#### SUSTAINABLE PRACTICES FOR NATURAL RESOURCES MANAGEMENT

Through Biological Tools

#### Editor

Dr. Rajani Srivastava Inditute of Environment & Socializable Development Rajio Gaught Socie Comput, Benerat Hindu University

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### Contents

	Forwarurd	v
	Acknowledgement	wi
	Preface	vii-viii
I.	Carbon Nanomaterial for Crop Management Kolpana Awasthi & Robul Awasthi	1-12
2.	Adaptive Management and Practices of Fisheries Triva Makherjee	13-20
3.	Water Resource Management Strategies Anil Kumar Pandey	21-33
4.	Agriculture: Challenges and Adaptive Strategies A.K. Bundela & R. Srivastava	34-41
5.	A Review on Water Pollution Anil K Dwivedi	42-59
6.	Management of Cancer with Indigenous Plant Resources Anwag Slukla, Harendra Pathak, Dheeraj Mahviya, Dev Nath Singh Gautam & Ambrish Kumar Singh	60-67
7.	Fluoride Contamination: An Immense Issue to Ground Water Madnu Tiwari	68-73
8.	Soil Ecosystem Vis-A-Vis Environmental Change Tirthesh K Sharma, Sippy Dasani, Jyoti Richhoria & Pankaj kum	74-88
9,	Sustainable Production of Oyster Mushroom in Uttar Pradesh, India K.K Gautam & Deepak Gautam	89-96
10.		97-104
11.	Post-Harvest Management of Nuts and Dry Fruits- Essential for Sustainable Management of Our Food Resources Ravindra Kumar Pandey	105-121

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4

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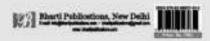
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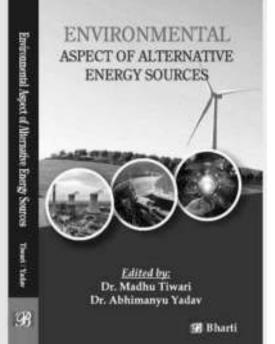
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#### Content

	Foreword	400
	Pretace	v
1.	Energy Harvesting, Storage and Conversion Situ Raw Patreaul Akhtar Khan	1-11
2	Role of Coordination Polymers in Fuel Cell Application Vinita	12-19
8	An Introduction to Photoelectrochemical Dye-Sensitized Solar Cells Summ Exolumba. Dharmondra Komar Singh and Islamr Chandra Manrya	28-29
4	Hydrogen Energy: A Clean and Green Fuel T. P. Yadav and Kalpona Atouthi	30-38
<b>K</b> .	Need of Renewable energy: Impact of Climate Change on Human Mental Health Shubba Srinutana	39-47
6.	Organic Photovoltaics: An Environment- Friendly Alternative Energy Source Abituhek Singh and Manish Escuar Singh	45-58
5	Scenario of Renevable Energy Sources in India and its Effect on Environment Josef: Virms and Preeti Virms	59-65
8.	Indian Energy Crisis Priyanka Srituation and S. P. Srituation	66-77
	Ocean Wave Energy Conversion and Sconario in India Sondata Thuari	78-86
10,	Renewable Energy Resources Aditya Kumar and Dharmondra Kumar Singh	87-95
11.	Waste to Energy Generation: A Clean Technology Towards Sustainability Rajani Semutana and Shubhan Semutana	96-108
	D10011 1 0171000012	
	New Della - 110002, Italia	

#### viti Crement 12. Trivironisental Protection and Conservation of Natural Resources in India: From Ancient 109-117 Times of Present Age Jitendre Singh Naulaiha 23. Water Pullated Aquatic Life and Human Health 118-125 Angle Verriss 14. Algal Biofael: A Sustainable Source of 126-138 Alternative Energy Sumle Gattle 15. Effect of Seil Pollutants in Crops Production 131-134 Richmand Conservation of Natural Resources and Wild Life Management 135-142 26. Accadherit Siegh States 17. Innovation and Sustainable Development 143-145 Mayo Yisdon and Steams Singly 18. Nanostructured Materials in Hydrogen Energy 149-157 Asket Burner Singly and And Kumar 19. Jonic Liquids as a Green Solvent, Catalyst 158-167 and Reagent Garina 20. Fluoride Toxicity in Drinkling Water 100-174 Showta Vidan and Paras Nath 21. Solid State Gas Sensors for Environmental 175-185 Applications: An Appenach to Detect Low Concentration of Gases Fration Runse Salu, Latit Chindra, R. Durnedi, V.N. Mishra, and R. Prokash 22. Pollution and its Impact on Society 186-195 Shalesh Scianti and Arabu Kumar Singh 23. Waste Management for Safe Environment 196-211 Challenge and Opportunities Manty Kumar Visituakarmat, Aran Kamar Kasihaning and Strendsz Kunze Siegh Yalay 24. Educational Strategies for Sustainable Development A Conceptual Francework 232-225 Jal Singly Yadat

#### Renewable Energy Sources : An Assessment in Environmental Scenario

Edited by Dr. Abhimanyu Yadav Dr. Madhu Tiwari



#### Content

Fe	reword	
<i>p</i> <sub>n</sub>	rface	+ii
1.	Role of Structural Materials in Nuclear Energy Generation Proof Vorma and Managar Singh Rajdoo	1-7
2.	Green Electronics: A Need for a Sustainable Environment Abhishek Singh, Srizhti Gupta and Manish Kumar S	8-17 ingh
3.	An Introduction to Dye-Sensitized Solar Cells Inhwar Chandra Maurya	18-27
4.	Assessment of Renewable Energy Sources on Environment Processor Kumar	28-34
5.	Environmental Conservation in Ancient India : A Study Anjana	35-43
6.	Designing Surface Stabilized Colloidal Quantum dots as a Photo Anode for Efficient Light Harvesting Souil Kumar	44-54
7.	Renewable Resources and Society Shailesh Solanki and Debanjana Prasad	55-65

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8.	Renewable Resources-Sular Energy, Wind Energy and Biomass Energy	66-69
	Suahit Kumar	
9.	Plastic Pollution and Climate Change	70-74
	Suman Gupta	
10,	Alternative Smart Green Approaches for the Conventional Plastic-PHA: A Critical Review Kashizh	75-87
11.	The Role of Mathematical Model in Sustainable Development Ajay Kumar Sonkar	\$8-96
12.	Diabetes Mellitus: A Life-Style Associated Threat to Male Fertility in Modern Society	97-106
	Prakash Chandra Gupta	
13.	Biomedical Applications of Nanomaterials Sunayana Kashyap, Vandana Kashyap, Akash Kumar and Shobhana Kashyap	107-113
14.	Natural Organic Materials as Economic and Green Solution for Corrosion Inhibition of Carbon Steel in Aggressive Media	114-127
	Gopal Ji	592-583
15.	Water Pullution in India and its Impact on Society Ravindra Kumar Panday	128-138
16.	Ecological Stability and Pest Management Ranjit Singh and P. N. Dangre	139-144
17.	Environmental Pollution Management Using 2D Carbon Nanomatrial : Graphene Kalpana Awaithi and Soima Awaithi	145-156
15.	Arsenic Contamination in Drinking Water Paras Nath	157-163

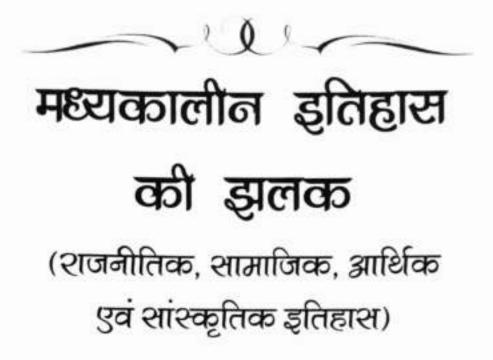
19.	Mushroom: An Approach to Sustainable Packaging Material	164-170
	Rashmi Singh	
20.	Impact of Water Contamination on Animal Life and Control Mechanism	171-177
	Shikha Vishwakarma	
21.	Air Quality Index	178-187
	Hemant Kumar Nirala and Manisha	
22.	Water Pollution and its Sources, Impact on the Human Health, Control and Management	188-195
	Santhosh Kumar Singh and Dharmendra Kumar Sing	h
23.	Role of Environmental Education in Sustainable Development	196-204
	Lokpati Tripathi	
24.	Environmental Attitudes of NSS Volunteers Monika Saroj and Santosh Kumar Arya	205-212
25.	A Scientific Way for Welfare of Society by Mathematical Modeling	213-220
	Sarveshanand	
26.	Water Pollution and its Impact on the Human Health Ratnesh Kumar Soni	221-228

# मध्यकालीन इतिहास की झलक

### (राजनीतिक, सामाजिक, आर्थिक एवं सांस्कृतिक इतिहास)

डॉ. मनोज सिंह यादव





संपादक

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विषय-सूची

अध्याय । ।
भारत में इस्लाम का आगमन
डॉ. उदय प्रताप सिंह
अध्याय 2
Author दिल्ली के आरम्भिक सुल्तानः (कुतुबुद्दीन ऐबक, इल्तुतमिश, रजिया तथा बलवन)
डॉ. मनोज सिंह यादव
अध्याय 3
दिल्ली सल्तनत का विस्तार काल (खिलजी) वंश)
डॉ. मनोज कुमार पाण्डेय
अध्याय 4 41
दिल्ली सल्तनत का अवसान काल (तुगलक वंश)
डॉ. हेमन्त कुमार मिश्र
अध्याय 5 50
प्रथम अफगान सल्तनत (लोदी) वंश)
डॉ. निजानन्द
अध्याय 6 58
बहमनी तथा विजयनगर साम्राज्य
डॉ. मनोज सिंह यादव

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	अध्याय ७	1225
	दिल्ली सल्तनत का समाज, प्रशासन, अर्थव्यवस्था, स्थापत्य, साहित्य एवं राजस्	व व्यवाका
	डॉ. मनोज सिंह यादव	
	अध्याय 8	
	मुगल राज्य व्यवस्था: (बाबर , हुमायूं तथा शेरशाह)	
	डॉ.सुनील कुमार मिश्र	
	अध्याय 9	
	अकबर तथा जहांगीर	
	डॉ. नरेन्द्र प्रताप सिंह यादव	
	अध्याय 10	
	शाहजहां तथा औरंगजेब	
ð	डॉ. मनोज कुमार पाण्डेय	
	अध्याय 11	122
Author	मुगलों का राजत्व सिद्धान्त	
3	डॉ. चन्द्रभान यादव	
э	अध्याय 12	132
Author	गुगल प्रशासन	
3	इ. मनोज सिंह यादव	
3	१ध्याय १३	145
Author <b>T</b>	गलकालीन जागीदारी प्रथा एवं भू- राजस्व प्रबन्धन	
	ी ग्रामेन सिंह जनन	

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अध्याय ।4	
मुगलकालीन कला (स्थापत्यकला एवं चित्रकला)	
डाँ. रोशन प्रसाद	
अध्याय 15	
मराठों की उत्पत्ति तथा शिवाजी एवं पेशवाकालीन मराठा साम्राज्य	

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डाँ. चन्द्रभान यादव Author



कशी नरेश राजकीय स्नातकोत्तर महाविद्यालय ज्ञानपुर भदोही

सन् 1192 में तराइन के द्वितीय युद्ध में मुहम्मद गोरी की निर्णायक विजय तथा भारत में राजनीतिक सत्ता के परिवर्तन के फलस्वरूप दिल्ली सल्तनत की स्थापना 1206 ईसवी में हुई थी। दिल्ली सल्तनत के प्रारम्भिक चरण में तीन राज्य वंशों के संस्थापक अपने प्रारम्भिक जीवन में गुलाम रह चुके थे इसलिए भ्रमवश इन तीन राज्य वंशों को एक साथ मिलाकर प्रायः गुलाम वंश के नाम से जाना जाता है। दिल्ली सल्तनत के पहले सुल्तान कुतबुद्दीन ऐबक ने दिल्ली सल्तनत को गज़नी साम्राज्य से अलग कर व्यावहारिक दृष्टि से एक स्वतन्त्र राज्य का रूप प्रदान किया परन्तु उसको ठोस प्रशासनिक ढांचा व राजनीतिक स्थायित्न प्रदान करने का श्रेय इल्तुतमिश को जाता है। इल्तुतमिश की पुत्री रज़िया ने सुल्तान के रूप में अपनी योग्यता का परिचय दिया परन्तु अमीरों के प्रबल विरोध के कारण उसका पतन हो गया।

सुल्तान नासिरुद्दीन महमूद के शासनकाल में वास्तविक शक्ति उसके वज़ीर गियासुद्दीन बलबन के हाथों में रही। सुल्तान नासिरुद्दीन महमूद की मृत्यु के बाद बलबन खुद सुल्तान बन बैठा। बलबन तथाकथित गुलाम वंश का सबसे शक्तिशाली एवं सफल शासक था, उसने लौह एवं रक्त की नीति को अपना कर अपने राज्य को सुदृढ़ किया। बलबन ने अपने राज्य में शान्ति एवं व्यवस्था स्थापित करने में सफलता प्राप्त की। उसने



दक्षिण भारत की राजनीतिक परिस्थितियों से लाभ उठाकर 14वीं शताब्दी में अनेक स्थानीय शक्तियों ने छोटे छोटे राज्य स्थापित किये, शीघ्र ही संगम के पुत्रों द्वारा स्थापित विजयनगर साम्राज्य और हसन गंगू द्वाग स्थापित बहमनी राज्य ने प्रतिष्ठा प्राप्त की और दीर्घकाल तक ये राज्य दक्षिण भारत की राजनीति के नियना बने रहे।

विजयनगर साम्राज्य और बहमनी साम्राज्य का संपूर्ण काल एक-दूसरे के साथ निरंतर युद्धों में व्यतीत हुआ और कभी एक पक्ष विजयी होता तो कभी दूसरा। लेकिन आपसी युद्धों के बावजूद भी इन दोनों ही राज्यों न कला ,साहित्य और स्थापत्य के क्षेत्र में अभूतपूर्व उपलब्धियां हासिल की और इस काल में अनेक विदेश यात्रियों ने इन राज्यों का भ्रमण किया और अपने प्रक्षण लिखे जो इन राज्यों के पूर्ण जानकारी प्रदान करते हैं।

दक्षिण के इन राज्यों के आपसी संघर्ष के अलावा उत्तर के विस्तारवादी मुगल साम्राज्य के साथ भी इनक संघर्ष हुआ। राजनीतिक प्रतिद्वंदिता के चलते बहमनी साम्राज्य का विघटन हो गया और बीजाए गोलकुण्डा, बीदर, बरार और अहमदनगर की रियासतें अस्तित्व में आर्यी लेकिन विजयनगर के साथ इनकी प्रतिद्वन्दता बनी रही। सन् 1565 ई. को राक्षसटंगड़ी के युद्ध में विजयनगर साम्राज्य की पराजय हुई औ साम्राज्य का विजयी राज्यों ने बंटवारा किया हांलाकि विजयनगर राज्य पुनर्जीवित हुआ लेकिन यह पुनर्जीव अल्पावधि का था और धीरे-धीरे विस्तारवादी मुगल साम्राज्य में दक्षिण के इन राज्यों को समाहित कर लिग गया।

| मध्यकालीन इतिहास की झलक (राजनीतिक, सामाजिक, आर्थिक एवं सांस्कृतिक इतिहास



### डॉ. मनोज सिंह यादव

असिस्टेन्ट प्रोफेसर इतिहास विभाग काशी नरेश राजकीय स्नातकोत्तर महाविद्यालय ज्ञानपुर भदोही

मुसलमानों के आने से पूर्व भी भारतीय समाज विभिन्न वर्गों में विभक्त था, मुसलमानों के आने से उसका जिभक्तिकरण बढ़ गया। स्त्रियों की स्थिति पहले की अपेक्षा और गिर गयी थी। हिन्दु समाज में सामान्यतः लोग निरामिष भोजन करते थे यद्यपि युद्धप्रिय जातियों और शूद्रों में मांसाहार प्रचलित था। सल्तनत काल में दो जिरोधी धर्मों एवं संस्कृतियों को मानने वाले व्यक्तियों को एक साथ रहने के अवसर प्राप्त हुए और दोनों ने एक इसरे को किसी सीमा तक प्रभावित भी किया।

आर्थिक दृष्टि से भारत एक समृद्धिशाली देश था। भारत में प्रायः सभी स्थानों पर विभिन्न प्रकार के अन्न, तलें, फल आदि उत्पन्न किये जोते थे। अधिकांश फसलें वर्ष में दो बार और कहींकहीं तीन बार भी उत्पन्न बी जाती थीं। उद्योगों की दृष्टि से भी भारत अच्छी स्थिति में था। भारत में आन्तरिक और विदेशी व्यापार इन्त था। दूरस्थ प्रदेशों को जोड़ने वाली सडकें पर्याप्त मात्रा में थीं आरे भिन्न-भिन्न वस्तुओं की व्यापारिक पण्डियां विद्यमान थी। परंतु भारत की इस आर्थिक सम्पन्नता का मुख्य लाभ शासक और व्यापारी वर्ग ने प्राप्त क्या था। जनसाधारण की स्थिति शोचनीय तो नहीं परंतु बहुत अच्छी भी नहीं थी।

। मध्यकालीन इतिहास की झलक (राजनीतिक, सामाजिक, आिंक एवं सांस्कृतिक इतिहास)





प्रशासन

डॉ. मनोज सिंह यादव असिस्टेन्ट प्रोफेसर इतिहास विभाग काशी नरेश राजकीय स्नातकोत्तर महाविद्यालय ज्ञानपुर भदोही

मुगल काल में मुख्य रूप से सैन्य शक्ति पर आधारित एक केन्द्रीकृत शासन था। मुगलों ने तुर्क, मंगोल, अफ़गान और भारतीय प्रशासनिक परम्पराओं का समन्वय कर अपनी प्रशासनिक व्यवस्था का विकास किया था। बादशाह इसका सर्वोच्च प्रशासक तथा सर्वोच्च सेनानायक होता था। वह साम्राज्य के सर्वोच्च न्यायाधीश की भूमिका भी निभाता था। बादशाह अपने उच्चस्थ अधिकारियों की स्वयं नियुक्ति करता था। केन्द्रीय शासन के अन्तर्गत उच्च्तम अधिकारी वकील, वज़ीर अथवा दीवान-ए-कुल, मीरबख्शी, मीर-ए-सामाँ, सद्र-उस-सुदर, काज़ी-उल-कज़ात, मीर-एआतिश, दारोगा-ए-डाक चौकी, मीर-ए-बहर, मुहतसिब आदि थे। इन अधिकारियों को केन्द्रीय प्रशासन के अपने दायित्व के अतिरित्तः अपने विभागों से सम्बद्ध प्रान्तों के अधिकारियों पर भी नज़र रखनी होती थी। प्रान्त के सर्वोच्च अधिकारी सूबेदार तथा वित्त विभाग के प्रमुख दीवान की नियुक्ति बादशाह द्वारा की जाती थी। प्रान्तीय प्रशासन को हम केन्द्रीय प्रशासन का ही लघु रूप कह सकते हैं। स्थानीय प्रशासन में सरकार, परगने और ग्राम का प्रशासन आता था।

मुगल साम्राज्य की सुदृढ़ता एवं उसके स्थायित्व का मूल कारण उसकी सक्षम वित्त व्यवस्था थी। केन्द्र में दीवान-ए-कुल तथा प्रान्त में दीवान वित्त विभाग का प्रमुख होता था। मुगलों की राजस्व प्रणाली मुख्य रूप से मुस्लिम प्रशासनिक परम्पराओं के अनुरूप थी। खिराज, खम्स, जज़िया और ज़कात मुख्य कर थे और समय-



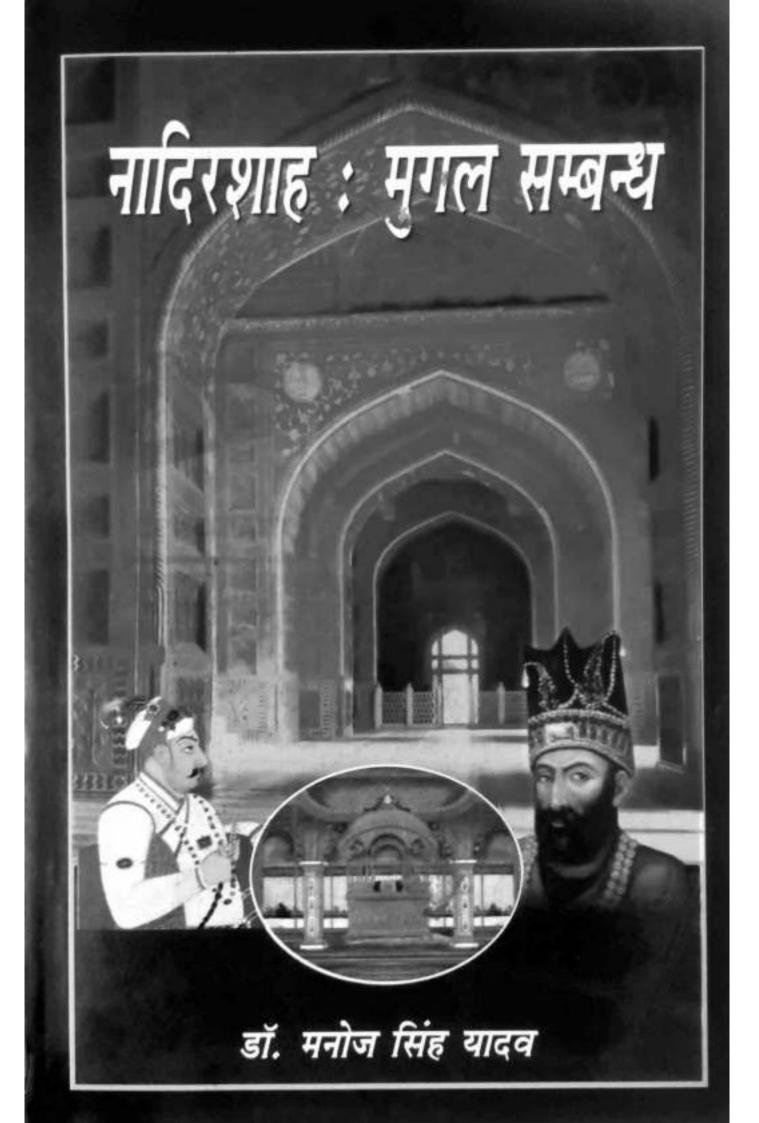
**डॉ. मनोज सिंह यादव** असिस्टेन्ट प्रोफेसर इतिहास विभाग काशी नरेश राजकीय स्नातकोत्तर महाविद्यालय जानपुर भदोही

बागीरदारी प्रथा सामन्तवादी शासन प्रणाली का एक प्रकार थीं। सल्तनत काल में अमीरों को उनके नकद वेतन के बदले में उन्हें उसके समतुल्य आय के इक्ते (जागीर) प्रदान किए जाते थे। बलबन और अलाउद्दीन खिलजी ने जागीरदारी प्रथा का दमन किया जब कि फ़ीरोज़ तुगलक ने इसका पुनरुत्थान किया। अकबर ने मनसबदारी व्यवस्था के अन्तर्गत उच्च पदीय मनसबदारों को वेतन के बदले में जागीरें आवंटित कीं। जागीर वंगानुगत नहीं होती थी तथा समय-समय पर उनका हस्तान्तरण भी होता था किन्तु पूर्व शासकों और बमीदारों का उनके गृह क्षेत्र में जागीर-ए-वतन प्रदान की जाती थी। जागीरदार अपनी आवंटित जागीरों में प्रशासक की भूमिन्डा भी निभाते थे। जागीरदारों की गतिविधियों पर सम्बद्ध सूबेदार, फ्रौजदार व शिकदार के माध्यम से राज्य का नियन्त्रण रखा जाता था। धीरे-धीरे सैनिक व राजनीतिक कारणों से जागीरदारों की संख्या बढ़ती चली गई और जागीरों की कमी पड़ने लगी। औरंगज़ेब के शासनकाल के उत्तरार्ध से जागीरदारी व्यवस्था राज्य पर एक भारी आर्थिक बोझ बन गई और परवर्ती काल में उसमें और भी अधिक अव्यवस्था व अगजकता व्याप्त होने के कारण उसका पतन हो गया।

कृषि प्रधान देश भारत में राज्य की आय का मुख्य स्रोत भू-राजस्व रहा है। मौर्य तथा गुप्त काल में आमतौर पर उपज का छठा भाग भू-राजस्व के रूप में लिया जाता था। भू-राजस्व निर्धारण में भूमि की नापजोख किए जाने

। मध्यकालीन इतिहास की झलक (राजनीतिक, सामाजिक, आर्थिक एवं सांस्कृतिक इतिहास)

145

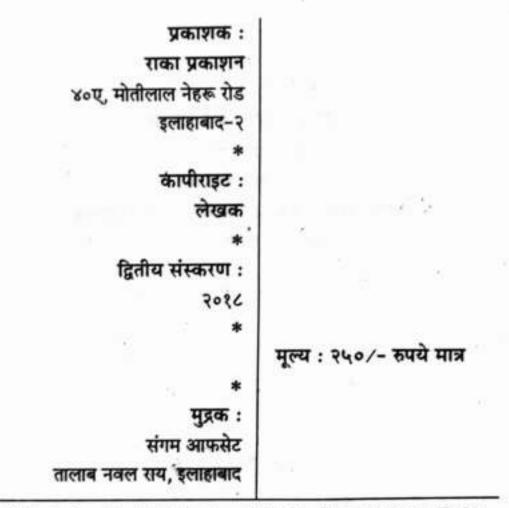


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<b>A</b> - 11	मुगल कालीन भारत में हस्तकौशल : महिलाओं के सन्दर्भ में	66
Author	0.0 ml	1000
	कामिनी वर्मा भारतीय इतिहास में कौशल विकास	75
	डा. जय लब्म काल प्राचीन वास्तुकला कौशल में दक्ष 'स्थपति'	84
	प्राचीन भारत में कौशल विकास : संक्षिप्त परिचय	89
	≆चा चौधरी	
	हिन्दी की प्राचीन व अद्यतन स्थिति व रोजगार की अनन्त संभावनाएँ	94
	डॉ. गायत्री माहेश्वरी	
	Importance of Human Resource Management in	
	Higher Education	102
	Dr. Shuvajit Chakroborty	
	Education and Skill Development Necessary for Employme	nt 109
	Dr. Yamini Pandey	
	Skill Development: A Necessity for Poverty Alleviation in Ind	lia117
	Shelly Shrivastava	
	Initiating Skill Development	123
	Dr. Urjaswita Singh	125
	Skill Development in India : An Analytical Study	125
	Dr. Rishikesh Singh	135
	Political Skill to Enhance and Balance the Work Relationship	
	Supla	
	Comparative study of Aggressian 1	
	and Government Public School of dim	
	Dr. Dinesh Chandra Arara	149
	Effectiveness of coping skills among the	
	Effectiveness of coping skills among Individual, Team and Combat Game Players	
500	Dr. Moradhvaj Singh	157
* a . A .	Basic Mental Statu	

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	<ol> <li>अधुना महिला-कहानीका रा का पाया</li> <li>डॉ. हरीतिमा कुमार, डॉ. वन्दना यादव</li> </ol>	
-	2- बौज्रकालीन मूल्यपरक स्त्री शिक्षा - डॉ. (श्रीमती) ममता गंगवार	20
जिला-	2- बौज्रकालीन मूल्यपरक स्त्री स्तरा - डॉ. (श्रीमती) ममता गंगवार	
	3- मैत्रेबी पुष्पा की कहानियों में अभिव्यक्त नारी	28
SHITTH	3- मैत्रेयी पुष्पा का पाला - डॉ. कंचनलता यादव	
• ;	4- भारतीय जनतंत्र में महिला और विकास	34
1	4- भारताय जनतत्र न पहिला - डॉ. आर. के. त्रिपाठी	
• •	००	52
•	<u>-</u> डॉ. प्रीति कुमारी	1
1	िन्न सन्मनी में स्वियाँ - लखनऊ जनपद के संदर्भ में	63
Author	- डॉ. कामिनी वर्मा	05
1	7- हिन्दी आत्मकथा लेखिकाएँ - पारिवारिक एवं सामाजिक जीवन	71
2	- डॉ. शशिकला	11
:	8- नारी शिक्षा : एक अध्ययन	78
1	- डॉ. गीता अस्थाना	10
	9- उदयभानु हंस के काव्य में नारी विमर्श	04
ne.	- डॉ. आशा वर्मा	84
	10- महिला सशक्तिक रण - ग्रामीण परिवेश	
		91
	- डॉ. भानुप्रताप सिंह, डॉ. राम प्रकाश	
	11- सीमोन द बोउवार के नारी-चिंतन की प्रासंगिकता	97
	- डॉ एभा मीरिक्न	1
	12- महिलाओं की आधुनिक युग में सामाजिक एवं धार्मिक स्थिति	31200 <u>-21</u> 0
	ु उन्न तानाजिक एवं धामिक स्थिति	107
1	- डॉ. अखिला सिंह गौर	
	- डा. आखेला सिंह गौर 3- साहित्यिक एवं सामाजिक परिदृश्य में नारी	110
	- डॉ. साधना मिश्रा	110

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प्राक्कथन :	88
प्रथम पुष्प :	ર્ ્
डॉ.सविता भारद्वाज / मेरे साथ तुम भी चला करो	
द्वितीय पुष्प :	રુષ
प्रो.चौथीराम यादव /भारतीय राष्ट्र की पुनर्व्या औ	र हाशिए का
समाज	
तृतीय पुष्प :	४९
Author डॉ.कामिनी वर्मा / पर्यावरणीय संचेतना एवं महिलायें	
चतुर्थ पुष्प :	५९
डॉ.समीर कुमार पाण्डेय / सह-अस्तित्व का विमर्श	
पंचम पुष्प :	60
डॉ शशिकला जायसवाल / स्व-अस्तित्व से सह-अस्तित्व	। तक : स्त्री
षष्टम् पुष्प :	50
संतन कुमार राम / भौगोलिक सह- अस्तित्व एवं स	संघर्ष: मानसून
एशिया का एक विश्लेषणात्मक अध्ययन	

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# संपादक डॉ. मनोज कुमार तिवारी

विषय-सूची

पाक्कधन	5
प्रस्तावना	7
आभार	9
एच.आई.वी. / एड्स की वर्तमान स्थिति	11
_डॉ. मनोज कुमार तिवारी	
इतिहास के आईने में एचआईवी/एड्स Kanak	23
_डॉ. कामिनी वर्मा	
उत्तर प्रदेश में एच.आई.वी. की जाँच	27
–श्री अजय शुक्ला	
देखभाल व सहयोग केन्द्र	30
–श्रीमती अनिता सिंह	
एचआईवी/एड्स ः मनोसामाजिक विश्लेषण	39
–डॉ. मुकेश कुमार श्रीवास्तव	
विवाह : एच. आई. वी. संक्रमित व्यक्ति के जीवन का	
पुर्ननिर्माण	50
(विवाह के दर्शन एवं उद्देश्य को आत्मसात करके)	
–डॉ. सौरभ पालीवाल	
एच.आई.वी. / एड्स व श्रम जगत पर राष्ट्रीय नीति	59
–डॉ. मनीष मिश्र	
एच.आई.वी. संक्रमित व्यक्तियों के कानूनी अधिकार	72
	प्रस्तावना आभार एच.आई.वी. / एड्स की वर्तमान स्थिति -डॉ. मनोज कुमार तिवारी इतिहास के आईने में एचआईवी / एड्स Kanak -डॉ. कामिनी वर्मा उत्तर प्रदेश में एच.आई.वी. की जाँच -श्री अजय शुक्ला देखमाल व सहयोग केन्द्र -श्रीमती अनिता सिंह एचआईवी / एड्स : मनोसामाजिक विश्लेषण -डॉ. मुकेश कुमार श्रीवास्तव विवाह : एच. आई. वी. संक्रमित व्यक्ति के जीवन का पुर्ननिर्माण (विवाह के दर्शन एवं उद्देश्य को आत्मसात करके) -डॉ. सौरभ पालीवाल एच.आई.वी. / एड्स व श्रम जगत पर राष्ट्रीय नीति

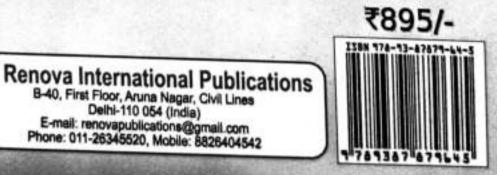
९च.आइ.वा. सक्रामत व्याक्तया क कानूना आधकार −विजेता सिंह



डाँ मनोज कुमार तिवारी पीएचडी (मनोविज्ञान्र), सीसीवाईपी, सीआरई के साथ एचआईवी/ एडस के कई प्रशिक्षण कार्यक्रमाँ, न्ययशाला एवं काल्फ्रेंस में सक्रिय सहआ ... करो इए पूर्ण किया है। डॉ तिवारा 👘 वर्षी से

एचआईवी/एइस के क्षेत्र में बचाव जागरूकता 0 121 जी रहे लोगों के जीवन में गुणवत्तापूर्ण सुधार जय से अपनी सेवाएं दे रहे हैं। आपने मनोविजान माथ-साथ एचआईवी/एड्स के क्षेत्र में भी राष्ट्रीय स्तर के कई शोध पत्र प्रकाशित कर चुके हैं । आपने चार पुस्तकों की रचना के साथ कई पुस्तकों में अध्याय लेखन का भी कार्य किया है । आप एचआईवी/एड्स के प्रति जागरूकता के लिए समाचार पत्रों एवं पत्रिकाओं में गुणवत्तापूर्ण लेखन व्यापक रूप से करते हैं । आप विश्वविद्यालयों, महाविद्यालयों एवं प्रशिक्षण संस्थानों के शिक्षण एवं प्रशिक्षण कार्यक्रमों में विगत 16 वर्षों से अपना व्याख्यान देते आ रहे हैं। आपकी मानसिक स्वास्थ्य, परीक्षण, परामर्श, मनोचिकित्सा एवं दिव्यांगजनों के कल्याणर्थ कार्य करने में गहरी रुचि है। आपके विशिष्ट योगदान के लिए कई संस्थाओं ने आप को सम्मानित है।

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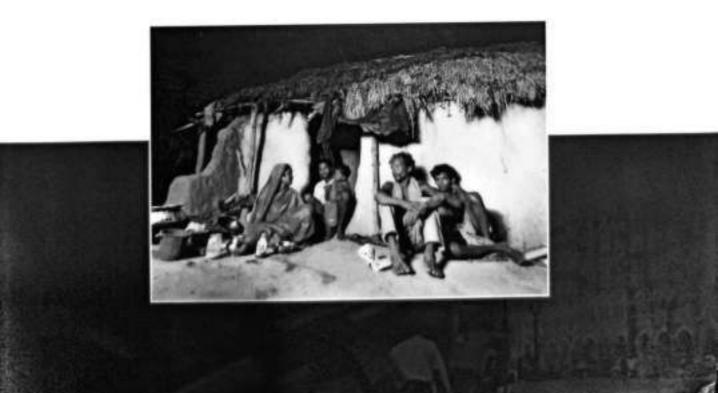
### अनुक्रमणिका

1.	भारतीय संस्कृति और गंगाः तृप्ति से मुक्ति तक <i>सविता भारद्वाज</i>	17
2.	जल ही जीवन का आधार है <i>कामिनी वर्मा</i> Author	28
3.	जल संकट : एक साहित्यिक विश्लेषण <i>डॉ. संगीता मौर्य</i>	34
4.	हड़प्पा सभ्यता में जल संरक्षण की अवसंरचनाएँ <i>डॉ. विकास सिंह</i>	43
5.	स्वच्छ जल और स्वास्थ्य <i>डॉ. अनीता कुमारी</i>	49
6.	जल का सामाजिक चिंतन : कल, आज और कल <i>घनश्याम कुशवाहा</i>	56
7.	भारत में जल संरक्षण एवं प्रबंधन का इतिहास : एक अवलोकन <i>सारिका सिंह</i>	66
8.	मऊ जनपद में भूजल स्तर में गिरावट की समस्या का एक अध्ययन <i>सुनीता</i>	75
9.	मानव जीवन में जल का महत्त्व ः एक विमर्श <i>अतुल त्रिपाठी</i>	86
10.	नीर और नारी <i>अन्नू राय</i>	91
11.	नहरों के पुनर्विकास में मनरेगा योजना की भूमिका : जनपद मिर्जापुर के सन्दर्भ में <i>संदीप सरोज</i>	97
12.	पेयजल एवं आवास सुविधाओं का विकास ः सिद्धार्थनगर, जनपद <i>विकास कुमार</i>	109



# समकालीन भारत में सामाजिक एवं राजनैतिक मुद्दे

### डॉ. गौरव त्रिपाठी•डॉ. कामिनी वर्मा Editor





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इस सम्पादित पुस्तक में लेखक द्वारा व्यक्त विचार उनके व्यक्तिगत हैं जिसका प्रकाशक से कोई संबंध नहीं है।

भारत में प्रकाशित

झपसू यादव 'अखण्ड पब्लिशिंग हाउस' के द्वारा प्रकाशित।



	(xxii)		
	मानवाधिकारों में महिला संदर्भ	137	
t.	मानवाधिकारों म गत - हों ममता चंद्र शेखर. - हों ममता चंद्र शेखर. केशोर अपराध न्याय और अधिकार	154	
8	किशोर अपराध	161	
9	खाद्य सूरक्षा एव सम्मार्थन		
10.	समकालीन भारत में जापुर के साधन, शिक्षा एंव प्रभाव	167	
	<u>_डॉ. विदुषी शमा</u> भारत में 'आतकंवाद के पोषण धर्मोन्माद की भूमिका' <u>_डॉ. राम तिवारी</u>	190	
12.	पंचायती राज एवं महिला नेतृत्व विकास –डॉ. राजेश कुमार	200	
13.	नैतिक एवं चारित्रिक मूल्यों की प्रस्थिति : वर्तमान परिप्रेक्ष्य में <i>—डॉ. श्रीमती वन्दना द्विवेदी</i>	240	
	शिक्षित बेरोजगारी –डॉ. शशी रानी अवस्थी	250	
	भारतीय समाज में पत्रकारिता (मीडिया) का प्रभाव –डॉ. प्रज्ञा मिश्रा	266	
	समलैंगिकता : एक सामाजिक समस्या - <i>कामिनी वर्मा</i>	273	
17.	वृद्धाश्रम एक सामाजिक घटनाक्रम -डॉ. चेतना जपाध्याय		
18.	गंगा का अस्तित्व कल और आज –डॉ. धीरज कुमार गुप्ता	280	
	ु गर गुप्ता	287	



# े प्रगतिशील स्त्री विमर्श

डॉ. गौरव त्रिपाठी डॉ. कामिनी वर्मा



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इस पुस्तक में लेखक द्वारा व्यक्त विचार उनके व्यक्तिगत हैं जिसका प्रकाशक से कोई संबंध नहीं है।

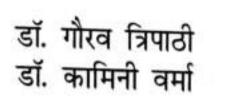
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झपसू यादव 'अखण्ड पब्लिशिंग हाउस' के द्वारा प्रकाशित।

विषय सूची

	समर्पण	v
	भूमिका	vii
	योगदान सूची	xi
1.	भारतीय समाज में किराये की कोख <i>—डॉ. कामिनी वर्मा</i> Author	1
2.	'आधी आबादी और उसका सशक्तिकरण' – <i>डॉ. अनुपम शाही</i>	12
3.	खेल जगत में भारतीय महिलाओं की भूमिका – <i>डॉ. जितेन्द्र विक्रम वेद, डॉ. वन्दना शर्मा</i>	20
4.	भारत के परिपेक्ष्य में महिला प्रतिनिधित्व – <i>डॉ. के. एच. वासनिक</i>	24
5.	महाराष्ट्र में महिला प्रतिनिधित्व <i>—डॉ. के. एच. वासनिक</i>	38
6.	भारत में स्त्री शिक्षा एवं संभावनाएं – <i>डॉ. सुमन शुक्ला</i>	52
7.	कामकाजी महिलाओं की सामाजिक सुरक्षा – <i>डॉ. आशीष धर त्रिपाठी</i>	62
8.	भारत में महिलाओं की दशा एवं दिशा <i>—डॉ. ब्रजेश श्रीवास्तव</i>	72
9.	महिला सशक्तिकरणः एक विश्लेषण – <i>डॉ. भावना सिंह, डॉ. माया यादव</i>	76

# स्त्री विमर्श में नयापन



Editor



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# भारतीय संस्कृ में राष्ट्रीय तत्व

# डॉ. कामिनी वर्मा



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यह पुस्तक इस शर्त पर विक्रय की जा रही है कि प्रकाशक की लिखित पूर्वानुमति के बिना इसका व्यावसायिक अथवा अन्य किसी भी रूप से उपयोग नहीं किया जा सकता। इन्हे पुनः प्रकाशित कर विक्रय या किराए पर नहीं दिया जा सकता है तथा जिल्दबंद अथवा किसी भी अन्य रूप में पाठकों के मध्य इसका परिचालन नहीं किया जा सकता। यह सभी शर्त पुस्तक के खरीदार पर भी लागू है।

इस पुस्तक का प्रकाशन सावधानीपूर्वक किया है। पुस्तक की सामग्री या कहानी के किसी चरित्र या घटना का किसी से कोई परोक्ष या अपरोक्ष सम्बन्ध नहीं। अगर कोई साम्यता है तो वो संयोग से ही होगी जिसके लिए प्रकाशक एवं लेखक का कोई उत्तरदायित्व नही।

11.	कोविड—19 राष्ट्रीय विमर्शः भारतीय संस्कृति के संदर्भ में	99
12.	डॉ॰ कामिनी वर्मा राष्ट्रीय अखण्डता में महापुरूषों की भूमिका मनीषा	108
13.	1857: 'माझा प्रवास' के आधार पर सपना सिंह	117
14.	देश की अखण्डता का एक अध्यायः हैदराबाद रियासत का भारत में विलय	127
15.	डॉ॰ मोनिका सरोज खेल और राष्ट्रीय एकता डॉ॰ चन्द्र प्रकाश	135
16.	राष्ट्रीय आन्दोलन में समाचार पत्रों का योगदान शशिधर शुक्ला	142
17.	राष्ट्र, राष्ट्रीय एकता एवं शिक्षा भारतीय संदर्भ डॉ॰ जयसिंह यादव Author	147
18.	राष्ट्रीय एकता एवं अखण्डता डॉ॰ अन्जू वर्मा	178
19.	राष्ट्रीय एकता और अखण्डता में हिन्दी भाषा का योगदान डॉ॰ शशिकला	183
20.	राष्ट्रीय सेवा योजना के समक्ष चुनौतियाँ एवं राष्ट्रीय एकता डॉ० अवधेश सिंह यादव Author	189
21.	भारत भू—खण्ड अखण्ड भौगोलिक विमर्श प्रो. डॉ० दीनबन्धु पाण्डेय	197

# SUSTAINABLE PRACTICES FOR Natural Resource Management Through Biological Tools

Dr. Rajani Srivastava



# SUSTAINABLE PRACTICES FOR NATURAL RESOURCES MANAGEMENT

**Through Biological Tools** 

### Editor

Dr. Rajani Srivastava

Institute of Environment & Sustainable Development Rajiv Ganghi South Campus, Banaras Hindu University



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## Post-Harvest Management of Nuts and Dry Fruits-Essential for Sustainable Management of Our Food Resources

Ravindra Kumar Pandey Author

### ABSTRACT

Nuts and dry fruits are rich in carbohydrates, proteins, fats, vitamins and minerals. They are rich in omega 3 fatty acids and antioxidant minerals such as selenium. They are consumed and stored for future use. They are very susceptible to fungal contamination during their storage and transportation. Sometimes during storage they absorb moisture from the environment and moisture invites fungal growth. Several fungi grow and produce mycotoxins in the stored nuts and dry fruits. Mycotoxins are carcinogenic and heat stable. Due to the growth of fungi the appearance, taste and palatability of the nuts are reduced. Several chemical antimicrobials are used to control deterioration in storage but they create health hazards. The antimicrobials obtained from the green plants have promising future. Eugenol, thymol, cinnamic acid isolated from plants have antimicrobial properties. These antimicrobials can be added in the packaging materials and in particular to polymer films.

Keywords: Mycotoxins, Antimicrobials, Polymer films

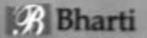
#### INTRODUCTION

Cashew nut (Anacordium occidentale L.), Almond (Prunus amygdalus Batsch.), Walnut (Juglans regia L.) and Cudduppa almond or Cheronjee (Buchnania lanzen Spreng.) are the major nuts and dried fruits. The nutritional contents of these nuts are very high. Cashew nut contains 18% carbohydrates, 46.7% fats, 12.8% proteins and high amount of minerals such as Mg, Ca, K, P and Fe. It is also rich

<sup>1</sup> Department of Botany, K.N. Govt. P.G. College, Gyanpur, Bhadohi, U.P.

# RENEWABLE ENERGY SOURCES An Assessment in Environment Scenario

<u>Edited by:</u> Dr. Abhimanyu Yadav Dr. Madhu Tiwari



# Renewable Energy Sources : An Assessment in Environmental Scenario

Edited by

Dr. Abhimanyu Yadav Dr. Madhu Tiwari



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## Water Pollution in India and its Impact on Society

Author Ravindra Kumar Pandey

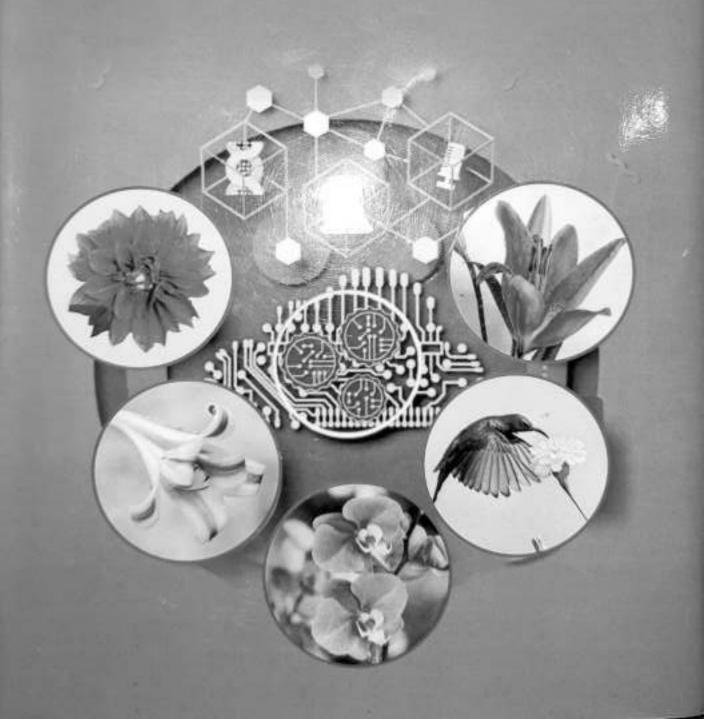
#### ABSTRACT

Water pollution is the contamination of water bodies. Water pollution results when contaminants are introduced into the natural environment. Inadequate release of treated wastewater into natural water bodies can lead to degradation of aquatic ecosystem and public health problems. Water pollution is the leading worldwide cause of death due to water-borne diseases. Water has regenerative capability in the sense that it could absorb pollution loads up to certain levels without auecting its quality. In fact there could be a problem of water pollution only if the pollution loads exceed the natural regenerative capacity of water. The control of water pollution therefore is to reduce the pollution loads generated from anthropogenic activities to its natural regenerative capacity. This chapter mainly highlight the concept, extent, causes of water pollution, its effects. The elements of pollutants and methods used to prevent the water pollution in environment are also discussed. Key Words: Pollution, Anthropogenic.

Faculty of Sciences, Department of Botany, K. N. Gout. P.G. College, Gyanpur

# ADVANCES IN BIOSCIENCES

# Dr. Amit Tiwari • Dr. Piyush Mishra



# Advances in Biosciences

Editor

Dr. Amit Tiwari Dr. Piyush Mishra



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# Post-Harvest Decay Control of Fruits and Vegetables using Essential Oils

### Author Ravindra Kumar Pandey

Department of Botany, Faculty of Sciences, Kashi Naresh Government P.G. College Gyanpur Bhadohi-221309 Email-rituravi20@gmail.com

#### Abstract

Fresh fruits and vegetables play a vital role in human health and nutrition but they destroy very easily due to their high water and nutrient content. Unfortunately the loss of fresh fruits and vegetables is very high due to decay caused by pathogens during poor postharvest handling. Attempts have been made by horticultural industries to reduce the post-harvest microbial decay by use of synthetic fungicides which have created human health concerns. Therefore attempts are being made to reduce post-harvest microbial decay by use of essential oils extracted from plants and proven to be efficient in prolonging shelf life of fruits and vegetables without affecting there sensory properties. Essential oils are secondary plant metabolites and they are synthesized in different parts of the plants and they act as defense system against herbivores and pathogens. They are volatile compounds therefore this property is exploited in post-harvest application as fumigants. Further essential oils are obtained from renewable sources and they do not cause environmental pollution as synthetic fungicides do. Further essential oils can be incorporated into chitosan and alginate based materials as edible coatings.

Keywords Essential oils, Metabolites, Antimicrobial

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in.	Renewable Roscy in India	3309-2412
	the Naddauch Known	
11	Environment Low and Judicial Activities in India	266-213
	Dr. Kaldoop	
-	Revenuenced Protection Act	276-238
	Prasti Toutia	10.0
29.	National Green Tethward: A Step Towards Environment Protect	178-217
	Dr.Kublerg	
98.	Impact and Causes of Flonds, Tecnomi, Avalanches and Earths	2444-2254
	Dr. Hari Om Shorms	10040-12010
11	Meteorological Disesters: Classification and Canves	1000-000
	Dr. Hari Om Sharma	110-217
88.	Disaster Management and Rick Mitigation	
	Dr. Hart One Sharma	118.000
88.	Algal Scenadary Matsholites	
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# Alternative Energy Sources

Editors Dr. Madhu Tiwari Dr. Abhimanyu Yadav - 7



Man Dalla: 110003 India

12	Environmental Protection and Conservation of National Resources in India: From Ancient Tomes of Present Age Prevatia Searce Standarba	109-117
13,	Water Pollated Aquatic Life and Human Health Area Const.	118-125
14,	Algal Biofnel: A Sostainable Source of Alternative Energy Scenari Gepta	126-130
15	Effect of Soil Pollutants in Crops Production Assessment	131-134
15	Conservation of Natural Resources and Wild Life Management Auadhost Singh Yadan	135-142
17	Innovation and Sustainable Development Mouse Volument Stores Storeh	143-148
18.	Nanostructured Materials in Hydrogen Energy Ankat Kumar Singh and Anil Kumar	149-157
19,	Ionic Liquids as a Green Solvent, Catalyst and Reagent	158-167

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#### Algal Biofuel: A Sustainable Source of Alternative Energy

Suman Gupta'

#### ABSTRACT

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# Renewable Energy Sources an Assessment in Environmental Scenario

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Processing & Married	
Environmental Conservation in Ancient India: A Study	35
Designing Surface Stabilized Colloidal Quantum dots as a Photo Anode for Efficient Light Harvesting Sural Kumar	44
Renewable Resources and Society Shuilesh Solanki and Debanjana Prasad	55
Renewable Resources-Solar Energy, Wind Energy and Biomass Energy	66
Sushil Kumar	
Plastic Pollution and Climate Change Suman Gupta	70
	Environmental Conservation in Ancient India: A Study Anjuna Designing Surface Stabilized Colloidal Quantum dots as a Photo Anode for Efficient Light Harvesting Sunil Kumar Renewable Resources and Society Shailesh Solanki and Debanjana Prasad Renewable Resources-Solar Energy, Wind Energy and Biomass Energy Sushil Kumar Plastic Pollution and Climate Change

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#### **Plastic Pollution and Climate Change**

Suman Gunta

#### ABSTRACT

51	
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	d yes yes alter anne sent hyer anter anne sent sent anne sett an		
	Dept.of Sociology Sri Agrosen Kanya P.G.College Valanasi		144
	Afflicted By Monotria Gondhi Koshi Vidyapith	Varanasi	
19.	Global warming and Education -Dr. Asha M. Dharankar Assistant professor, Gevenment college of Education, Akole, 444065 Maharashtre, Indie.	158-165	
20.	Jar Suman Conto Assistant Professor of Bolany	166-195 Author	
	KeshiNaresh Gov. P.GCollegeGyanpurBhadohi 21	11304 U.P. India	
21.	Plant Ecology and Indian Culture -Dr. Momani Saka, Assistant Professor, Berhampare Girl's College, Dept of Sanskrit. Marshubbod, West Bengal	170-175	
27	Mathematical Aspects of Enviourment	176-179	

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Atam Nirbhar Bharat Abhiyan: Challenges and Opportunities

20

Dr. Suman Gupta

# Super Foods And Its Importance In Our Daily Diet

<u>Editor</u> Dr. Latika Yadav Volume-1

<u>Co-Editor</u> Dr. Madhu

#### ABOUT BOOK:

uper foods have grown in popularity over the previous decade, becoming a hot topic of discussion in the community's health and wellness. During the COVID-19 pandemics, the concept of super food gained prominence. Super food is a marketing term for foods that claim health benefits due to their high nutrient density. Between 2011 and 2021, the number of food and beverage products on the market that contain benefits due to their high nutrient density. Between 2011 and 2021, the number of foods might be a good entry into healthy eating, and the terms "super food," "super fruit," or "super grain" more than doubled. Super foods might be a good entry into healthy eating, and the terms "super food," "super fruit," or "super grain" more than doubled. Super foods might be a good entry into healthy eating, and the terms "super food," "super fruit," or "super grain" more than doubled. Super foods might be a good entry into healthy eating, and the terms "super food," "super fruit," or "super grain" more than doubled. Super foods might be a good entry into healthy eating, and the terms "super food," super fruit, or "super grain" more than doubled for super foods might be a good entry into healthy eating, and the terms "super food," super foods are said to be nutritious powerhouses that include high levels of antioxidants, phytochemicals, vitamins, On the other hand, Super foods are said to be nutritious powerhouses that include high levels of antioxidants, phytochemicals, vitamins, this book, we hope that we can educate people about many super foods, their nutritional and medicinal characteristics, production, this book, we hope that we can educate people about many super foods, their nutritional and medicinal characteristics, production, this book, we hope that we can educate people about many super foods, their nutritional and medicinal characteristics, production, information on super foods. We believe that this attempt will benefit students, researchers, academicians, and the general public.

#### ABOUT EDITOR



Dr. Latika Yadav is currently working as Assistant Professor and Head in the Department of Home Science, Government Degree College, Punwarka, Saharanpur, Uttar Pradesh. She completed her B.Sc. Home Science from Acharya Narendra Deva University of Agriculture and Technology. Ayodhya, U.P. M.Sc (Foods and Nutrition) from Banaras Hindu University. Varanasi, U.P.; Ph.D in Foods and Nutrition from Maharana Pratap University of Agriculture and Technology. Udaipur, Rajasthan and B.Ed in Home Science from Dr. Bhim Rao University. Agra, U.P. She earned a University Gold Medal in B.Sc. and was the department topper in Ambedkar University. Agra, U.P. She earned a University Gold Medal in B.Sc. and was the department topper in M.Sc. She was awarded a Ph.D. scholarship by the UGC, the NFOBC-JRF. She has qualified ICAR JRF (2008), UGC -NET (2010, 2013, 2014). ASRB NET (2018) and Rajasthan SET (2013). She cleared various competitive NET (2010, 2013, 2014). ASRB NET (2018) and Rajasthan SET (2013).

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# SUPER FOODS AND ITS IMPORTANCE IN OUR DAILY DIET

(Volume I)

Editor Dr. Latika Yadav

> Co-Editor Dr. Madhu

Kripa-Drishti Publications, Pune.

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# Super Foods And Its Importance In Our Daily Diet

<u>Editor</u> Dr. Latika Yadav Volume-II

<u>Co-Editor</u> Dr. Madhu

#### ABOUT BOOK:

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#### ABOUT EDITOR



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# ITS IMPORTANCE IN OUR DAILY DIET

# (Volume II)

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# HEALTHY DIET FOR HEALTHY LIFE

**4**B

Dr. Madhu Dr. Latika Yadav



# HEALTHY DIET FOR HEALTHY LIFE

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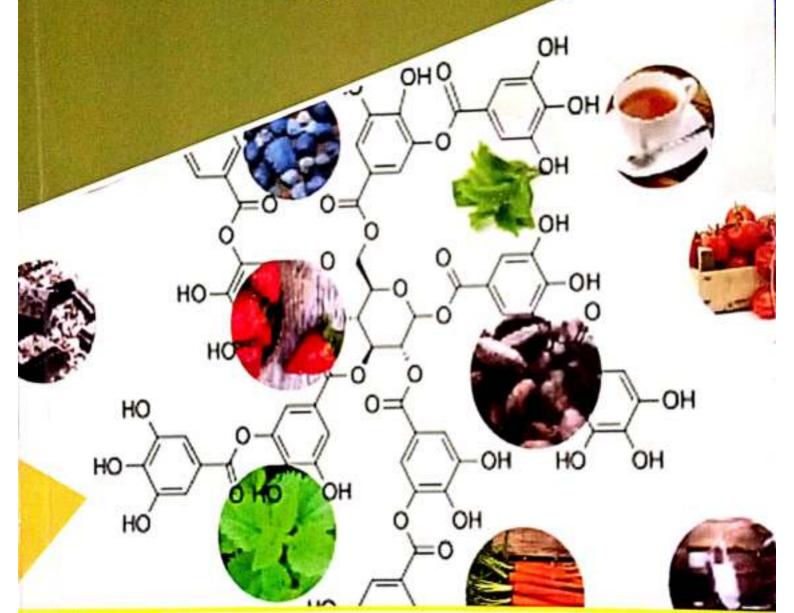
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# HEALTHY DIET FOR HEALTHY LIFE

By: Dr. Madhu & Dr. Latika Yadav

# POLYPHENOLS IN HEALTH AND DISEASES

**First Edition** 



Dr. Latika Yadav Dr. Sadhna Singh Neelesh Kumar Maurya

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# Polyphenols in Health and Diseases

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## Contents

S.No	Chapters	Page
1	Polyphenols as functional ingredients in food system and their safety concern Neelam Chaturvedi and Parul Sharma	1-15
2	Plant Polyphenols -Structure and distribution Parul Sharma and Neelam Chaturvedi	16-25
3	Bioavailability of Polyphenols in Human Diet: A review Study Raksha and Priya Vashishtha	26-41
4	Polyphenols and Obesity Baliram Gurunath Rathod, Nagaveni Shivshetty and Venkata Giridhar Poosarla	42-59
5	Polyphenols and Hypertension Aruna Siripurapu, Baliram Gurunath Rathod, Nagaveni Shivshetty and Venkata Giridhar Poosarla	60-73
6	Polyphenols and Cardiovascular diseases Patricia Michael, Venkata Giridhar Poosarla and Nagaveni Shivshetty	74-88
7	Polyphenols and Obesity S. Priyanka, P. Karthika and T. Poongodi Vijayakumar	89-112
8	Polyphenols in Drinks and Beverages Zeenat Aman, Sadhna Singh, Sneh Singh and Mridula Pandey	113-129
9	Role of polyphenols as functional food in non insulin dependent diabetes Madhu and Suresh Bhise	130-151

Polyphenols in Health and Diseases

# Chapter 9 Role of polyphenols as functional food in non insulin dependent diabetes

Madhu<sup>1</sup> and Suresh Bhise<sup>2</sup>

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#### Abstract

Non insulin dependent diabetes (Type 2 diabetes) is becoming global well-being solicitude. Concurrently hereditary and environmental hazards components such as poor eating ways and lack of physical activity, are known to play a role in the development of type 2 diabetes. Plants engender polyphenols, which are very essential functional foods in our diet. They are classified into several groups due to their different chemical structures. Flavanoids, lignans, stilbenes, and phenolic acids are the four primary families of polyphenols. Polyphenols are a category of plant-extracted organic compounds. Thry posses antioxidant characteristics and anti-inflammatory that have been linked to a lesser predominance of metabolic syndrome such as obesity, non insulin dependent diabetes, and high blood pressure. Furthermore, in that respect broad recognition that foods high in phytochemicals and polyphenols may play a sustancial function in maintaining human cardiovascular health, and existing scientific testimony suggests that constant dietary ingestion of these feed improves glucose metabolism. Present research associate polyphenol-rich dietary patterns to glucose metabolism and emphasize the compounds' potential benefits in the prevention of type 2 diabetes. Several in vivo and in vitro research have been conducted to date 10 evaluate their health consequences. They become acknowledge being a prooxidant nature with more antioxidant properties. Polyphenols shows a vital role in protecting the body from extrinsic stimulant and in eliminating reactive oxygen species(ROS), which are produced usually result of certain disorders Polyphenols also protect against certain diseases and slow down their progression through several ways.

Keywords: Polyphenols, functional food, antioxidants, phytochemicals, and insulin-resistant dependent diabetics.

# The Mushcoom An Incredible Natural Resource

# Mr. Balwant Singh Dr. Vinay Kumar Singh

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Chapter-18	Antifungal Activities of Mushrooms: An updated overview	
Chapter-19	An updated overview Antimicrobial Activity	285-29
Chapter-20	Antimicrobial Activities of Mushrooms Antioxidant Activities of Mushroom Antioxidant	297-31
Chapter-21	and compounds and	313-330
Chapter-22	and of Mushrooms	340-356
Chapter-23	Poisonous Mushroom in India Indian Poisonous Mushrooms	357-373
Chapter-24	Antibacterial activities of mushrooms	374-384
Chapter-25	Spectrum of mushroom varieties: Edible and Poisonous	385-399 400-413
Chapter-26	Mushroom's As Cheapest Source of	414-435
	Functional Food and Medicine for Poor Man	414-433
Chapter-27	Antitumor Properties of Mushrooms	436-454
Chapter-28	Antiviral Activities of Mushroom	455-488
Chapter-29	Bioremediation of Contaminated soil to Develop Sustainable Environment with Involvement of Fungal Communities	489-521

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# **26** Mushroom's As Cheapest Source of Functional Food and Medicine for Poor Man Dr. Madhu

### Introduction

Mushrooms have been ingested since the dawn of time; the ancient Greeks believed that mushrooms gave warriors extra vigor in combat, and the Romans regarded them as "Food of the Gods." Mushrooms have been revered as a health food and a "elixir of life" in Chinese culture for ages. They've been a part of human society for thousands of years, and their sensory traits have piqued the interest of some of history's most influential civilizations; they've also been lauded for their delectable gastronomic qualities. The practice of eating mushrooms is known as mycophagy. Wild edible mushrooms were picked and consumed in ancient times, and this tradition may be traced back to that period.

Mushrooms are members of the Fungi kingdom. Fungi are one of the ecosystem's principal decomposers. They can be found all throughout the earth, existing in mysterious ways or sprouting from the bodies of dead species. Fungi are often neglected as a source of nutrients. Many funguses, such as *Agaricus xanthodermus, Amanita gemmata, Cudonia circinans, Entolona sinuatum, Hapalopilus nidulans*, and others, are toxic to humans.



# Recent Trends and Advances in Medicinal Plants Research



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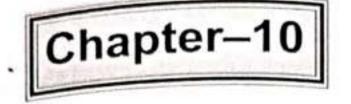
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# Contents

Preface	(v)
<ol> <li>Biodiversity of Arbuscular Mycorrhizal Fungi Associated with Some Medicinal Plants of Sagar District of Madhya Pradesh 1         <ul> <li>Pradesh 1                 <ul> <li>Prashant Kumar Soni, Archana Mishra and Mahendra Mishra</li></ul></li></ul></li></ol>	
<ol> <li>Application of Plant Biotechnology in the Production of High-Quality Medicines from Medicinal Plants –Sunil Kumar Katiyar and Utkarsh Katiyar     </li> </ol>	15
<ol> <li>Importance of Biofertilizers in the Cultivation of Medicinal Plants –Mahroofa Jan, Asmat Ara, Sumaya Hassan, Sumeet Kour</li> </ol>	36
<ol> <li>Elucidiating the Impact of Climate Change on Medicinal Plants         <ul> <li>Shaon Chakraborty, Anjani Kumar, Vivek Kashyap,</li> <li>Sudhanshu, Aishi Mukherjee</li> </ul> </li> </ol>	48
<ol> <li>Study of Traditionally Used Wild Edible Plants of District Uttarkashi, Uttarakhand, India –Aaradhna Chauhan, Jai Laxmi Rawat and Richa Badhani</li> </ol>	57
<ol> <li>Ethnomedicinal Plants Utilized by Tribal Communities in the Similipal Biosphere Reserve, Odisha, India: A Review –Dr. Umabati Sahu and Dr. Ipsita Das     </li> </ol>	68
<ol> <li>Wound Healing Potential of Medicinal Plants as Natural Products         <ul> <li>Harshad S. Kapare, Hemant K. Gaikwad, Shubham K. Gadge</li> </ul> </li> </ol>	81
8. Medicinal Properties of Some Common Poisonous Plants -Dr. Samarendra Narayan Mallick & Malay Prithwiraj Sahoo	92
9. Medicinal Plants for Cardiovascular Ailments -Dr. Tulika Mishra	110
10. Medicinal Plant: A Boon for Diabetics	122



# Medicinal Plant: A Boon for Diabetics

-Dr. Madhu\*

### Abstract

Many people have benefited from medicinal herbs for decades. La before the prehistoric period, plants were employed for medical purposes of to the existence of many more phytochemicals such as flavonoids and mine that serve as antioxidants, medicinal plants have shown a mature tendency the treatment of numerous diseases as well as lifestyle disorders. According the World Health Organization, 80 percent of people throughout the work use herbal medicines for some component of their primary health care. Anon 21,000 plant species have the potential to be utilized as medical plants, accordin to the WHO. Approximately 800 plants have been identified to have am diabetic properties. The use of medicinal plants is seen to be quite safe, there are no or very few adverse effects. The fact that these medicines and tune with nature is the largest advantage. The golden truth is that here remedies may be used by people of all ages and genders. Aloe, Tulsi, Net Turmeric, and Ginger are medicinal plants that can help with a variety diseases. Apart from that, onion (Allium cepa), garlic (Allium sativum), All vera (ghrita kumara), fenugreek seeds (Trigonella foenum-graecum), ash geo (Benincasa hispida), beetroot (Beta vulgaris), jamun (Syzygium cumin), (Tinospora cordifolia), bael (Aegle marmelos). Diabetes is a long-term metabli illness that can lead to significant consequences such as retinoput neuropathy, nephropathy, and foot difficulties. The current review need

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# Oncology in Global World It's Advance and Research

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# Contents

Acknowledgement	
Foreword	
Preface	υιι ix
1. Cancer Disease: Approaches in Treating Through Targeted Gene Therapy Vipin Kesharwani	1
Sagarika Kabra	
Deepika Saini	
2. Anti-Cancer: Its Mechanisms, Treatments and Drug Uses Breast Cancer Molecular Mechanism of Tamoxifen Resistance and its Treatment	
Ankit Pateriya	13
Mohit	
Deepak Sharma	
3. Preclinical and Clinical Studies of Phytochemical in Cancer Treatment	24
Deepesh Lall	24
Shruti Rathore	
Neeraj Sharma	

18. Biochemical Indicator : An Approac Effective Reducement of Carcinoger Shalini Kesharwani 19. Nutrition & Pharmaceuticals : Curs	
19. Nutrition of Cancer Regimen for Cancer	228
Regimen for out	
Krati Dwivedi	
Mahendra Dwivedi	NO DE
Nikhil Kushwaha	bloc
20. Nutraceuticals in Cruciferous Vegeta and its Role in Cancer Prevention	Dies
	238
Dr. Madhu	
21. Phases Used in Cancer Treatm	ent:
Cytotoxic Drugs	257
Mukul Srivastava	
Safiya Begum	
Satya Maurya	
Alkama Begum	
22. Nutraceutical and Their Possible Rol	e in
Human Cancer	
Madhulika Singh	272
Niharika Pandey	
Index	
Manager O BENERS DIRECTORY STREET	
Dimenti Carvent Dissembly	
CARLEN AND AND AND AND AND AND AND AND AND AN	

# 20. Nutraceuticals in Cruciferous Vegetables and its Role in Cancer Prevention

Dr. Madhu\*

# **Nutraceuticals As Phytochemicals**

Plant-derived compounds possess phytochemicals agents that have been exert its good health effects either direct, by altering particular atomic targets, or indirect, by impacting metabolic processes through stable conjugates. Plants have evolved a broad spectrum of phytochemicals properties to protect itselves from highly ROS (Reactive oxygen species) and as a defensive mechanism. These products, which include phytochemical-rich extracts to achieve favourable physiological benefits, cannot be termed "food."

<sup>\*</sup>Assistant Professor, Department of Home Science Kashi Naresh Govt. PG College, Gyanpur, Bhadohi, U.P.



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## Contents

Chapters	Page No.
1. Nutritional Properties and Health Benefits of Wheat (Neha Thakur and Dr. Archana Singh)	grass 01-07
2. Food Additives (Dr. Neetu Dobhal)	09-28
3. Nutrition Transition (Dr. Renu Shrestha and Dr. G.B. Bhatt)	29-44
<ol> <li>Nutrition in Digital India (Dr. Vatsala Saharan and Dr. Heenu Dhar)</li> </ol>	45-57
5. My Plate Concept (Dr. Akanksha Yadav)	59-69
6. Alternative Proteins (Dr. Diksha Bisht, Ankita Dobhal and Dr. Deepa Sanwal)	71-83
7. Smart Food Packaging (Suresh Bhise and Madhu)	85-103
8. Super Foods (Tarandeep Kaur)	105-122
9. Eat Right Eat Smart (Shweta Joshi)	123-138
<ol> <li>Nutrition Education through e-Plateforms (Dr. Raksha and Dr. Priya Vashishtha)</li> </ol>	139-152

## Chapter - 7 Smart Food Packaging

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# Home Science As a Vocational Subject : Challenges and Opportunities

Dr. Anamika Chauhan Dr. Deepika Dhawan



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# Contents

Ch	apter	Page No.
-	Foreword	iii-iv
	Preface	v-vi
1.	Importance of Home Science: Industrial Scientific and Educational Dr. Anamika Chauhan	, 1-7
2.	Career Opportunities Through Home Scienc	e
	Educational Training	8-23
	Anjali Yadav	
	Jyoti Tiwari	
3.	Role of Home Science in Socio-Economic	
	Empowerment of Women Ankita Bisht	24-35
	Dr Anita Sati	
4.	Role of Home Science in Health Care Throug	h
	Food and Nutrition	36-44
	Bharti Ruhela	
	Rekha Naithani	
5.	Women Empowerment for Home Science As	a
	Main Focusing Area	45-60
	Deblina Roy Importance of Home Science in Health Care	61-72
6.		
_	Deepali Sharma Home Science- A Subject Designing Personality	78-83
7.		
	of Students	
	Dr. Deepika Dhawan	83-8
8.		10.00
-	Devyani Lingwal	
9.	Persuading Factors for Social Disregard for	87-9
	Home Science Subject	
	Indresh Kumar vii	

10. To Change Society Thinking Towards H Science : A Challenge	
a change of the second s	ome
Dr. Karanjeet Kaur	(in
Dr. Simericet Kaur	24
11. Progressive Aspect of Home Science Th	
0 11 1VE1 2020	ough
Kusum Duhan	99-In-
Dr. Manju Kanwar Rathore	14
Shikha Kapoor	
12. Human Developmentlists: As a Soldieres	
Community Wellbeing	
Dr. Lata Pujar	107-11
Dr. Sumangala Badami	
13. Home Science/Community Science:	
An Employment Opportunities	02425-5
Dr. Madhu	115-132
14. Role of Home Science in Pandemic Situation	
and in Entire Life Cycle of a Human Being	
Manisha Rani	133-143
15. Home Science: Wide Spectrum of Scope Acro	
Various Fields	
Dr. Manju Kanwar Rathore	144-154
Shikha Kapoor	
16. Women Empowerment for Home Science	155-166
Muskan Sharma	
17. Home Science in NEP 2020: A Roadmap to	
Vocational Education	167-176
Neha Joshi	
Manisha Dhami	
Seema Sharma	
8. Vocationalization of Home Science:	
	177 102
A Contemporary Perspective	177-192

13

# HOME SCIENCE/COMMUNITY SCIENCE: AN EMPLOYMENT OPPORTUNITIES

Dr. Madhu

## Introduction:

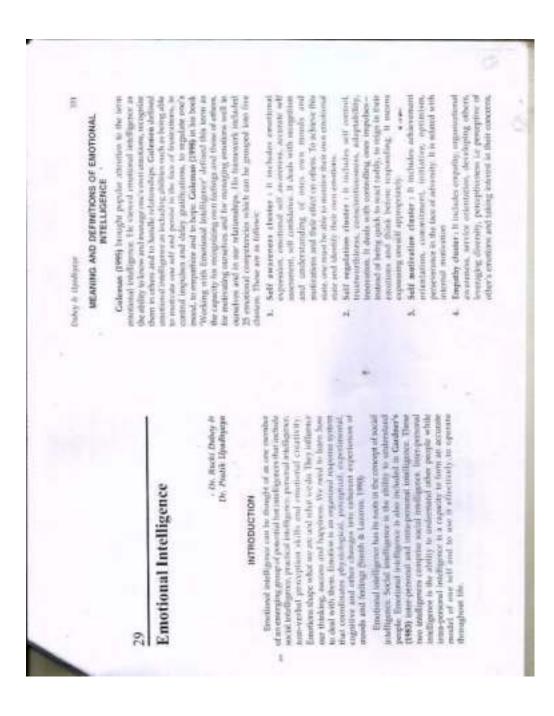
Youth's full and effective engagement in social, economic, and political growth is dependent on their knowledge and education. To ensure that young people, particularly underprivileged youth, acquire the information, capacities, skills, and ethical values required to fulfill their role as agents of overall development, more focus must be paid to raising participation rates.

'Home science' is made up of the phrases 'home' and 'science.' The term "house" refers to the family's primary residence, whereas "science" refers to knowledge based on facts, principles, and laws. In an ever-changing world, home science teaches a scientific approach to modern housekeeping for achieving home welfare and maintaining family life (SCERT, 2011). House science encompasses all aspects of a person's life, including their home, family members, and resources (Vyas and Shastri, 2011). Home science is a unique field that combines

Assistant Professor, Deptt of Home Science, Kashi Naresh Govt, PG College, Gyanpur, Bhadohi, U.P.



12 -	8	27	36	69	49	99	ng 76	6
CONTENTS Projece I. History of Psychology . Dr. Sativit Kontent, & Dr. Radiante Molik	<ol> <li>Paychology &amp; Bducational Psychology</li> <li>De Satist Komme Kalherter, &amp; Dr. Rathons Malik</li> </ol>	3. Nature and Scope of Educational Psychology - Ads Huypy Known Takm	<ol> <li>Functions of Educational Psychology</li> <li>De Jamü Tümunteseri</li> </ol>	<ol> <li>Methods Of Educational Psychology</li> <li>K. Mahawaundumu &amp; Di. L. Govge Sitzitent</li> </ol>	6. Growth and Development -Dr. Parents Snigh	<ol> <li>Developmental Tasks - Specific Neuds and Problems during Adolescence</li> <li>Ms. Higpy Kumeri Yadau</li> </ol>	8. Cognitive Development and Classroom Learning 76 - Dr. Subst Adsim	9. Learning - Min. Anju Shirnai
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# NEW HORIZONS OF TEACHING AND LEARNING IN THE LIGHT OF NEP 2020

Pratik Upadhyaya Ruchi Dubey

# NEW HORIZONS OF TEACHING AND LEARNING

In the present scenario, new methods of teaching and learning are being adopted by teachers and students according to their own interests and needs to fulfil the requirements of the new millennium. The present book and to meet the challenges of the new millennium. The present book provides an insight on new methods of teaching and new methods of learning. The book has covered diverse aspects of teaching and learning. MOOD constructives, cooperative learning, blended learning, experiential learning, e-learning, flipped classroom, gamification, multicultural education, emotional intelligence, social intelligence, spiritual intelligence, metacognition, , etc. The book also includes few research based chapters on creativity, online teaching and learning resistance.

Dr. Pratik Upadhyaya is Assistant Professor in the Department of Teacher Education, K. N. Government P. G. College, Gyanpur, Bhadoh U.P. since February 2016. He has more than of 18 years of teaching expensence. He has also served in Mahatma Gandi Antarrashtriya Hind Vishwavidyalaya, Wardha, Maharashtra and Ewing Christian College Prayagra as Assistant Professor. He has to his credit more than 45 meearch papers published in reputed journals and authorship of 2 books includes has to his credit a minor research project funded by U.P. Servement. His area of specialization includes pedagogy of the matics educational psychology, measurement and evaluation.

Dr. Ruchi Dubey is Assistant Professor in the Department of Education University of Allahabad, Prayagraj, U.P. since 2013. She has more than 1 years of teaching experience. She has authored 3 books and has to he credit more than 75 publications including research papers in journals chapters in edited books and 2 psychological tools. Her area c specialization is Educational Psychology and Pedagogy of English.

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# RENEWABLE ENERGY SOURCES An Assessment in Environment Scenario

<u>Edited by:</u> Dr. Abhimanyu Yadav Dr. Madhu Tiwari

Bharti

# Renewable Energy Sources : An Assessment in Environmental Scenario

Edited by

Dr. Abhimanyu Yadav Dr. Madhu Tiwari



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# Content

Foreword	
Preface	vii
1. Role of Structural Materials in Nuclear Energy Generation	1-7
Preeti Verma and Manager Singh Rajdeo 2. Green Electronics: A Need for a	0.17
Sustainable Environment	8-17
Abhishek Singh, Srishti Gupta and Manish Kuma	r Singh
3. An Introduction to Dye-Sensitized Solar Cells Ishwar Chandra Maurya	18-27
4. Assessment of Renewable Energy Sources on Environment	28-34
Preetam Kumar	
5. Environmental Conservation in Ancient India : A Study	35-43
Anjana	
6. Designing Surface Stabilized Colloidal Quantum dots as a Photo Anode for Efficient Light Harvesting	44-54
Sunil Kumar	
7. Renewable Resources and Society	55-65
Shailesh Solanki and Debanjana Prasad	

8.	Renewable Resources-Solar Energy, Wind Energy and Biomass Energy	66-69
	Sushil Kumar	
9.	Plastic Pollution and Climate Change	70-74
	Suman Gupta	
10.	Alternative Smart Green Approaches for the Conventional Plastic-PHA: A Critical Review	75-87
	Kashish	
11.	The Role of Mathematical Model in Sustainable Development	88-96
	Ajay Kumar Sonkar	
12.	Diabetes Mellitus: A Life-Style Associated Threat to Male Fertility in Modern Society	97-106
	Prakash Chandra Gupta	
13.	Biomedical Applications of Nanomaterials	107-113
	Sunayana Kashyap, Vandana Kashyap, Akash Kumar and Shobhana Kashyap	
14.	Natural Organic Materials as Economic and Green Solution for Corrosion Inhibition of Carbon Steel in Aggressive Media	114-127
	Gopal Ji	
15	. Water Pollution in India and its Impact on Society Ravindra Kumar Pandey	128-138
	122 LD 100 001 0000 10000 00	139-144
16	Ecological Stability and Pest Management Ranjit Singh and P. N. Dongre	139-144
17	Environmental Pollution Management Using 2D Carbon Nanomatrial : Graphene	145-156
	Kalpana Awasthi and Seema Awasthi	
18	Arsenic Contamination in Drinking Water Paras Nath	157-163

19.	Mushroom: An Approach to Sustainable Packaging Material	164-170
	Rashmi Singh	
20.	Impact of Water Contamination on Animal Life and Control Mechanism	171-177
	Shikha Vishwakarma	
21.	Air Quality Index	178-187
	Hemant Kumar Nirala and Manisha	
22.	Water Pollution and its Sources, Impact on the Human Health, Control and Management	188-195
	Santhosh Kumar Singh and Dharmendra Kumar Sing	gh
23.	Role of Environmental Education in Sustainable Development	196-204
	Lokpati Tripathi	
24.	Environmental Attitudes of NSS Volunteers	205-212
	Monika Saroj and Santosh Kumar Arya	
25.	A Scientific Way for Welfare of Society by Mathematical Modeling	213-220
	Sarveshanand	
26.	Water Pollution and its Impact on the Human Health	221-228
	Ratnesh Kumar Soni	



# Assessment of Renewable Energy Sources on Environment

Preetam Kumar<sup>1</sup>

### ABSTRACT

Ongoing concerns about the climate change have made renewable energy sources an important component of the world energy consumption portfolio. To meet the nation's energy objective of a secure, competitive, and environmentally energy system, broad development of a range of energy technologies are developed. Renewable power is booming as innovative work that brings down the cost and displacing harmful fossil fuel in power sector. Renewable energy are-solar energy, wind energy, bio mass energy, hydro energy etc. Renewable energy is usually more environment friendly but these are more site specific. Renewable energy sources are generally thought of harmless but it does not mean they have no environmental consequences at all. Renewable energy sources are contributing to nation but on the other side it also disturbing the environment, it requires large area of land, disturbing eco-system and more. This chapter is all about the environmental and socio economic impact affecting the natural balance associated with renewable power generation. It's true that renewable sources energy is cost effective but improvements are still necessary.

Keywords: Renewable energy sources, Environmental change, Sustainable development, Fossil fuel.

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### INTRODUCTION

Renewable energy sources are obtained naturally from the environment and it's again generated after some interval of time. The rapid increase in energy consumption particularly in the past several decades has raised fears of exhausting the globe reserves of petroleum and other resources in the near other. This energy focused on sustainable development. Renewable resources are part of the earth natural environment. Renewable energy sources are enhancing the efficiency and also reducing the prices. After facing a global warming and other problems caused by fossil fuel, environment demand to focus more on renewable energy sources for future generations. Renewable energy is currently unevenly and insufficiently exploited. Benefits of renewable energy sources exist but it also has environmental and socio economic impact. Many private and public enterprises are searching for new renewable energy sources to meet up their energy solution requirements and also trying to reduce the effects arising out of using renewable resources. Renewable energy is found in deep underground, the air, sunlight, also in oceans. Governments, intergovernmental agencies, interested parties and individual in the world today look forward to achieve a sustainable future due to opportunities created in recent time to replace fossil fuel energy with renewable energy sources.

This chapter deals the following renewable energy sources

- Solar energy
- Wind energy
- Hydro energy
- Geothermal energy
- Biomass
- Ocean thermal energy

#### (a) Solar Energy

Solar energy converts the sunlight heat into other form of energy for use. Two types of ways are used to harness solar energy; Photovoltaic and Solar thermal. Solar photovoltaic technology uses semiconductors to convert sunlight into direct current electricity and solar thermal utilize sun heat for heating or electricity production. 30 Renewable Energy Sources : An Assessment in Environmental Scenario

Adverse impacts of using solar energy system also exist.

- These systems require exotic input like cadmium sulphide is toxic and explosive and generate air pollutants like antifreeze agents, rust inhibitors.
- They require large portion of permanent land for installation and reclamation is not done until the plant is decommissioned.
- Soil erosion, wind diversion, potential decrease in evaporation rate from soil.

#### (b) Wind Energy

Wind energy captures the natural wind in our environment and converts the air motion into mechanical energy. Wind requires low operations and maintenance costs after initial construction. India wind energy sector is led by indigenous wind power industry and show the consistent progress. Expansion led to strong ecosystem and produces no air and water pollution.

Wind power sector has number of other environmental effects that limits its potential.

- Wind turbine produce noise from air passing over the blades and moving parts of the turbine.
- Birds get killed when they collide with the rotating blades of a turbine.
- Migratory species are at a higher risk than resident species.
- Wind power uses land as wind turbine will be spaced a certain distance apart and land in between regarded as occupied.
- Turbine causes interference in communication systems.
- Wind mills that are placed near lake become warmer because of reduced evaporation from their surface.

#### (c) Hydro Energy

Hydro power converts the flowing water into electricity. Now a days hydro plants produce electricity using turbines and generators.

Assessment of Renewable Energy Sources on Environment

Hydro power energy impacts the environment in following ways

 Damming a river disturb the ecosystem by flooding upstream landscape, disturb the habitats for wildlife.

31

- Loss of vegetation in flooded areas creates methane and other harmful gas.
- Carbon dioxide emissions occur during construction which results in small amount of greenhouse gas emissions.
- Construction of large dam has virtually ceased because most underdeveloped site are under environmental protection.
- Hydro energy causes socio economic damage by displacing local populations.
- Require large amount of financial support for building dam which is not cost effective.

#### (d) Geothermal Energy

Geothermal energy is a heat that comes below the earth surface. It is most abundant in the rocks and fluid below the earth curst. In order to generate power from geothermal energy, mile deep wells are dug into underground reservoirs to access the stream and hot water, which are used to drive turbines connected to electricity generators.

Geothermal energy cons towards the environment are

- The extraction of geothermal energy from the grounds leads to a release of greenhouse gases like hydrogen sulfide, carbon dioxide, methane and ammonia.
- Improper drilling leads escaping of minerals and gases from underground.
- Locations may cool down after a while making it impossible to harvest more geothermal energy in future.
- Reservoirs can be depleted if fluid is removed faster than replaced.
- If the heat is not taken care of, it can cause a meltdown or other issues where the energy is not properly distributed or used.

32 Renewable Energy Sources : An Assessment in Environmental Scenario

- Construction of geothermal plant can affect the stability of land and may cause earthquake.
- Drilling and installing is quite a complex system which causes rising the price.
- Geothermal power plant is hard to implement in big cities.
- Large amount of chemicals released when geothermal fields are trapped for commercials production and can be hazardous to people living nearby.
- Geothermal power plant requires large amount of water for cooling purpose.

### (e) Bio-Mass

The organic bio-degradable wastes from various sources such as cattle dung, animal waste, and food kitchen waste, poultry dropping waste, forestry residues, agro-industry, and more are the feed stock for biogas plant. Biomass is an integral part of earth carbon cycle. The carbon cycle is the process by which carbon is exchanged between all layers of earth.

Drawback of biomass energy is

- If biomass feed stocks are not replenished as quickly as they are used, they can become nonrenewable.
- Biomass requires are able land to develop.
- Biomass has lower energy density as scientists believe that it's not economically efficient.
- Burning biomass release carbon monoxide, carbon dioxide, nitrogen oxide and other pollutants.
- Biomass energy production can cause soil erosion problem and significant nutrition loss will be incurred by harvesting of crop residues.
- Alteration of forests and wetlands will reduce many habitats and mating areas of some mammals and birds.

### (f) Ocean Energy

The ocean form of energy has the potential for providing a substantial amount of new renewable and reliable energy around

Assessment of Renewable Energy Sources on Environment

the world. Several technology employ different strategy for harvesting ocean energy. The main sources of ocean energy are: tidal streams; ocean currents; tidal range; waves; ocean thermal energy; salinity gradients. It does not produce any greenhouse gases or waste products.

Drawbacks of ocean energy

- It affects the ocean water quality as temperature changes, salinity, pressure of water changes etc.
- The pumping of large volumes of cold water from depths of ocean to surface will release dissolved gases such as carbon dioxide, oxygen, nitrogen.
- Machine and equipment used for installation purpose are very expensive.
- Large machines near the water to gather ocean energy disturb the seafloor, change the habitat, and create noise that disturbs the sea life.

### CONCLUSION

Against this backdrop, this chapter seeks to deal the potential and trend of sustainable development with renewable energy source and environmental impact. Technology constraints, sociological and economical distribution, and energy policy play key roles in determining the most effective use of these endless resources. It is important to consider the potential for changing to more sustainable energy sources. If we want to develop energy independence and security, renewable energy sources have to be develop in much better way. Earth climate temperature has risen in the past few decades that may cause floods, heat waves, drought, rise in sea level, extreme weather condition. To protect earth and its nature we need to produce energy from renewable energy sources in a modified manner. Thus renewable energy resources have the potential to provide a significant amount of energy. To meet the energy target of nation we need to encourage renewable energy sources. As renewable energy sources have lower environmental impact as compare to conventional energy technologies. Renewable energy will not run out and it's necessary to produce energy from these sources in better way without harming the nature.

33

# 34 Renewable Energy Sources : An Assessment in Environmental Scenario

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