pathogens like Escherichia coli and Staphylococcus aureus. Green macroalgal biomass, left after ulvan extraction, was subjected to dark fermentation to produce non-edible polyhydroxybutyrate. This study showcases the feasibility of creating both edible and non-edible packaging films using green macroalgal biomass as a sustainable feedstock.

Fourth Technical session:

This session chaired by Dr. P. Paul Divakar, Lecturer in Physics, Y.V.N.R.Government Degree College, Kaikaluru. Dr. Jaswanth G Technion Israel Institute, Israel, gave invited talk on A Comprehensive Guide to Crafting a Sustainable Research Paper. He has explained that this presentation aims to provide a thorough guide on the meticulous process of crafting a sustainable research paper, emphasizing the integration of environmental consciousness, ethical considerations, and academic excellence. In a world where knowledge dissemination is expanding rapidly, the need for sustainable research practices has become paramount.

This presentation encapsulates the key components of the comprehensive guide, offering insights into each stage of the research paper development process. The presentation begins by stressing the importance of selecting a relevant and timely topic that aligns with both personal interests and broader academic objectives. Emphasis is placed on choosing research questions that address existing gaps or controversies in the literature, thereby contributing meaningfully to the field. Furthermore, considerations of feasibility in terms of available resources and time are discussed to ensure a well-rounded approach to the research endeavor. A significant portion of the presentation delves into the critical role of a comprehensive literature review. Attendees will learn how to navigate existing research to understand the current state of knowledge, identify gaps, and critically evaluate and synthesize relevant studies. This foundational step serves as a springboard for the development of clear research objectives and hypotheses, aligning with the principles of SMART goal setting.

Valedictory Session: 31st January.2024)

Dr. B.Raghunatha Reddy, Principal, Y.V.N.R. Government degree College, Kaikaluru, Eluru District presided over the function. Dr. Ch.Krishna, Regional Joint Director, Rajamahendravaram appreciated the departments of chemistry, Physics, Zoology , and IQAC of Y.V.N.R Government college, for their efforts in bringing the experts and research scholars together on a single platform to discuss about the Research Methodology in Environmental Sciences. Dr.Ch.Krishna, Regional Joint Director, Rajamahendravaram attended as a chief guest of the function and addressed the gathering. In his valedictory talk he mainly focused on various roles of research in environmental science.

Our nation is going through major challenges like terrorism, poverty, inflation, unemployment and environmental pollution etc,. Out of all theses problem environmental pollution became more dangerous and it is also a threat the whole globe. We will have to provide a good soil, good quality of air and good quality of water to the future generations. In this junction a lot of research has been carried out to discovery of new eco methods to safe guard the globe and it is the need of hour.

Research is a systematic search for information and new knowledge. It covers topics in every field of science and perceptions of its scope and activities are unlimited. The classical broad divisions of research are: basic and applied research. The basic research is necessary to generate new knowledge and technologies to deal with major unresolved health problems. On the other hand, applied research is necessary to identify priority problems and to design and evaluate policies and programs that will deliver the greatest health benefit, making optimal use of available resources. Quantitative and Qualitative researches: Early forms of research originated in the natural sciences such as biology, chemistry, physics, geology etc. and was concerned with investigating things which we could observe and measure in some way. Such observations and measurements can be made objectively and repeated by other researchers. This process is referred to as “quantitative” research. Much later, along came researchers working in the social sciences: psychology, sociology, anthropology etc. They were interested in studying human behaviour and the social world inhabited by human beings. They found increasing difficulty in trying to explain human behaviour in simply measurable terms.



Inaugural Session



Principal's Message



Environmental research is the scientific study of environmental processes and systems, including the effects of human activity on these systems. The goal of environmental research is to understand how: the natural world works. human activity affects the environment. Research is a scientific investigation. Investigation means a search for new facts and ideas in any branch of knowledge. Thus, we can say that research is a search for knowledge. Research may be considered as a movement, a movement from the unknown to the known. It is actually a voyage of discovery. Research is carried out for two purposes; one is the discovery of new facts and the second, verification of the old ones. The object of every business organization, of course, is the discovery of new facts, new relationship, and new laws governing the business phenomena. But constant verification of the old concepts is also needed especially in dynamic business environment.

Environmental research is a broad field that encompasses topics from air and water quality to climate change. Environment is living things and what is around them. It includes physical, chemical and other natural forces. Living things do not simply exist in their environment. They constantly interact with it. Organisms change in response to conditions in their environment. In the environment there are interactions between plants, animals, soil, water, temperature, light and other living, and non-living things. Now a day's People afraid of threat of III World war. But there are so many problems which attacking the world in several ways. Terrorism, Unemployment, Financial crisis and Environmental disasters etc., are also other problems which is going to be destroy the world. Out of them Environmental pollution is one of the dangers which now the globe is facing. It is very dangerous than nuclear weapons. Therefore, It is the need of the hour to invent new Research methods in controlling the environmental pollution. It is the responsibility of every Scientist of either Pure sciences or Social sciences to carry more research to protect our environment carefully inorder to give life to future generations.

In the light of the aforesaid challenging tasks, we believe that the present International webinar plays a vital role in identifying the thrust areas of research in assessing the pollution depth and evolving the methods for controlling the pollution. No doubt the fruitful deliberations in the webinar would yield the constructive suggestions and guidelines for the further developments in environmental sciences. I am appreciating the efforts of organizers and I wish a grand success.

Thank you all.

INAUGURAL TALK :

Prof. G. Gnana Mani

*Vice - Chancellor
Krishna University*



Prof. G. Gnana Mani, Vice - Chancellor, Krishna University, Machilipatnam attended as a chief guest of the function and addressed the gathering. In his inaugural talk he mainly focused on various roles of research in environmental science. Some of them are

1. In Biodiversity Management
2. In Air quality analysis
3. In Water quality analysis
4. In Soil Quality analysis
5. In Policies making
6. Conservation of Natural Resources

1. In Biodiversity Management: As you know that biodiversity is variety and variability among all species on a spatial scale. This biological diversity degrading day by day due to habitat loss, pollution, poaching, over exploitation etc. Research provides the basic data of biodiversity. By using these data and other associated information, scientists seek the solution for biodiversity degradation.
2. In Air quality analysis: Air is most essential components of life. Without food and water we can survive for few days but without air we cannot survival for several minutes. Research not only provides the air quality data but also identify the sources and remedial measures of air pollution.

3. In Water quality analysis: You are well aware about the importance of water. It is used for variety of purposes as drinking, bathing, irrigation, industrial purpose etc. When it becomes polluted, it causes numerous health problems. Research provides the data of water quality by analyzing parameters of water quality by using different methodologies and interprets the quality of water.
4. In Soil Quality analysis: Soil is upper most layer of earth. Human being depends on soil for food, fodder and several other components. Soil quality is also an important factor. Researcher analyze the soil for its various physical and chemical properties as organic matter, moisture content, water holding capacity, chlorides, temperature, pH, heavy metals etc. Research provides the data and information about the quality of soil. Using these data, farmers practiced the different methods of agriculture and also sow matching crops on their farm lands.
5. In Policies making: Researches also analyze various components requiring policy formulation and modification. Ecologists, environmentalists, sociologists etc. conduct various researches such as Environmental Impact Assessment (EIA) to mitigate the environmental problems. Any project which is being implemented required EIA and SIA which are also result of research.
6. Conservation of Natural Resources: As you know the natural resources are ecologically, environmentally, socially and economically very important. Researches on natural resources provide basic data to conserve the natural resources at local and global level. Researches also estimate the contribution of natural resources to the communities. Government of different countries declared some spatial natural patches as the national parks, wildlife sanctuaries, biosphere reserves, conservation sites etc. on the basis of researches and investigations besides the environmental studies research is an important tool in other sciences and technologies.

Invited Talk –1

Dr. **DOLLA THARUN** PhD

Assistant Professor,

"Gitam Deemed to be University

Visakhapatnam"



RESEARCHING SUSTAINABLE DEVELOPMENT GOALS (SDGS)

- SHAPING YOUR PAPERS TO SDGS

ABSTRACT

In the contemporary landscape of global challenges, the Sustainable Development Goals (SDGs) stand as a beacon for sustainable and inclusive development. This talk delves into the significance of integrating SDGs into research papers, emphasizing the pivotal role researchers play in advancing these universal objectives. The focus is on understanding the core principles of SDGs, their relevance across diverse disciplines, and the practical approaches researchers can adopt to contribute meaningfully to the global pursuit of sustainability.

The SDGs, adopted by all United Nations Member States in 2015, provide a comprehensive framework comprising 17 goals and 169 targets aimed at addressing social, economic, and environmental issues. These goals underscore the interconnectedness of global challenges, emphasizing the need for collaborative efforts to build a more sustainable future. Researchers, as key contributors to knowledge creation and dissemination, have a unique opportunity to align their work with the SDGs, thereby amplifying its impact and relevance.

The first section of this talk explores the foundational principles of the SDGs. It elucidates the three dimensions - economic, social, and environmental - that encapsulate the goals.

The holistic nature of the SDGs recognizes the intricate relationships between poverty, inequality, climate change, and other pressing issues. Researchers are encouraged to adopt an interdisciplinary approach that considers the multifaceted nature of sustainable development, breaking down traditional silos in academia.

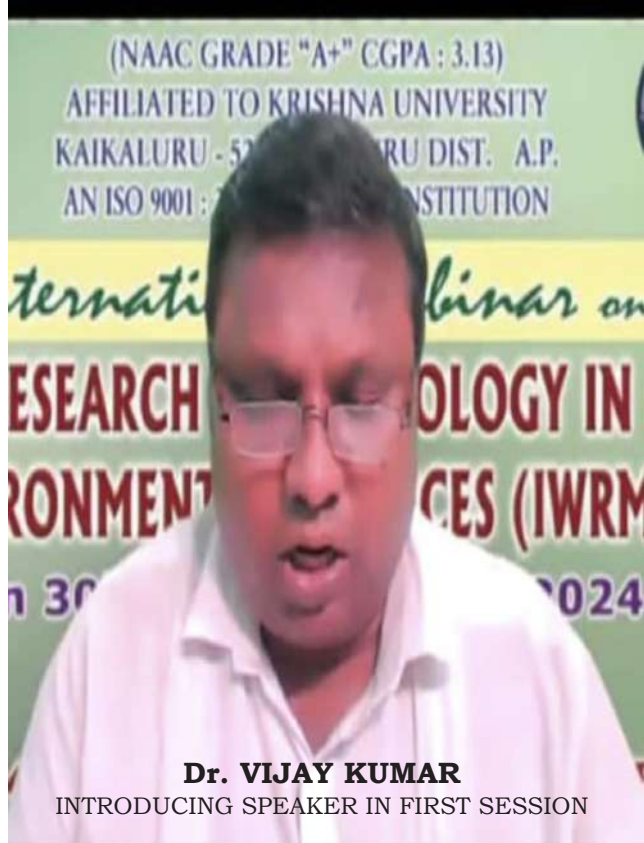
The second section underscores the relevance of SDGs across diverse disciplines. Whether in the sciences, humanities, or social sciences, the SDGs offer a universally applicable framework that resonates with the essence of each field. For instance, a biologist may explore sustainable agricultural practices (SDG 2: Zero Hunger), while a sociologist may delve into gender equality and social inclusion (SDG 5: Gender Equality). By recognizing the universality of the SDGs, researchers can tailor their investigations to contribute to the overarching vision of a more equitable and sustainable world.

Moving beyond theoretical considerations, the third section offers practical strategies for researchers to shape their papers in alignment with SDGs. This involves adopting a problem-solving mindset, identifying linkages between research questions and SDGs, and integrating sustainability principles into research methodologies. Researchers are encouraged to collaborate with diverse stakeholders, including policymakers, communities, and non-governmental organizations, fostering knowledge exchange and co-creation of solutions.

Furthermore, this talk explores the role of technology and innovation in advancing the SDGs. Embracing cutting-edge technologies and innovative approaches can enhance the effectiveness and scalability of research interventions. From leveraging big data for sustainable urban planning to harnessing renewable energy solutions, technology becomes a powerful enabler for achieving SDGs.

In conclusion, this talk posits that integrating SDGs into research papers is not merely a scholarly choice but a moral imperative. Researchers, by aligning their work with the SDGs, contribute to the collective endeavor of building a sustainable and equitable future for all. The talk calls for a paradigm shift in research practices, urging scholars to transcend disciplinary boundaries and actively engage with the transformative agenda set forth by the SDGs. As custodians of knowledge, researchers possess the agency to shape a world where no one is left behind, and sustainable development becomes a reality.

DAY - 1, SESSION - I INAUGURAL SESSION



Prof. RAJAKUMAR BALLA,
Department of Chemistry,
Indian Institute of Technology Madras
Chennai 600036
rajakumar@iitm.a.in

POLLUTION AND ITS CHEMISTRY - A THREAT TO THE BIOSPHERE

Abstract:

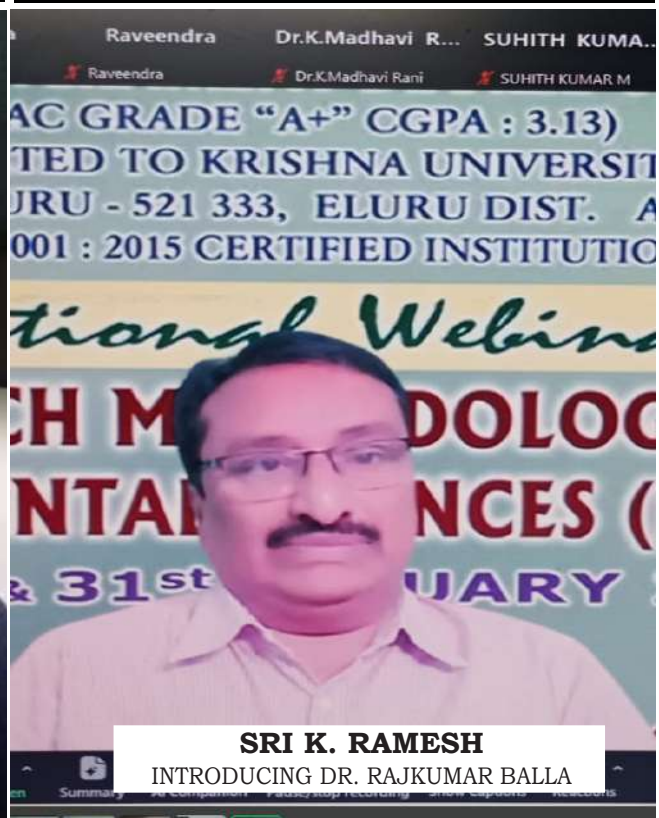
The nature given biosphere is highly balanced in all the required essentials for the survival of the life. Unfortunately, it was pushed into the threatened zone by all un-natural human activities. The un-natural human activities include rapid industrialization, deforestation and disturbing the eco system. The rapid industrialization has led to the emissions of all kinds of chemicals to above the tolerance limits into the Earth's atmosphere. These emissions include chlorinated compounds, and they are detrimental to the Earth's ozone layer in the stratosphere. In addition, emissions of volatile organic compounds (VOCs) have significantly influenced the chemical composition of the Earth's atmosphere. The adverse effects caused by the VOCs include climate change, global warming, acidic rains, and ozone formation in the troposphere. The secondary organic aerosols generated in the chemical transformation via their oxidation in the atmosphere have shown severe effects on the health of the humans and rest of the biosphere.

In this talk, such effects and the remedies will be discussed. In addition, few experimental methods used for the determination of parameters such as global warming potentials will be introduced to the audience.

DAY - 1, SESSION - II



Dr. RAJ KUMAR BALLA
IN SECOND SESSION



SRI K. RAMESH
INTRODUCING DR. RAJKUMAR BALLA

N. Arul Manikandan

Department of Microbiology, University of Galway, Galway, Ireland.

School of Biotechnology, Dublin City University, Dublin, Ireland.

Sustainable biorefining and bioprocessing of marine algae to produce edible and non-edible packaging films to combat plastic pollution

Globally, annual petroleum-based plastic production reached 360 million tonnes in 2018. The packaging sector, consuming 42% of the global plastic production, emerges as the largest user of petroleum-based plastic. Approximately 22 to 43% of all the polymers end up in landfills, and a significant 10–20 million tons find their way into the oceans each year. Amongst which, the persistent use and improper disposal of single-use plastics contribute substantially to global plastic pollution. However, proper food packaging is inevitable to ensure high food safety and extended product shelf-life. Researchers have explored and developed edible packaging films as they produce no waste. Notably, products like Tetra Pak® enhance food protection and shelf life. The current investigation introduces a compostable combo pack system made of edible-ulvan films and non-edible polyhydroxybutyrate films to enhance food safety and alongside combating the plastic pollution in Ireland. The preparation of edible-ulvan films involves crosslinking and plasticization of ulvan using citric acid and xylitol, as confirmed by Fourier transform infrared (FTIR) spectroscopy and differential scanning calorimetry (DSC) analysis. The gut-friendliness of the edible ulvan film was evaluated using *Lactobacillus* and *Bifidobacterium* spp. (yoghurt), demonstrating an enhancement in the growth of these beneficial microbiomes while simultaneously inhibiting the activity of pathogens like *Escherichia coli* and *Staphylococcus aureus*. Green macroalgal biomass, left after ulvan extraction, was subjected to dark fermentation to produce non-edible polyhydroxybutyrate. This study showcases the feasibility of creating both edible and non-edible packaging films using green macroalgal biomass as a sustainable feedstock.

Keywords: Plastic; Food packaging; Polyhydroxybutyrate; Edible and Non-edible

DAY - 2, SESSION - III



Dr V. Sandhya acted as moderator of the session



Dr Padma Dorothy delivering Greetings



Smt Y. Gnanaprasunambha introducing
Dr .Arul Manikandan



Dr Arul Manikandan Delivering Lecture

Dr Jaswanth G

Technion Postdoctoral Fellow
Faculty of Civil Engineering, Technion Israel Institute
Israel.

A COMPREHENSIVE GUIDE TO CRAFTING A SUSTAINABLE RESEARCH PAPER

Abstract

This comprehensive guide navigates the intricate process of crafting a sustainable research paper, offering a holistic approach to scholarly writing. It elucidates the pivotal elements necessary for producing impactful and enduring research. The guide emphasizes the importance of a well-defined research question, encouraging scholars to meticulously formulate inquiries that contribute meaningfully to existing knowledge.

Bio: Dr.Gangolu, a resident of Vijayawada, Andhra Pradesh, completed his bachelor's degree at the Department of Civil Engineering, Andhra University College of Engineering. Following his undergraduate studies, he pursued a direct Ph.D. program at the Department of Civil Engineering, Indian Institute of Technology (IIT) Guwahati. After obtaining his Ph.D., he served as a post-doctoral researcher at the Indian Institute of Technology (IIT) Madras before joining as an Assistant Professor in the Department of Civil Engineering at Aditya Engineering College, Surampalem. In 2023, Dr.Gangolu accepted an offer and is currently serving as a Technion Postdoctoral Fellow in the Faculty of Civil Engineering at Technion Israel Institute, Israel. His research in structural engineering focuses on high-strain dynamic loadings on structures, including impact and blast scenarios. Over the past two years, he has demonstrated remarkable productivity, publishing seven SCI articles in top journals, with four of them boasting an impressive impact factor of 8.1 and a cumulative impact factor is 41.9.



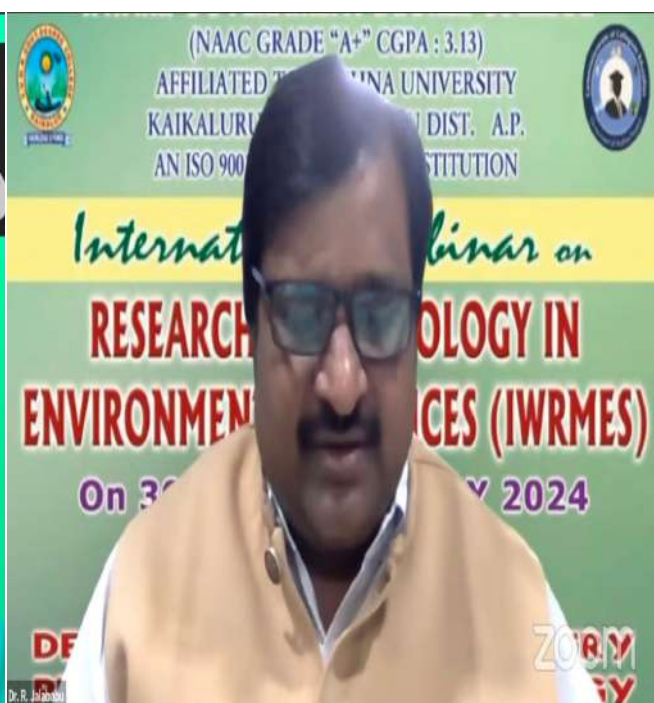
Dr M. Vijayakumar introducing Dr . G. Jaswanth in the second session



Dr G. Jaswanth delivering his lecture in the second session



Dr P. Paul divakar Delivering the Theam of the Webinor



Dr R. Jalababu presenting the report of the webinor





VALEDICTORY SESSION





**Government of Andhrapradesh
Higher Education Department**



Dr Krishna Chappidi

*Regional Joint Director (FAC)
RJD of Collegiate Education (Zone - I & II
Rajamahendravaram*



VALEDICTORY TALK

Good evening to you all. First of all, I would like to congratulate Dr B. Raghunatha Reddy and his team in getting NAAC A grade with CGPA 3.13 in the 3rd cycle. I also appreciate the Principal and his team for carrying out the same spirit in organizing different academic activities for the benefit of the students.

I am indeed delighted to participate in the valedictory function of the international webinar on “Research Methodology in Environmental Sciences”. My greetings to scientists, distinguished guests, experts, academicians, policy makers and representatives of Non-Governmental Organisations. I wish you all a happy, prosperous, productive and creative 2024. When I was invited to address this International webinar, I was thinking what thoughts I can share with you in this beautiful environment. I have selected the topic for discussion the need of the Research in Environmental Sciences “.

Our nation is going through major challenges like terrorism, poverty, inflation, unemployment and environmental pollution etc,. Out of all theses problem environmental pollution became more dangerous and it is also a threat the whole globe. We will have to provide a good soil, good quality of air and good quality of water to the future generations. In this junction a lot of research has been carried out to discovery of new eco methods to safe guard the globe and it is the need of hour.

Research is a systematic search for information and new knowledge. It covers topics in every field of science and perceptions of its scope and activities are unlimited. The classical broad divisions of research are: basic and applied research. The basic research is necessary to generate new knowledge and technologies to deal with major unresolved health problems. On the other hand, applied research is necessary to identify priority problems and to design and evaluate policies and programs that will deliver the greatest health benefit, making optimal use of available resources. Quantitative and Qualitative researches: Early forms of research originated in the natural sciences such as biology, chemistry, physics, geology etc. and was concerned with investigating things which we could observe and measure in some way. Such observations and measurements can be made objectively and repeated by other researchers. This process is referred to as “quantitative” research. Much later, along came researchers working in the social sciences: psychology, sociology, anthropology etc. They were interested in studying human behaviour and the social world inhabited by human beings. They found increasing difficulty in trying to explain human behaviour in simply measurable terms.

The contamination of soil due to the presence of chemicals or other harmful particles is called soil pollution. It, directly and indirectly, affects our lives. Excessive use of chemicals like pesticides and fertilisers for agricultural production, mining, improper waste disposal, and acid rain are some of the major causes of soil pollution. As a result of soil pollution, the soil loses its fertility and deteriorates natural vegetation. It adversely affects the organisms residing in the soil, degrades agricultural productivity, and even results in famine.

The challenges for the scientists and technologies would be in the areas of development of seeds that would ensure good yield even under constraints of water and land with organic farming. The challenges for the scientist is indeed a knowledge graduation from characterization of soil to the matching of the seed with the composition of the fertilizer, water management and evolving new pre-harvesting techniques for such conditions. The domain of farming would enlarge from grain production to food processing and marketing.

Friends, I would like to share with you my deep concern about water. Ganges flows across India and Brahmaputra flows through different countries and enters into India. Rhine River, Danube flows into many European countries. Blue Nile and White Nile flow through many African countries and join at Khartoum and then flows as Nile from Sudan to Egypt. I studied the routes of the rivers and also see the exponential increase in the requirement of water. I noted that the flow volume remains almost constant. It was reassuring to note there are many international

rivers which flow through many countries and enrich them. This experience is essential in implementing our interlinking of rivers programme for benefiting the nation. The nations have to join; scientist and technologist have to assist in finding solutions for effective and equitable utilization of water for ensuring prosperity of all nations. We should collectively find solution to this problem.

Globally, there are a few solutions to solve water shortage. The solutions are redistribution of water, water re-cycling and prevention of wastage, rain-water harvesting and inter-linking of rivers. What is the solution as a scientists and technologist can provide for these missions? We must find scientific solutions to these missions so the missions are executed in a cost effective manner maintaining the eco-logical balance and bio-diversity.

Air pollution can be defined as the mixing of external harmful gases and particles in the atmosphere. It is caused by the release of contaminants like toxic gases, chemicals, and other particulate matter. The impact of air pollution can be severe; it varies from person to person. Air pollution impoverishes our lives by causing global warming, acid rain, ozone depletion and increasing the risk of cancer, respiratory diseases, skin diseases, etc

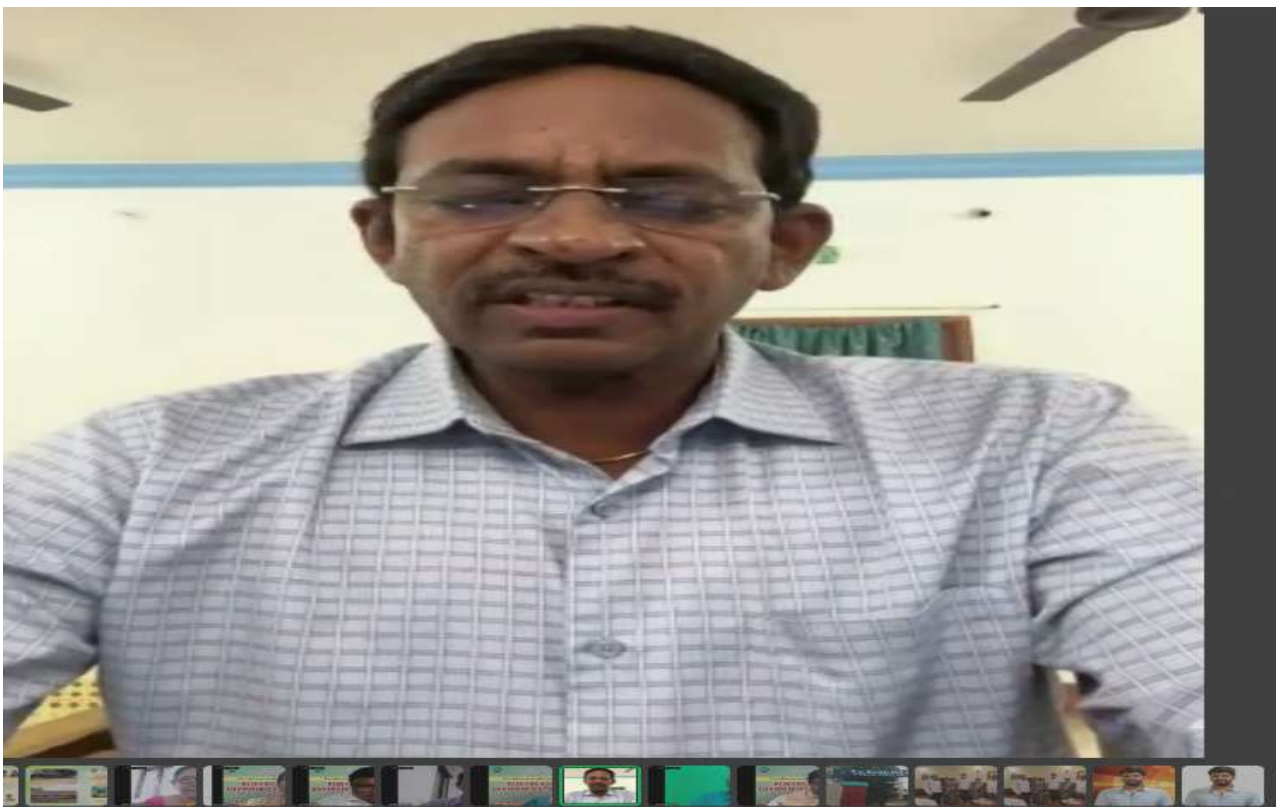
Noise pollution is caused by the excessive amounts of noise in our environment. Noise pollution is generally man-made, and it badly affects the natural balance of our ecosystem. Any sound which is over 85 decibels is harmful to human health. Due to globalisation and industrialization, the level of noise pollution in our environment has increased drastically. Some of the main contributors to noise pollution are machinery used in industries, noise emitted by vehicles, sounds produced during construction work, noise during public festivals and social events, etc. Noise pollution has become a major issue for many developed and developing nations. As a consequence, people are facing sleeping disorders, hearing loss, hypertension, stress-related illnesses, etc.

I am very happy to see that these two days you have witnessed wonderful messages on the topic by the young and dynamic speakers. I personally appreciate Dr Tharun Dolla, Professor Rajkumar Balla, Dr Arul Manikandan and Dr G. Jaswanth for their valuable speeches. Finally I would like the Principal and the organizing committee who has given me the opportunity to share my views. I wish that in the coming days YVNR Government Degree College will conduct a good number of webinars or workshops for the benefit of the students and researchers. Thank you very much. All the best.

VALEDICTORY TALK

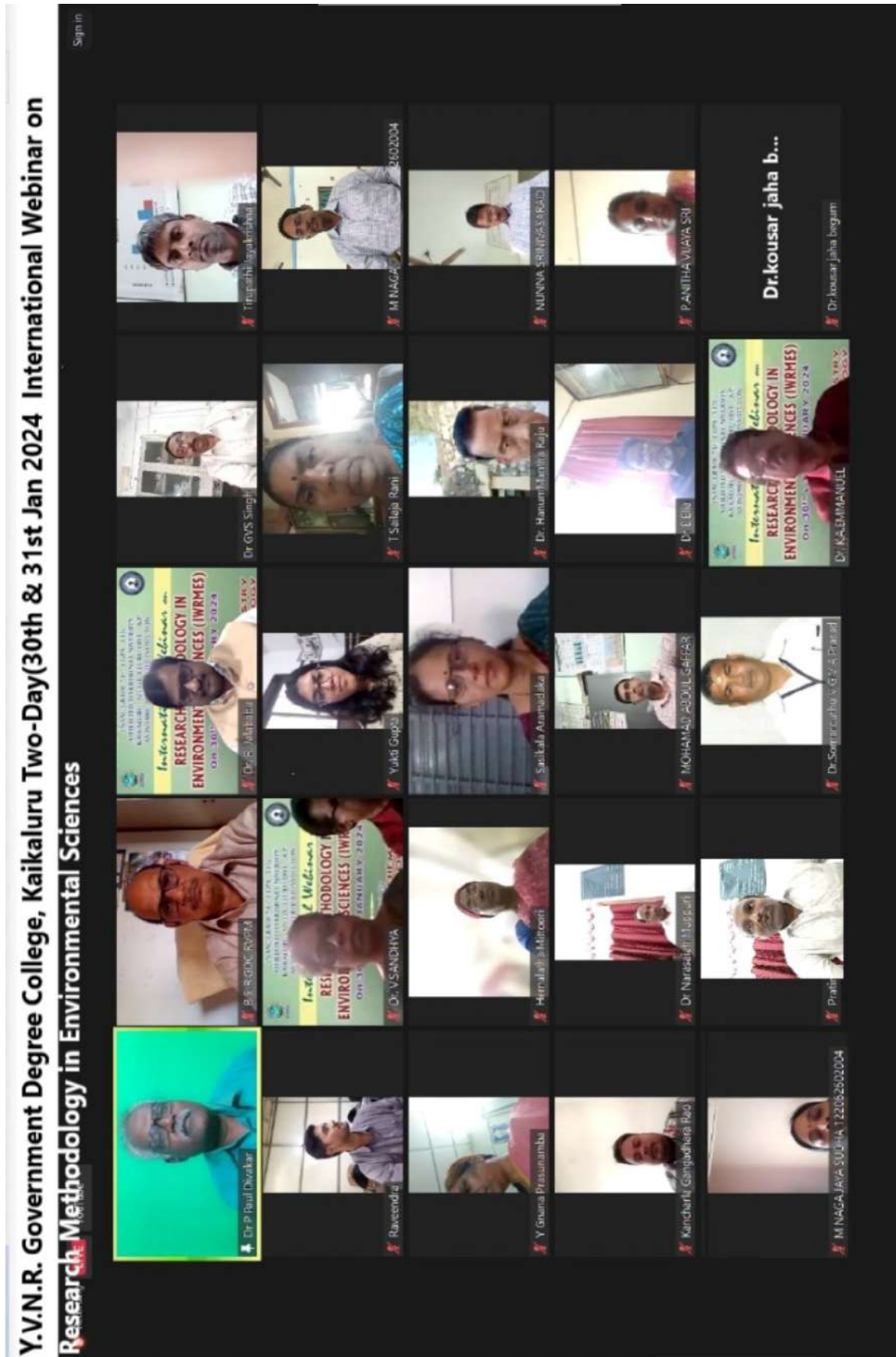


Dr P. Paul divakar acted as moderator for valedictory session



Dr C. Krishna RJD delivering valedictory lecture

VALEDICTORY PHOTO



Annexure - I

Feedback Form

International Webinar on Research Methodology in Environmental Science (IWRMES JAN 2024) on 30th & 31st January 2024 conducted by Y.V.N.R. Government Degree College, Kaikaluru, Eluru district, Andhra Pradesh, India.

* Indicates required question

1. Email *

2. Full Name *

3. Designation / Class (For students) *

4. Name of the Institution & Place *

5. E-mail address *

Feedback Section

Please give your Feedback about International Webinar for further improvement

6. 1. Do you feel the Resource persons are helpful to improve your knowledge on Research Methodology on Environmental Sciences. *

Mark only one oval.

- ☐ Yes
☐ No

7. 2. How clear were the ideas and concepts Resource persons presented. *

Mark only one oval.

- ☐ Excellent
☐ Good
☐ Fair
☐ Poor

8. 3. How did you feel the presentation of **Dr. Dolla Tharun** in Session -I *

Mark only one oval.

- ☐ excellent
☐ Good
☐ Fair
☐ Poor

9. 4. How did you feel the presentation of **Prof. Raja Kumar Balla** in Session -II *

Mark only one oval.

- ☐ excellent
☐ Good
☐ Fair
☐ Poor

10. 5. How did you feel the presentation of **Dr. Arul Manikandan** in Session -III *

Mark only one oval.

- ☐ excellent
☐ Good
☐ Fair
☐ Poor

11. 6. How did you feel the presentation of **Dr. Jaswanth G** in Session -IV *

Mark only one oval.

- ☐ excellent
☐ Good
☐ Fair
☐ Poor

12. 7. How do you feel about Organization of International webinar on Research Methodology in Environmental Sciences. *

Mark only one oval.

- ☐ Excellent
☐ Good
☐ Fair
☐ Poor

13. 8. Any suggestions, Please *

Annexure - II



Annexure - III



Annexure - IV



అంధ్రప్రదేశ్ సాక్షరత మంత్రి కార్యదర్శి, అంధ్రప్రదేశ్ సాక్షరత మంత్రి కార్యదర్శి, అంధ్రప్రదేశ్ సాక్షరత మంత్రి కార్యదర్శి

పర్యావరణ పరిరక్షణ మనందరి బాధ్యత



కైకలూరు: జనవరి 30: ప్రభుత్వ న్యూస్: ఇంటర్వ్యూనల్ వెబినార్ - రీచార్జ్ మెథడాలజీ ఇన్ ఎన్విరాన్మెంటల్ సైన్స్ స్థానిక వైబిఎన్ఆర్ డిగ్రీ కళాశాలలో మంగళవారం రెండు రోజుల అంతర్జాతీయ వెబినార్ ను ప్రారంభించారు ఈ వెబినార్ ముఖ్య అంశం రీసెర్చ్ మెథడాలజీ ఇన్ ఎన్విరాన్మెంటల్ సైన్స్ ఈ కార్యక్రమానికి కళాశాల ప్రిన్సిపల్ డాక్టర్ జి.రఘునాథరెడ్డి, అధ్యక్షత వహించి ప్రారంభ ఉపన్యాసం చేశారు.

ఈ సమావేశమునకు ముఖ్య అతిథిగా విచ్చేసిన ప్రొఫెసర్, జి.జ్ఞానామణి, వైస్ చాన్సలర్ కృష్ణా యూనివర్సిటీ మచిలీపట్నం ఆయన మాట్లాడుతూ నేటి పరిశోధనలు పర్యావరణం మరియు పర్యావరణ సంరక్షణ రంగంలో విశేషమైన పరిశోధనలు చేయవలసిన అవశ్యకత ఎంతైనా ఉందని తెలియజేశారు. అనంతరం ప్రముఖ ఎన్విరాన్మెంటల్ డాక్టర్.

పద్మ దోరతి, విద్యార్థులకు పరిశోధకులకు నిర్వాహ కమిటీ వారికి అభినందనలు తెలియజేస్తూ వైస్ ప్రిన్సిపాల్, డి. ఉదయ ప్రకాశరావు, మాట్లాడుతూ పర్యావరణ పరిరక్షణ మన అందరి కర్తవ్యం అని తెలిపారు. డాక్టర్. డొల్ల తరుణ్, అసిస్టెంట్ ప్రొఫెసర్ గీతం యూనివర్సిటీ విశాఖపట్నం, సైన్సుబుల్ డెవలప్మెంట్ గోల్స్ షేపింగ్ యువర్ పేపర్స్ అనే అంశంపై విపులంగా చర్చించడం జరిగింది. డాక్టర్. రాజకుమార్ బొల్ల ప్రొఫెసర్ ఐటి మద్రాస్ వారు పాల్యూషన్ అండ్ ఇట్స్ కెమిస్ట్రీ ఏ డ్రెస్ట్ టు ది బయోస్ఫియర్ అనే అంశంపై వివరంగా విశ్లేషించినారు. ఈ కార్యక్రమానికి దేశ విదేశాల నుండి విద్యార్థులు పరిశోధకులు డిగ్రీ కళాశాలల అధ్యాపకులు సుమారు 500 మందికి పైగా హాజరైనారు. ఈ కార్యక్రమంలో ఐ క్యుఎస్ కో ఆర్డినేటర్ డాక్టర్. ఆర్. జాలా బాబు, ఆర్గనైజర్ సెక్రటరీ, డాక్టర్ .వి.సంధ్య, కె. రమేష్, నల్లూరి. శ్రీనివాసరావు, ఎం. విజయ్ కుమార్, ప్రొగ్రాం కోఆర్డినేటర్, డాక్టర్ .జె.వి ఇమ్మానియేల్, డాక్టర్. పి. పాల్ దివాకర్, మరియు ఇతర అధ్యాపకులు పాల్గొన్నారు.

పర్యావరణ శాస్త్రాల్లో పరిశోధన పద్ధతి

- కైకలూరు నుండి అంతర్జాతీయ వెబినార్
- రీసెర్చ్ మెథడాలజీ
- కృష్ణా యూనివర్సిటీ వీసీ జ్ఞానమణి



కైకలూరు: పర్యావరణం అనే మాటకు ప్రపంచ దేశాలు ఉరిక్కిపడుతున్నాయి. మానవాళి మనుగడలో శీలక భూమిక పోషిస్తోన్న ఈ అంశంపై తరుచూ పలు యూనివర్సిటీలు వెబినార్లు నిర్వహించి దేశ, విదేశాల్లోని నిపుణుల ఆభిప్రాయాలను అందరికీ తెలియజేస్తున్నాయి. అటువంటిదే కైకలూరు వైబిఎన్ఆర్ ప్రభుత్వ డిగ్రీ కాలేజీలో డిపార్టుమెంట్ ఆఫ్ కెమిస్ట్రీ, ఫిజిక్స్, బోటనీ, జియాలజీ, కాలేజీ చక్రావర్తి నయ్యకృష్ణ అధ్యక్షంలో ఇంటర్వ్యూనల్ వెబినార్ - రీసెర్చ్ మెథడాలజీ ఇన్ ఎన్విరాన్మెంటల్ సైన్స్ అనే అంశంపై వెబినార్ మంగళవారం నిర్వహించారు. దీనికి కాలేజీ ప్రిన్సిపాల్ డాక్టరు పి.రఘునాథరెడ్డి అధ్యక్షత వహించారు. రీసెర్చ్ మెథడాలజీ కృష్ణ యూనివర్సిటీ వైస్ చాన్సలర్ ప్రొఫెసర్ జి.జ్ఞానమణి పర్యావరణ అవశ్యకతను వివరించారు. మద్రాసు ఐఐటి ప్రొఫెసర్ డాక్టర్ బల్ల రాజేకుమార్ పాల్యూషన్ అండ్ ఇట్స్ కెమిస్ట్రీ ఏ డ్రెస్ట్ టు ది బయోస్ఫియర్ అనే అంశాన్ని లోతుగా విశ్లేషించారు. వెబినార్కు ప్రధాన పోషకులుగా కమిషనర్ కాలేజీ యల్ ఎడ్యుకేషన్, విజయవాడకు చెందిన పోల భాస్కర్, మంగళగిరి సీసీఈ జాయింట్ డైరెక్టర్ డాక్టర్ ఆర్. కే.వి.వి.మూర్తి స్వామి వ్యవహరించారు. వక్రలుగా బర్దాన్, తమిళనాడు, ఇక్రాయేట్, విశాఖపట్నానికి చెందిన బల్ల రాజేకుమార్, ఆరుట్ మణికంధన్, జి.జె.సంధ్య, డొల్ల తరుణ్ వ్యవహరిస్తున్నారు. కైకలూరు కాలేజీకి చెందిన వెబినర్ కో ఆర్డినేటర్ కె.వి. ఇమ్మానియేల్, కె.పాల్ దివాకర్ మాట్లాడుతూ బుధవారం కో వెబినార్ ముగిసిందన్నారు. వెబినార్లో పాల్గొంటున్న దేశ విదేశాల్లో విద్యార్థులు, పరిశోధకులు, అధ్యాపకులకు పర్యావరణ అవశ్యకతపై చక్కటి అవగాహన ఏర్పడుతోందన్నారు. వెబినార్లో పాల్గొంటున్న ఆభిప్రాయాలు, ఇతర ఆలోచనలు పుస్తకరూపంలో వస్త్రాయని నిర్వాహకులు తెలిపారు.

పర్యావరణాన్ని పరిరక్షించుకోవాలి

కైకలూరు, జనవరి 30. పర్యావరణ సంరక్షణకు పరిశోధనలు చేయవలసిన అవశ్యకత గురించిన ఉందని కృష్ణా యూనివర్సిటీ వైస్ చాన్సలర్ ప్రొఫెసర్ జి. జ్ఞానమణి అన్నారు. స్థానిక వైబిఎన్ఆర్ ప్రభుత్వ డిగ్రీ కళాశాల అధ్యక్షంలో రీసెర్చ్ మెథడాలజీ ఇన్ ఎన్విరాన్మెంటల్ సైన్స్ అంతర్జాతీయ సమీక్షను మంగళవారం ఆన్లైన్ ద్వారా నిర్వహించారు. సెమినార్కు ప్రిన్సిపాల్ డాక్టర్ పి. రఘునాథరెడ్డి అధ్యక్షత వహించారు. వక్రలు మాట్లాడుతూ పర్యావరణ పరిరక్షణ ప్రజలందరి కర్తవ్యమన్నారు. డాక్టర్ పద్మ దోరతి, వైస్ ప్రిన్సిపాల్ డి. ఉదయప్రకాష్, ఐక్య కోఆర్డినేటర్ జాలబాబు, ఆర్గనైజింగ్ సెక్రటరీ డాక్టర్ సంధ్య, కె.ఇమ్మానియేలు, పి. పాల్ దివాకర్ తదితరులు పాల్గొన్నారు.



మాట్లాడుతున్న రఘునాథరెడ్డి

పి. రఘునాథరెడ్డి మాట్లాడారు. ముఖ్య అతిథిగా విచ్చేసిన డా. సి. కృష్ణ హర్షావరణరంగంలో పరిశోధన ప్రాముఖ్యతను వివరించారు. భావి తరాలకు మంచినిస్తూ, మంచి నేల, మంచి గాలి ఇవ్వాలన్న బాధ్యత మనందరిదీ ఉందన్నారు. కార్యక్రమాలకు బాధ్యతవర్తులుగా డా. పి.సంగయ్య, డా. పి.పాల్ దివాకర్ లు వ్యవహరించారు. వైస్ ఛిన్మిపాల్ డి. ఉదయప్రకాశరావు వెటినరీ నిర్వహించిన శాఖలను అభినందించారు. డా. ఆర్. బాలాబాయి వెటినరీ రిపోర్టు, వందల సమర్పణ చేశారు. కార్యక్రమంలో జ్ఞాన ప్రసానాంబ, వీరన్నారావు పాల్గొన్నారు.

కైకలూరు: మర్యాదరణ శాస్త్రాల్లో పరిశోధన పద్ధతి అనే అంశంపై స్థానిక వైఎస్సార్ ప్రభుత్వ డిగ్రీ కళాశాలలో నిర్వహిస్తున్న ఇంటర్మీడియట్ వెబినార్ బుధవారంతో ముగిసింది. కళాశాలలో డిపార్టుమెంట్ ఆఫ్ కెమిస్ట్రీ, ఫిజిక్స్, బోటనీ, జువాలజీ, కాలేజ్ ఐక్యూషనీ సంయుక్త అధ్యయన మంగళవారం ఈ వెబినార్ ప్రారంభమైంది. ప్రిన్సిపాల్ బి.రఘునాథరెడ్డి అధ్యక్షతన చివరి రోజు మొదటి సెషన్లో ఇర్లండ్ ప్రాఫెసర్ ఆరుల్ మణికందన్ 'సస్టెనబుల్ బయో రిస్సినింగ్ ఆఫ్ మెడైన్ ఆల్ట్రీ టూ ప్రాడ్యూస్ ఇడిబుల్ అండ్ నాన్ ఇడుబుల్ ఫ్యాకేజీ ఫిలిమ్స్ టూ కంబాత్ ప్లాస్టిక్ పాల్యూషన్' అనే అంశంపై ప్రసంగించారు. అదే విధంగా రెండో సెషన్లో ఇజ్రాయేల్కు చెందిన ఆసిస్టెంట్ ప్రాఫెసర్ జి.నత్తుత్ 'ఎ కాంప్రహెన్సివ్ గైడ్ టూ ట్రాస్టింగ్ ఏ సస్టెనబుల్ రిసోర్స్ పేపర్స్' అనే అంశంపై వెబినార్లో వివరించారు. రాజమండ్రికి చెందిన కళాశాలల రీజినల్ డైరెక్టర్ డాక్టర్ సి.కృష్ణ మర్యాదరణ అంశాలను వివరించారు. స్థానిక అధ్యాపకులు కె.సంధ్య, పి.పాల్ దివాకర్ సందానకర్తలుగా వ్యవహించారు. వైస్ ప్రిన్సిపాల్ ఉదయ్ భకాష్, అధ్యాపకులు ఆర్.జాలబాబు, జ్ఞానప్రసాదాంబ పాల్గొన్నారు.

ఆంధ్రప్రభ

సహజవనరులను బావితరాలకు అందించాలి

[illegible]

రంగంలో పరిశోధన ప్రాముఖ్యత అద్భుతంగా వివరణాత్మకంగా వర్ణించారు. శ్రావణరాలకు మంచిదని, మంచి నేల, మంచి గాలి, మృదులైన బాధ్యత మన అందరి మీద ఉండవలసి తెలియజేశారు. ఈ కార్యక్రమమునకు న్యాయాధికారి వర్మగా ద్వారా, డి. నంద్యం మరియు ద్వారా, డి. పాలి దివ్యత వ్యవస్థించారు. నైతిక ద్వారా, డి. ఉదయ ప్రభాకర్ ద్వారా వినిపించి నిర్వహించిన కార్యాలను అభినందించారు. ఆర్. బల రామ బహుగ్రామి డి. కే.ఆర్.నెలర్ వేదికగా నిర్వహించారు. ఈ కార్యక్రమంలో శ్రీమతి, శ్రావణ ప్రసాదానంద, టీఎస్ డి.పాల్వెంకి మరియు అధ్యాపకులు పాల్గొన్నారు.