ANNUAL PROGRESS REPORT FOR SDG 13 – 2024

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17.3.13. University publishes progress against SDG 13

SPIHER plays an important role in raising awareness about climate change and its impacts through educational programs, seminars, and workshops. These initiatives are designed to foster a deep understanding of the science of climate change and the urgent need for sustainable practices across various industries and sectors. By incorporating climate change topics into the curriculum and offering specialized programs, SPIHER ensures that students are equipped with the knowledge to understand the challenges and solutions associated with climate change.

One of the key educational programs at SPIHER is the Environmental Studies course, where students gain insight into the causes, impacts, and potential solutions to climate change. Additionally, the institution regularly organizes workshops, conferences, and seminars featuring experts in climate science, renewable energy, and environmental law, providing a platform for knowledge sharing and discussion

FDP on Indian Knowledge System

The Faculty Development Programme (FDP) on *"Indian Knowledge System (IKS)"* was conducted to introduce educators to India's traditional knowledge heritage and its relevance to contemporary global challenges. In alignment with SDG 13: Climate Action, the session highlighted how ancient Indian wisdom offers sustainable approaches to environmental protection, climate resilience, and ecological harmony.

The FDP emphasized traditional practices such as water conservation methods, sustainable agriculture, biodiversity protection, Ayurveda-based environmental health concepts, and nature-centric living principles found in classical Indian texts. Resource persons demonstrated how these indigenous systems promote low-carbon lifestyles, responsible resource use, and community-based environmental stewardship.

Faculty members were encouraged to integrate IKS-based sustainability concepts into teaching and research, fostering climate awareness among students. By bridging traditional ecological knowledge with modern scientific understanding, the program promoted climate-conscious thinking and supported educators in cultivating environmentally responsible future citizens.

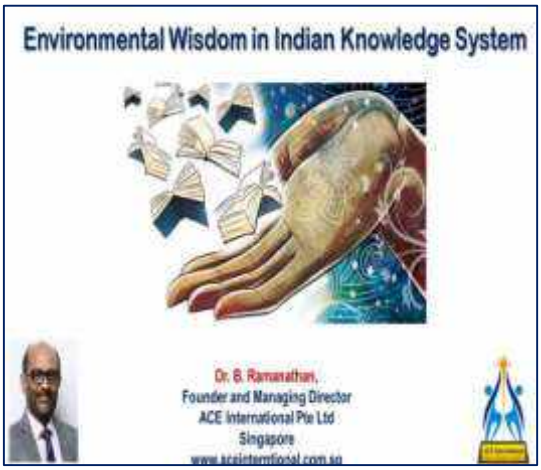
Overall, the FDP strengthened institutional commitment to SDG 13 by promoting climate literacy, sustainable practices rooted in Indian heritage, and collective responsibility toward environmental conservation.

Programme Brochure

Day-01

Inaugural session: 01:30 p.m. - 02:30 p.m.

The Inaugural session started with invocation. Dr. Sayeeda Sultana, Convener welcomed all the participants and briefed about the objective of the program and gave her best wishes for great success of the FDP program. The Chief Guest, Dr. B. Ramanathan, Managing Director, ACE International PTE Ltd., Singapore delivered the Importance of IKS and wished all the participants for the successful event though online mode.



Invited Talk by the Chief Guest, Dr. B. Ramanathan, Managing Director, ACE International PTE Ltd., Singapore

Meeting conducted in online platform

Chief Guest delivering lecture

DAY 02

Time: 2.00 p.m. - 3.00 p.m.

Speaker: Dr.C.U.Tripura Sundari, Faculty in Finance, Quantitative Finance Program, Department of Statistics, Pondicherry University, Pondicherry, India

Topic: Air pollution in India- Major Issues and Challenges

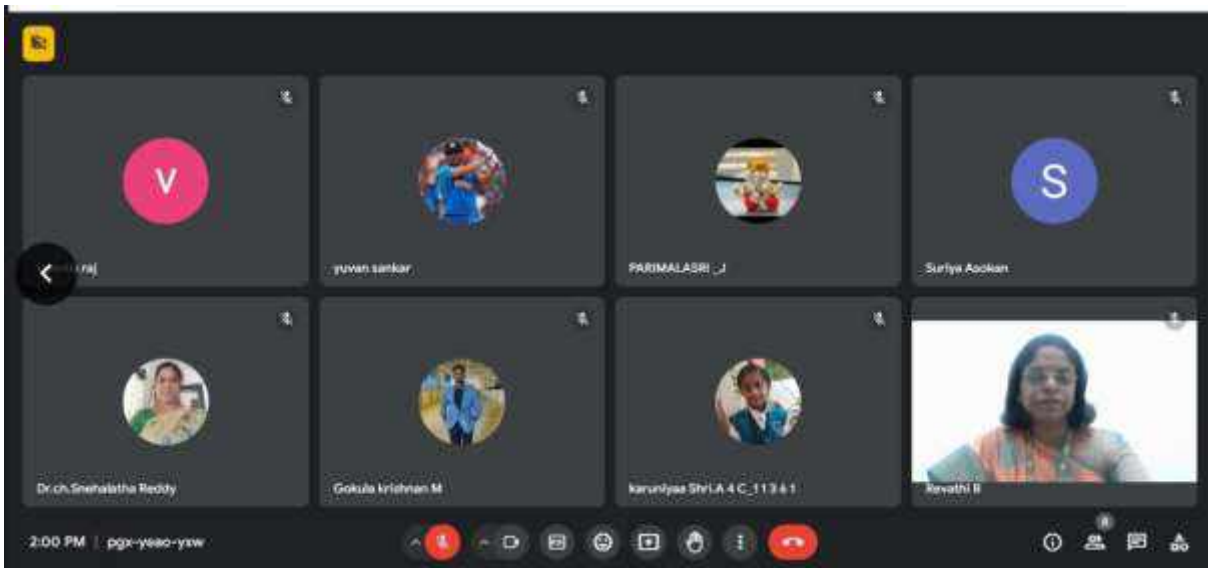
The Speaker Dr.C.U.Tripura Sundari, Faculty in Finance, Quantitative Finance Program, Department of Statistics, Pondicherry University, Pondicherry explained the Chemical Composition of Air pollution that includes a variety of harmful substances that damages the environment.

DAY 03

Time: 2.00 p.m. - 3.00 p.m.

Speaker: Ms. Revathy Balakrishnan, Associate Director, Department of student Affairs, SRM University, Andhra Pradesh, India.

Ms. Revathy Balakrishnan gave a special lecture about chanakya's concept for Personality Development.



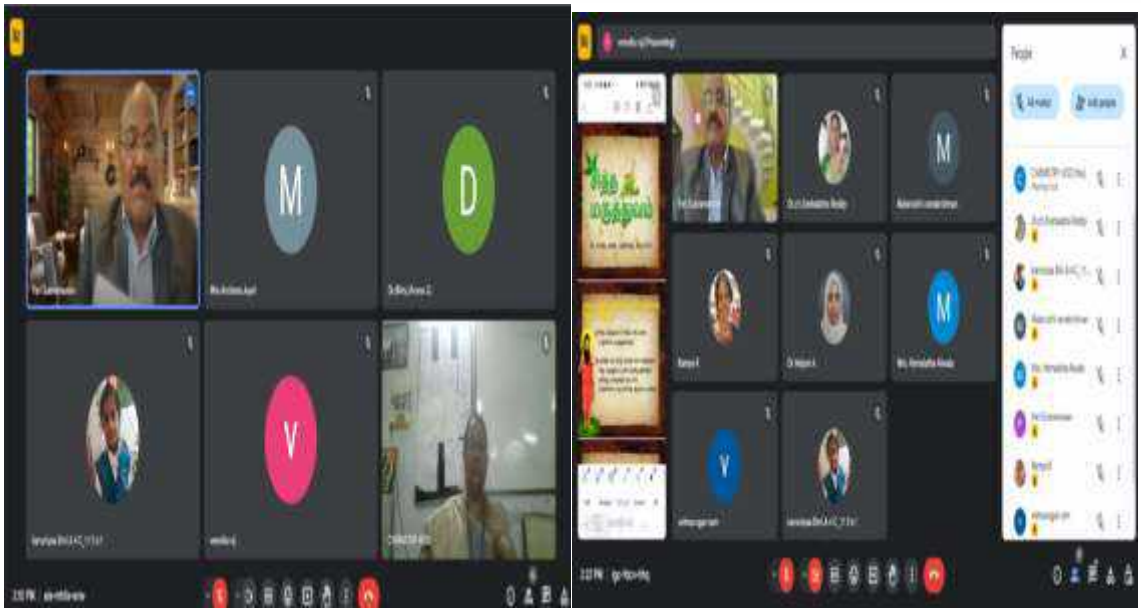
Chief Guest, Ms. Revathy Balakrishnan, Associate Director, Department of student Affairs, SRM University, Andhra Pradesh delivering lecture

DAY 04

Time: 2.00 p.m. - 3.00 p.m.

Speaker: Dr. S. Pari, Professor (Retired), Siddha Doctor, Salem, Tamil Nadu, India.

The Speaker Dr. S.Pari, Professor,(Retired) Siddha Doctor, Salem, Tamil Nadu demonstrated the Importance of Ayurveda, an ancient Indian system of medicine that can be very useful to us in our fast-paced modern lives over other methods of treatment.

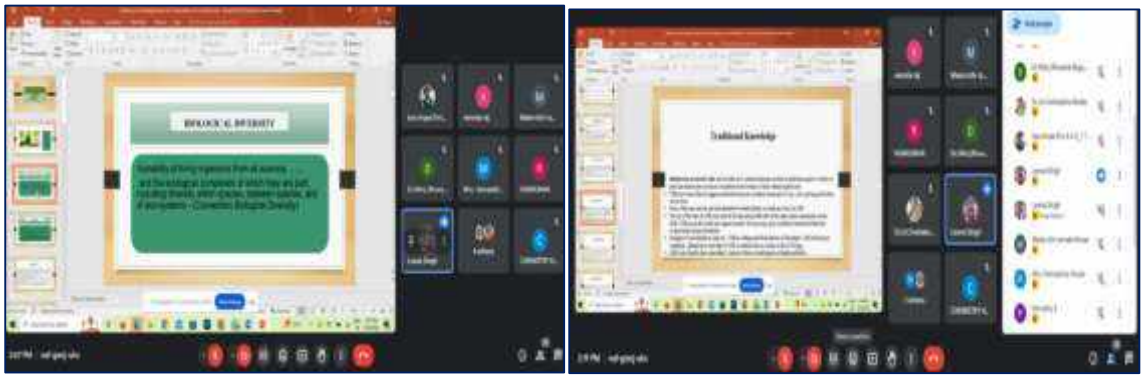


Chief Guest, Dr. S. Pari, Professor (Retired), Siddha Doctor, Salem, Tamil Nadu, delivering lecture

DAY 05

Time: 2.00 p.m. - 03.00p.m

Speaker: Dr.Leena Singh, Associate professor, Department of Applied Sciences (Environmental Sciences), Galgotia College of Engineering and Technology, UP, India.



Chief Guest, Dr. Leena Singh, Associate professor, Department of Applied Sciences (Environmental Sciences), Galgotia College of Engineering and Technology, UP, delivering lecture.

Public Links

https://www.instagram.com/p/DAmocvzC_KB/?igsh=cHdvb2Vlb3NhOHgw

https://www.linkedin.com/posts/spiherchennai_indianknowledgesystem-fdp-globalcollaboration-activity-7247057765922209793-5o4z?utm_source=share&utm_medium=member_android

https://www.facebook.com/share/p/jxcear4dxBhPtjik/?mibextid=qi2Omg

https://x.com/SpiherIndia/status/1841292299776704526?t=_gyqgLKBPoZsEsTQTf1Kwg&s=19

Research Articles published under SDG 13

1. Ravibalan S. Environmental Imaginaries: The Role of Climate Change and Ecological Conversations in the Works of Nnedi Okorafor; Library Progress International Vol.44 No.3, Jul-Dec 2024: P. 23351-23359

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Vol.44 No.3, Jul-Dec 2024: P. 23351-23359

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Online version ISSN 2320 317X

Original Article

Available online at www.bpasjournals.com

Environmental Imaginaries: The Role of Climate Change and Ecological Conversations in the Works of Nnedi Okorafor

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Orcid id: 0009-0004-3154-854X

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ABSTRACT

This article is on the 'environmental imaginary' in the science fiction of Nnedi Okorafor: Who Fears Death, the Binti trilogy, and The Book of Phoenix. These novels subvert traditional ways of thinking about climate change and ecological loss by offering new stories grounded in Afrofuturism and Africanfuturism. This paper delves into the criticism of Okorafor's modern environmental practices, which include environmental degradation, resource consumption, and human interaction with the environment. The analysis utilises African indigenous knowledge and its relationship with the land and the natural environment to provide two examples of different paradigms of sustainability and ecological recovery. Okorafor's characters are involved in environmental protection, and the book shows an ecofeminist viewpoint that deals with community, tradition, and technology in solving worldwide environmental issues. In addition to this, the study questions how literature constructs environmental imaginaries that can enhance the public's awareness of climate change and nurture environmental justice. This work broadens the current discussions on postcolonial speculative fiction and ecological futures while examining how Okorafor's works influence the discourse on capitalist resource exploitation.

Keywords: Nnedi Okorafor, Afrofuturism, Africanfuturism, environmental imaginaries, climate change, ecological conversations, speculative fiction.

I. Introduction

In the last few years, the idea of environmental imaginaries has entered the sphere of literary criticism, especially concerning climate change and environmental pollution. Environmental imaginaries meant how people, cultures, and societies perceived and conceptualized their interactions with the environment. These imaginaries were not only indicators of the dominant environmentalism but also bearers of the strategies through which societies engaged and addressed environmental urgencies. Environmental imaginaries in literature provided a lens through which authors and readers could view the world and the future it was shaping as it grappled with climate change (Adeniyi, 2022). In particular, African speculative fiction has been instrumental in enriching this discussion by presenting the ideas rooted in African epistemology and cosmology. Nnedi Okorafor's term, African futurism, emerged as the most pertinent lens to interpret these stories, emphasizing African-centric narratives with speculative elements rooted in cultural ties to the land.

It was only as the world started to experience the impact of climate change that there was a need to analyse climate change and ecological discourses in literature (DeLoughrey, 2011). Science fiction and other forms of fiction have always been effective means of social critique, and climate fiction became a

2. **Kumar MS, Ethirajulu S, Sethu G, Raj AD, Sundaram SJ, Kumar JV, Alam MW, Rosaiah P. Analysis and biological assessment of silver nanoparticles obtained from methanol extract of Piper cubeba's fruit. Waste and Biomass Valorization. 2024 Oct;15(10):5871-86.**

Analysis and Biological Assessment of Silver Nanoparticles Obtained from Methanol Extract of Piper Cubeba's Fruit

Original Paper | Published: 25 May 2024
Volume 15, pages 5871–5886, (2024) Cite this article

M. Sankar Kumar, Sailatha Ethirajulu, Gunasekaran Sethu, A. Dhayal Raj, S. John Sundaram, Jothi Vinoth Kumar, Mir Waqas Alam & Pitcheri Rosaiah

Abstract

The methanol fruit extract of Piper cubeba was used to create the silver nanoparticles (Ag-NPs). Then, their capacity to stop the growth of two Gram-positive bacteria, Bacillus cereus (6 mm) and Staphylococcus aureus (5 mm), as well as two Gram-negative bacteria, *Salmonella typhi* (3 mm) and *Escherichia coli* (5 mm), was tested. Also measured the zone of inhibition for *Aspergillus Sp.* and *Candida spp.* Fungus. By using the UV-visible spectrum (440 nm absorbance value), FT-IR (which demonstrated the existence of the O-H and C-N group), Powder-XRD revealed the peaks at 32.3°, 38.01°, 46.3° and 67.7°. By using SEM

Event Name : "Swachhata Hi seva 2024" -Swachhata pledge

Organized by : Department of Biotechnology

Date : 09.10.2024
Time : 10.00 to 12.30 pm

Brochure

Programme Brochure

Event Title	"**Swachhata Hi seva 2024" -Swachhata pledge**
Organized by	Department of Biotechnology Associated with National service scheme - unit, SPIHER
Date and Time	09.10.2024 at 10.00 am
Convenor	Dr. K. Amala, Asst. Professor and Head -Biotechnology
Participants details	Students: 31
Objective	To raise awareness among the general public regarding the importance of environment, benefits of trees and beautification in and around the village.
Report	The progress of various activities being undertaken under Swachhata Hi Sewa – 2024. Swachhata Pledge, awareness campaign, tree plantation etc. On October 09th 2024, the Department of Biotechnology associated with National Service Scheme Unit -SPIHER organized a tree plantation drive at adopted village Konambedu We all have to take step for tree plantation to save our earth. NSS volunteers,students and facuty members are actively participated in the program and many trees were planted at Konambedu villeage. everyone pledged to take responsibility to give good environment to our future generation. Participants were highly energetic to make the event a big success.
Feedback received from the participants	All the participants were delighted to attend and were very happy to be a part of this program.
No.of Participants	29
Facebook link	https://www.facebook.com/share/p/hjYcaUPxdH4ZoZWU/
Instagram Link	https://www.instagram.com/p/DCOhLgRPY8v/?igsh=cWt2bTZiNWljcTV0

Raising awareness among the general public regarding the importance of environment

2024 Book Chapters → SDG Mapping

Sl. No	Faculty	Title of Book Chapter	Department	Publisher	SDG(s)	Justification
1	Dr. Sayeeda Sultana	**Environment and Human Health**	Chemistry	Kripa Drishti Publications	SDG 3, SDG 13 (Climate Action)	Links environmental sustainability with public health.

Mapping of 2024 Patents to SDGs

Sl. No	Patent Title	Department	Date (2024)	Relevant SDG(s)	Justification
1	**Air Pollution Control System**	ECE	11.07.2024	SDG 3, SDG 11, SDG 13	Reduces urban air pollution.
2	**AI-based Climate Forecasting Robot**	Civil Engineering	24.06.2024	SDG 13, SDG 11	Climate prediction for disaster resilience.
3	**Wind Mill**	ECE	19.04.2024	SDG 7, SDG 13	Renewable energy generation.
4	**E-Auto with Fuel Cell-Thin Film Solar PV System**	EEE	18.04.2024	SDG 7 (Affordable & Clean Energy), SDG 11, SDG 13	Promotes clean transport and renewable energy.
5	**An Air Quality Mobile Monitoring Device**	Civil Engineering	27.03.2024	SDG 3, SDG 11, SDG 13 (Climate Action)	Monitors air pollution, helps cities manage environmental health.

Conclusion:

In conclusion, the initiatives under SDG 17.3.13 highlight the institution's commitment to ensuring that all partnership activities are inclusive, accessible, and beneficial to people across diverse backgrounds. By promoting transparency, equity, and participatory engagement in collaborative programmes, the institution ensures that individuals—whether students, faculty, or community members—are meaningfully involved and empowered through every stage of partnership implementation.

These efforts help create a supportive ecosystem where knowledge, resources, and opportunities are shared fairly, enabling beneficiaries to enhance their skills, improve their livelihoods, and actively contribute to sustainable development. By centering human dignity and empowerment within all partnership processes, the institution strengthens trust, fosters mutual respect, and builds collaborations that deliver long-lasting social impact. Overall, SDG 17.3.13 reinforces the institution's dedication to people-focused partnerships that prioritize inclusivity, equity, and shared progress for all.