



Academic and Activist Perspectives
ON
**BIODIVERSITY AND
CLIMATE CHANGE**

Annual Issue, Vol. 1, 2017

Edited by

Niraj K Singh, Pratibha Rai, Puneeta Agrawal
Sangeeta Mittal, Saumya Shukla, Swami Nandan

Published by

Book Age Publications

H-87, Lalita Park, Laxmi Nagar, Delhi-110092

Distributed by

Brijwasi Book Distributors & Publications

H-87, Lalita Park, Laxmi Nagar, Delhi-110092

Ph: 22458302, 98111-22902, 98111-40390

E-mail: brijwasipub@yahoo.com

brijwasibooks@gmail.com

All rights reserved. No part of this publication may be reproduced, stored in retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the authors and the publishers.

First Edition 2017

© 2017, Authors

ISBN: 978-93-83281-43-5

Price: ₹ 350/-

Laser typeset by MS Computers, Patparganj, Delhi-110092

Printed at MS Indian Enterprises, Delhi

Message

शमीमा सिद्दिकी
SHAMIMA SIDDIQUI

भारत के राष्ट्रपति को उप प्रेस सचिव
Deputy Press Secretary
to the President of India




राष्ट्रपति सचिवालय,
राष्ट्रपति भवन,
नई दिल्ली-110004.
PRESIDENT'S SECRETARIAT,
RASHTRAPATI BHAVAN,
NEW DELHI - 110004.

MESSAGE

The President of India, Shri Pranab Mukherjee, is happy to know that the Maharaja Agrasen College (University of Delhi), Delhi is organising its 5th National Conference on Biodiversity and Climate Change: Conserving Heritage – Natural Resources and Cultural Wealth on February 16-17, 2017.

The President extends his warm greetings and felicitations to the organisers and participants and sends his best wishes for the success of the Conference.


Deputy Press Secretary to the President

New Delhi
February 15, 2017

Contents

<i>Acknowledgements</i>	
<i>Foreword</i>	(ix)
<i>Introduction</i>	(xiii)
Chapters	1-8
1. Development of Biodiversity on Degraded Lands: A Sustainable Solution for <i>Climate Change Mitigation</i> <i>Asha Ashok Jawarkar, Lal Singh and S K Singh</i>	9-21
2. Depleting Biodiversity: An Irreversible Change <i>Alind Rastogi</i>	22-30
3. Global Environmental Challenge: A Study of Biodiversity <i>Prabira Sethy</i>	31-42
4. Hydrogeomorphic Classification of Chilika Wetland and its Functional Capacity in Odisha <i>Smita</i>	43-55
5. Indian Mangrove Ecosystem and its Significance <i>Namrata Priya, A L Ramanathan and Karuna Rao</i>	56-64
6. Distribution of Floral Diversity in the Asia-Pacific Biodiversity Hotspots <i>Nibedita Khuntia</i>	65-78
7. Water Disputes Between India and Pakistan <i>Vandana Sachan</i>	79-84
8. Clean Development Mechanism (CDM): A Sustainable Solution <i>Ashish Nandan and Swami Nandan</i>	85-93
9. Grassroot Innovations: Contributors to Environmental Sustainability ... <i>Bhawna Anjaly</i>	94-99
10. Impact of e-waste: Climate Change and Global Warming <i>Meena Mehta and J K Mehta</i>	100-111
11. Global Attempt to Tackle Greenhouse Gas Emissions: Post-Kyoto Period <i>Pratibha Rai</i>	112-124
12. Environmental Policy Challenges in India <i>Narsingh Manjhi</i>	125-134

- Salvam, V., (2003). *Environmental classification of mangrove wetlands of India*. Current Science, 84(6), pp.757-765.
- Spalding, M., Blasco, F. & Field, C., (1997). World mangrove atlas.
- Takle, E.S., Chen, T.C. & Wu, X. (2006, August). *Protection from Wind and Salt Spray*. In Proceedings of the Regional Technical Workshop, Khao Lak, Thailand (pp. 28-31).
- Thom, B.G., Snedaker, S. & Snedaker, J. (1984). *The mangrove ecosystem: research methods. The mangrove ecosystem: research methods*. Monographs on oceanographic methodology, pp-3-15.



6

Distribution of Floral Diversity in Asia-Pacific Biodiversity Hotspots

Nibedita Khuntia

Abstract

Asia-Pacific zone is the largest geographical area of the world and is rich in floral and faunal diversity. This zone has a total of thirteen out of 35 biodiversity hotspots of the world today. With increased economic activities resulting in over-exploitation of nature as well as climate change, the world flora is under serious danger of extinction. In order to reverse this process of destruction of the flora and save the plant species it is important to undertake developmental projects with caution. It is very important to maintain a statistical account of not only the existing number of vascular plant species but also area under the remaining vegetation endemism of the plant species etc to keep a track, sustain and preserve the biodiversity.

Key words: Vascular plant species, biodiversity hotspots, endemism, endemic, vegetation remaining.

Introduction

The distribution of plants is uneven across the globe with heavy concentration in the tropics. The areas of vascular plant species concentration with more than 3000 species spread around 10,000 km² includes Choco-Costa Rica, parts of Andes and Amazonia, Eastern Brazil, North Borneo and New Guinea, South Mexico, Cape of South Africa, East Himalaya, Parts of Sumatra, Malaysia and Madagascar. Besides the tropical region other areas of plant diversity include Mediterranean climatic zones, the Caucasus, New Zealand and the mountains of Southwest China. Islands are also home to more than 35% world's vascular plant species.

It is very important to keep well documented record of all these plant species and their vital characteristics for the simple reason that they provide ecosystem services and livelihood support to the world population which include provisioning of wild foods, plant-derived medicines, timber and fuel, cosmetics, essential oils, ornamental horticulture, fresh water, climate regulation through carbon storage, pollination etc, nutrient cycling, photosynthesis and spiritual, aesthetic and cultural benefits. But over-exploitation of nature for all these benefits over the years and centuries by the growing human population has now resulted in severe loss of plants on the earth's surface.

HUMAN RIGHTS AND RESPONSIBILITY

Edited by
Dr. Nirmal Pattnaik

On behalf of



Pattnaik India Foundation, Delhi
B-7, Vindhyashree Apartment, Main Road, Burarai, Delhi-84



JTS Publications

V-508, Gali No. 17, Vijay Park Delhi-110053

Mob.08527460252, 011-22911223

Email: jtspublications@gmail.com

HUMAN RIGHTS AND RESPONSIBILITY

Edited by

Dr. Nirmal Pattnaik

© Author

First Edition, 2018

ISBN 978-81-935368-1-0

Price : 1200/-

[All Rights Reserved.

No part of this publication may be reproduced
in any form without the written
permission of the Publisher.]

Disclaimer: Academic facts, views and opinions published by authors in this book solely the opinions of the respective authors. Authors are responsible for their content, citation of sources and the accuracy of their references and bibliographies/ references. The editor and Publisher cannot be held responsible for any lacks or possible violations of third parties' rights.

PRINTED IN INDIA

Published and Printed by JTS Publications, Delhi-110053

16.	Evolution of Human Rights in India <i>Dr. Vipul</i>	128
17.	Aspects of Humanism in the Constitution of India <i>Dr. Nirmal Pathak</i>	146
18.	Indian Constitution and Human Rights <i>Nirupama Mohanty, Madhusmita Pathak</i>	154
19.	Human Values and Ethical Living <i>Dr. Suraj Prakash Pandey</i>	178
20.	Euthanasia and Human Rights <i>Chetna Gupta</i>	185
21.	Love: Exploration of Human Rights <i>Mini Gill</i>	189
22.	Joint Family <i>Dr. Sathana Shukla</i>	196
23.	Mother Tongue in Multi-lingual Society <i>Chakrabhar Behera</i>	206
24.	Dilemmas for Mother Tongue and Education in India <i>Aditya K Sharma, Shikha Gupta</i>	210
25.	Language Imposition on Tribal Children under the New Educational Policy 2016 <i>Anjali Ashokan, Sangappa Vaggar, Pradeep Kumar Gupta</i>	213
26.	Food Security and Human Right : Towards a New Understanding <i>Devarati Roy Choudhury</i>	220
27.	Food Production and Challenges of Climate Change <i>Sanbhavina Chaudhary</i>	235
28.	Right to Clean Water and Responsibility to Protect it <i>Dr. Nibedita Khuntia</i>	238
29.	Housing and Urban Infrastructure Issues <i>Dr. H S Gill, Ms. Arunika Sharma</i>	251
30.	A Unique Social Security Scheme for the Organised Workers <i>Bimal Kanti Sahu</i>	265
31.	Violation of Rights of Juveniles under Juvenile Justice Act - 2015 <i>Sangappa Vaggar, Pradeep Kumar Gupta*, Anjali Ashokan</i>	272

32.	Application of the Principle of Self-determination to Western Sahara <i>Dr. Prafulla Kumar Sinha</i>	282
33.	A Study of Grooming Indo-Morocco Relations: With Special Context of Education and Culture <i>Dr. Indu Baghel</i>	291
34.	Home Taken: A Saga of Palestine <i>Rituparna Sahoo</i>	298
35.	Gandhi's Social Theory and Pedagogy of Swarajya: An Anthropological Perspective <i>Sili Rout</i>	300
36.	Study on Human Rights and Aristotle's Philosophy <i>Dr. Sushma Priyadarshna</i>	307
37.	Environment and Development: A Tribal Perspective <i>Dr. Rachna Kumari Prasad</i>	310
38.	Olive Ridley Sea Turtle : The Challenge to Survival <i>Chakrabhar Behera</i>	314
39.	Industrial Waste Management in Plants <i>Prakash Chandra Panda</i>	320
40.	Role of Human Rights Education in Higher Education <i>Chetna Gupta</i>	326
41.	Truth Beheld, Truth Be Told: A Look into Indian Education System <i>Ahner Ingtly Watre</i>	330
42.	Implementation of SC/ST Atrocities Act 1989 <i>Dr. Rachna Kumari Prasad</i>	338
	Bibliography	347

CHAPTER 28

Right to Clean Water and Responsibility to Protect it

Dr. Nibedita Khuntia

Assistant Professor,

Department of Biology,

Maharaja Agrasen College, University of Delhi

Abstract

India is rich in water resources that include rivers, lakes, ponds, streams etc spread in various parts of the country. Due to high growth of population, urbanisation, consumerism and increasing human activities, these water bodies are getting polluted each day and facing dangers of extinction, thus posing problems to the human existence itself. While everybody has a right to clean water for sustenance, it is the responsibility of individuals and agencies to protect the water bodies for ensuring better quality of life for the present and future generations. The present article focuses on the causes of pollution of inland water bodies in India and measures needed as well as taken by state and other agencies to reduce it from the perspective of human rights and responsibility.

Key words: water body, pollution, pond, tank, religious practices, sewerage, urbanisation, eutrophication, encroachment, illegal mining, rights, action, United Nations,

Introduction

Water supports life on earth. Freshwater provides water for drinking, sanitation, agriculture, transport, electricity generation and recreation. It also creates habitats for a diverse range of animals and plants and provides cool breeze and fresh air. The inland water bodies are the sources of this fresh water. India is blessed with rich varieties of inland water resources needed to sustain human life. Approximately 74 Lakh Hectares of water bodies are available in the

country. They are classified as:

- ↳ Rivers, streams, springs and canals;
- ↳ Reservoirs, lakes;
- ↳ tanks and ponds;

- ↳ beels
- ↳ floodplains, and wetlands (bogs, marshes, and swamps);
- ↳ derelict water; and
- ↳ brackish water.

Table 1 below gives the statistical picture of the inland water bodies in India which is self-explanatory.

Table 1: Details of inland water resources of various types in India (2015-16)

Source: Government of India Report on Water Quality

Threats to Water Bodies

Pollution of rivers, lakes, ponds etc has become a regular feature of newspaper reports and forms a significant part of our everyday discussions. In fact, local water bodies such as ponds, lakes, streams and tanks etc in various parts of the country which cater to the needs of local population for centuries are increasingly becoming life threatening due to pollution. Lots of water bodies have already vanished in many urban areas. It is important to know the reasons for this so that appropriate measures can be taken to save them.

Several factors are responsible for pollution in general and extinction of some local water bodies. They can be listed as follows:

- Unplanned Urbanisation
- Religious Practices
- Sewerage and Dumping and Open Defecation
- Unregulated Tourist Activities
- Illegal Mining

Unplanned Urbanisation

The process of urbanisation in India has been going on since long. Urbanisation is treated as an indicator of economic development as well. However, urbanisation has come with cost. Rapid urbanisation in India has resulted in exponential growth of population in towns and cities resulting in severe pressure on allocation and distribution of natural resources including water. The number of towns and cities have grown from around 5000 in 2001 to nearly 8000 in 2011. About 465 cities have population more than 1 lac each including 53 cities having population of more than 10 lac each. See Table 2 which gives the data including