CLIMATE CHANGE AND SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES



Climate Change and Sustainable Management of Natural Resources

Editors: Mridul Rabha Pabitra Barman

VOLE taring



Refresher Course (24th Sept to 14th Oct, 2018) UGC-Human Resource Development Centre

Guwahati-14

Editorial Board

Advisor:

Prof. Jogen Ch. Kalita, Director, HRDC, Gauhati University, Ghy-14

Dr. Shyamanta K. Chakraborty, Deputy Director, HRDC, Gauhati University, Ghy-14

Prof. Bhaben Tanti (Coordinator), Dept of Botany, Gauhati University, Ghy-14

Editors:

Mridul Rabha, Deptt. of Geology Pragjyotish College, Guwahati-09 (Assam)

Pabitra Barman, Deptt. of Geography, LOKD College, Dhekiajuli-784110

Members of Editorial Board:

Dr. Dipak Baruah, Deptt. of Geography, Bajali College, Pathsala, Barpeta (Assam)

Kalyan Jyoti Khanikar, Deptt. of English, Borhat B.P.B.M. College, Charaideo-785693 (Assam)

Dr. Temin Payum, Deptt. of Botany, Jawaharlal Nehru College, Pasighat-791103 (Arunachal)

Dr. Upakul Mahanta, Deptt. of Physics, Bajali College, Pathsala, Barpeta (Assam)

Pradip Chandra Kalita, Deptt. of Geography Pragjyotish College, Guwahati-09(Assam)

Dr. Bonti Bordoloi, Deptt. Of Geography, Bikali College, Dhupdhara, Assam

Dr. Deepika Dutta Saikia, Deptt. of Economics, Duliajan Girls' College, Dualiajan-786602 (Assam)

CONTENTS

Management of Forest Resources for Sustainable Development: An India's Perspective /11

Abul Kashem

Poverty is the Greatest Polluter- Rural Poverty and the Question of Natural Resource Sustainability /19

Aditi Das

"Nature Never Did Betray the Heart Who Loved Her" Wordsworth's Theory of Nature: An Eco-criticism Perspective /26

> Dr. Anima Baishya

Natural Resources of Assam: Source and Scope of Economic Development /32

≥Anjali Saikia

Deforestation and Its Impact on Environment, An Analysis /35

≥Dr. Anuradha Sarmah

Sustainable Management of Water Resources in India /42

≥ Babul Dutta

Understanding Ecological Consciousness in Ruskin Bond's Short Stories: An Ecocriticism Perspective /50

≥Dr. Begum Farida Alam

Management of Biodegradable Municipal Solid Waste Produced from Dhekiajuli Municipal Area, Sonitpur, Assam Through Vermicomposting /56

Mr. Biswajit Dey

Some Observation of Diversification of Farmlands and Associated Environmental Problems in Goalpara District, Assam /63

> Dr Bonti Bordoloi

Review on "Cartography of Flooding Hazard in Semi-Arid Climate: The Case of Tata Valley (South- East of Morocco)" /73 Dr. Chandra Kala Magar

A New Paradigm of Rural Industrialization in Assam and Its Environmental Concern /78

>Dr. (Mrs.) Deepika Dutta Saikia

North-East India as a Plateform for Different Hzards: A Retrospect /86

> Dr. Dipak Baruah

A Study on Brick Industry and its Impact on Environment /97

Dipamani Medhi

Study and Documentation of Traditional Knowledge on Crop Protection Against Pest and Diseases for Sustainable Agriculture Practices with Reference to Nalbari District of Assam /103

≥ Gautam Baishya

Preservation and Conservation of Library Materials in Different Environment Factors /112

Mr. Gautam Kumar Baruah

Climate Change And Human Nutrition /119

Mrs. Geetima Dutta

Religious Practice of Bodo-Kachari People in Sustainable Management of Natural Resources of Assam /123

Dr. Gitima Kalita

Biodiversity in Darrang- A Gift of Nature /132

≥ Jalti Ram Hazarika

Impact of Brick Industry on Degradation of Land and Environment – A Case Study of Nalanga Pahartali Village in Goalpara District /138

≥ Jamini Devi

Environmental Pollution and the Role of Forest in Maintaining Environment /146

Mrs. Jira Prova Borah

Environmental Hazards in Destruction of Library Materials and Some Preventive Measures /151

Juli Thakuria Link Change Change Link and addied woll

Eco-Tourism as a Means of Sustainable Development in North-East India-with Special Reference to Assam /158

& Kailash Sarmah

Climate Change, Management of Natural Resources and E-Waste /164

Climate Change and its Effects on Human Health /171

Kamal Uddin Ahmed Andrew Tangan Day and Andrew Internet

Climate Change & Sustainable Management of Natural Resources /178

≥Kumud Dehingia, Librarian

An Ecocritical Study of the North East with Reference to the Works of Mamang Dai and Temsula Ao /183

Dr. Livee Dutta

Forces Responsible for Changing the Surface of the Earth /192

Madharam Kakati

Conservation of Natural Resources for Sustainable Development: Role of an Individual /200

> Dr. Majidul Ahmed

Impact of Climate Change on Wetland and Eco-System with Special Reference to Hajo Area /207

≥Manisha Majumdar

Role of Tulsi as a Medicinal Plant for Sustainable Health /214

Mazeda Ahmed

The Dams and its Influence on Environment in North-East India/218

Monalisha Borgohain

Environmental Impact Assessment (EIA) for Sustainable Management of Natural Resources /223

Mridul Rabha 001 wolvest a review A to moot A -entracts

Plasma: Role in Sterilization and Medical Waste Management /229

> Dr . Mrinal Kumar Mishra

≥Dr. Upakul Mahanta

Global Warming: the Challenge Ahead /237

Md. Muktar Hasan

How Reliable Are The Climate Change Models? On Seeking Answers /243

≥Dr.Naorem Bobby Singh

Climate Change and Sustainable Management of Forest Resources /249

> Pabitra Barman

Degradation of Wetland Eco-system:

Its Impact on the Wetland Dependent Community with Special reference to Deepar Beel of Kamrup District (Metro), Assam /254

≥ Pradip Chandra Kalita

Climate Change and Its Impact on Human Health /270

> Pulama Talukdar

Deforestation as a prime cause of Climate Change induced Global Warming /277

≥ Dr. Rahul Daimary

A Review on Solid Waste Management with Recent Advanced Technologies in Global and Indian Context /284

Rubul Kumar Bania

≥ Satyajit Sarma

Effects of Environment on Library Materials and Its Measure /289

Rumi Das

Climate Change- Its Causes and Effects with Reference to Sustainable Future /293

≥Sonjib Borah

Herbal Drugs Induced Liver Injury- A Preliminary Study from Assam /299

Dr. Subhash Medhi

Chandan Kalita

Plastics- A Boon or A Curse a Review /309

Sulakshna Brahma

Environmental Pollution /314

> Dr. Sultana Rezia

Municipal Solid Waste Management in Pasighat Town: A Case Study/329

Dr. Temin Payum, Assistant

Role of Solar Power For Sustainability: An Overview /338

> Tridib Goswami

&Limo Ete

Role of Higher Education in Sustainable Development in India with Special Reference to North Eastern States /344

Tulumoni Chetia

Perspective Towards Environment in Ancient Time /350

Tumpa Paul

Shyamalima Chowdhury

Students' Accountability Clean India Mission /354

Mrs Tutumoni Chutia

Impact of climate change on rice cultivation and its sustainable management in Assam /359

Debanjali Saikia, Mehzabin Rehman, Sabnoor Yeasrin Jyoti, Saurov Jyoti Roy and Bhaben Tanti

Climate Change and Sustainable Management of Natural Resources

ISBN- 978-93-87263-90-1

Some Observation of Diversification of Farmlands and Associated Environmental Problems in Goalpara District, Assam

Dr Bonti Bordoloi*

Introduction

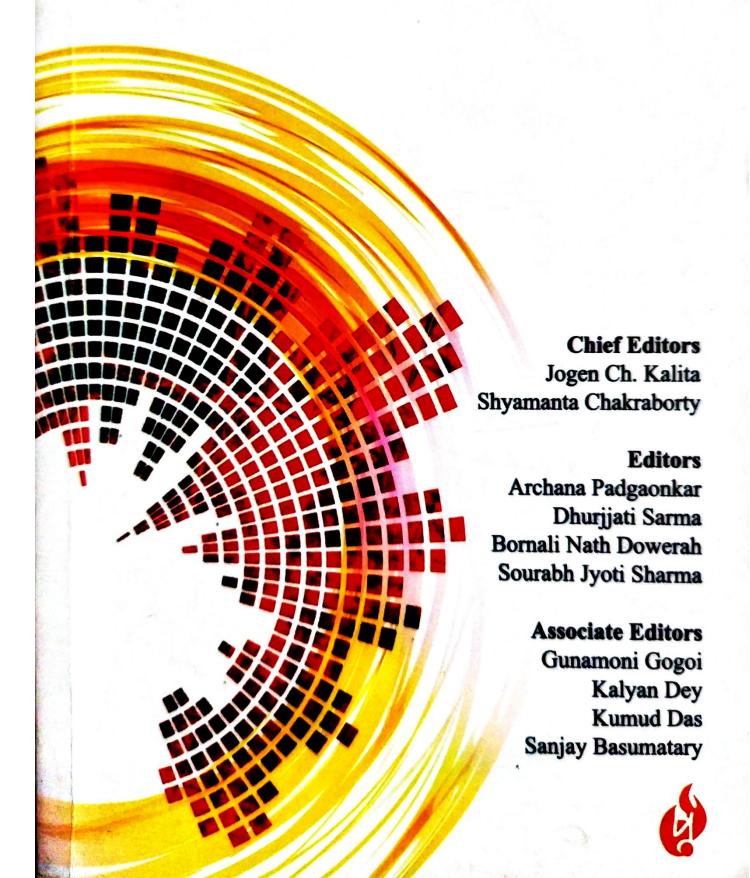
Land is one of the most vital life supporting natural resources. Farmlands, like other natural resources are finite. As the land is finite, there has always been a constraint in the carrying capacity of the land at a certain point of time. The ever increasing pressure of population, wanton exploitation of land resources for quick, short term gains as well as expansion of non-farm activities and human settlements without appropriate measures and technologies have far reaching impact on environment.

According to the British Department of Environment, Food and Rural Affairs (DEFRA) farmland diversification may be defined as 'the entrepreneurial use of farm resources for a non-agricultural purpose for commercial gain.' In recent decades the rapid

E-mail: bordoloibonti@gmail.com

^{*}Geography Department, Bikali College, Dhupdhara

CONVERGENCE



Convergence

A collection of articles on various facets of knowledge and published by Purbayan Publication, Satmail, Guwahati-14, Assam, on behalf of UGC-Human Resource Development Centre, Gauhati University,

First Edition & March, 2019

₹ 500/-

Convergence

First Edition:

March, 2019

ISBN: 978-93-88593-33-5

Copyright:

Editors

Price: 500/-

Cover design:

Sanjib Bora

Photo Credit:

Sourabh Jyoti Sharma

Published by:

Purbayon Publication Satmile, Near Gauhati University Guwahati- 14, Assam, India

Email: purbayonindia21@gmail.com

Website: purbayonpublication.com

Contact No. +91- 9864422157

নিৰ্মলপ্ৰভা বৰদলৈৰ গীতত ফাণ্ডনৰ ৰূপৰেখা /93

Therapeutic Remembering in the Journals of Mrs. P. H. Moore
Booding Armed Rebellion and Counter Insurgence
Reading Armed Rebellion and Counter Insurgency Operations in Assam with Special Reference to Arunima's Motherland /105
Jnanesh Roy Choudhury
Study on Traditionally Used Weeds by Some Ethnic People of
Salna Tea Estate of Nagaon District, Assam /113
Jenima Sultuna and Kumud Das
Sense of Irony and Humour in the short stories of R.K.
Narayan /122
Mohibul Islam
নিৰুপমা বৰগোহাঞিৰ ইপাৰৰ ঘৰ সিপাৰৰ ঘৰ' উপন্যাসত আঞ্চলিক চিত্ৰণ এটি
চমু বিশ্লেষণ /127
মুনমী কোঁৱৰ
Religion and Politics: Manipur Experience /134
Oinam Momoton Singh
Performance of Khadi and Village Industries in Rural
Industrialization of North East India /141
Porag Pachoni
Discrimination, Sexual Abuse, Incest and the Role of Community /150
Prasanta Pathak
Quantitative ethnobotany of some medicinal plants utilised
among indigenous people of Assam /157
Reena Terangpi and Farishta Yasmin
Numerical investigation of wind flow over prismatic buildings
Rupam Deka
Blended Learning: A New Dimension in Education /170
Determination of Anti-Nutritional Contents of Some Will
Securics of Assam / 1/6
Hwiyang Narzary and Sanjay Basumatary

Convergence

Discrimination, Sexual Abuse, The Role of Community Prasanta Pathak*

of a little girl who is a victim and unable to reconstruct Americans. Toni Morrison has traced the miserable plight incest, bisexuality, and lesbian love among African Alice Walker is a social critic where she has depicted rape, epistolary novel -The Color Purple. In The Color Purple, and the National Book Award in 1982 for her famous Morrison, Alice Walker is a recipient of the Pulitzer Prize lack of identity, drudgery and inferior complexity. Like beauty, incess and inter-communal oppression, black men's in the clutches of white men's racist ideology of standard Psychological dilemmas and the consequent oppression in 1970 is a true presentation of black woman's award. The Bluest Eye, Morrison's first novel, published she is the first African American writer to achieve this Prize for literature for her outstanding literary output and Morrison has been awarded the most prestigious Nobel literary scenario in the 1970's and 80's. In 1993, Toni Over the world by their emergence into African-American literary figures who illuminate their literary genius all Toni Morrison and Alice Walker both are the foremost

basic right of human being.

By selecting two novels one of Toni Morrison and other of Alice Walker, respectively The Bluest Eye, and The Colour Purple Objective:

her damaged self and finally shattered into pieces due to her quires oppressions on her by her community. Alice the relentless oppressions has traced the walker, one of her female characters but shown the oppression in one of her female characters but shown the reconstruction. the resemble other hand, has traced the same picture of walker, on the ofher female characters. oppression munity which is especially the female solidarity pole of community which is especially the female solidarity in reconstructing the damaged self. key words: Oppression, incest, rape, lack of identity.

Introduction: novels scrutinize the conflict between society and individual. Their self of a black girl because she is able to know that survival is the as well as Alice Walker. Many of Morrison's novels such as The community's male counterparts as well as the white Americans. oppression and humiliation they have received from their black struggling to reconstruct one's self-hood defying all kinds of psychological predicaments and their struggle for survival in a society tried to focus their different characters' physical, physiological and society. Both the novelists throughout their literary archaeologies with their inter-related and internecine experience in a complicated American society where the lives of black Americans are magnified thematic concerns are basically dispersed in the wide African where she lives does not allow her to grow. On the other hand, Alice of a black girl who is unable to reconstruct herself because the society individual and society. In The Bluest Eye, Morrison presents the plight Bluest Eye, Sula and Tar Baby have depicted the conflict between Reconstruction of self is a pivotal issue against the character's discriminated society. In such a society, some of characters keep which is a destitute historically and its existence is at stake in a racially Walker's The Colour Purple narrates the story of the construction of shattered self found a recurring issue in the fictions of Toni Morrision Toni Morrison and Alice Walker are both social critics and their

Bikali College,Dhupdhara *Assit. Professor, English department

sexual abuse of her father. Celie loses her self-confidence sexual abuse of sexual abuse she all sexual abuse sexual abuse she all sexual abuse and feels herself non-existent. She does not even write her name at the feels helself the letters written to God because she thinks it needless from a self who has no identity at all. Gradually, Celie is a grown from a sold gets married to a man who has entered into her life as a cruel husband. He positions her to a place for a long time no more than a slave. When Shug, Celie's husband's mistress comes to live with them her self -confidence starts to grow. Shug is a woman full of courage and strength who heartens Celie to reconstruct her defunct self. She encourages her to be stronger and in this reconstruction process of self, Celie's daughter-in-law Sofia shows Celie to stand up for herself. Sofia tries to make Celie a complete woman who can fight against all kinds of injustices and prejudices in their society. She could, finally, learn the skill of surmounting against the evils of the male dominated society. She knows the happiness of life and how a woman can survive physically and spiritually. The Colour Purple tells the story of endurance and growth; struggle and fight and at the same time, glory of life, all nurtured by love and care.

Conclusion:

SCOTIAL S

e W

il by what

ena

Sen!

Own

Uch

12

The role of individual, family and community are responsible to ensure the measure of oppression. These factors are distinctly perceived in the lives of Morrison's characters. The immoral and unethical poverty-stricken households, loveless and careless roles of parents, their untrue dogmatisms or stereotypical convictions and likewise their eroded self-hoods etc. are tossed within the slavery doomed economic condition of African American black people under the white superiority or racist control. The characters tend to track their surviving motions according to the path of self-realization, courage and self confidence. Celie's strong female companions become a constructive factor to mould her life in a positive way. Therefore, unlike Picola, she is successful in growing her self confidence and finally, able to enjoy her life.

References

 Bloom, Harold, ed.: 1990, Toni Morrison, Modern Critical Views, Chelsea House, New York.

- Calvin Hernton: 1965, Sex and Racism in America, New York: Grove.
- 3. Dr. Vishnukant: 2009, The Fiction of Toni Morrison-A Critical Study, Satyam Publishing House, New Delhi.
- 4. Morrison Toni: 1999. The Bluest Eye, Vintage Books, London,
- 5. Morrison Toni Sula, Vintage Books, London, 2004.
- 6. Judith H. Livingston, 1993 "Black Women's Lives, Black Women's voices."
- 7. Walker Alice: 2014, The Colour Purple, Orion Publishing Group, London.

অসমীয়া ভাষা সাহত্য সংস্কৃতি

পৰস্পৰা আৰু পৰিৱৰ্তন

সম্পাদনা বলীন ভূঞা আৰু ড° ৰীতা চেতিয়া Asomiya Bhasa-Sahitya-Sanskriti Parampara aru Paribartan

A collection of articles on various aspects, edited by Balin Bhuyan and Dr. Rita Chetia and published by Purbayon Publication, Satmile, Guwahati-14, Assam on behalf of 32 Refresher Course (3st September to 23st September, 2018); Human Resource Development Centre, Gauhati University, Guwahati Price: Rs. 500/-

Edition: September, 2018

ISBN- 978-93-87263-77-2

প্রথম প্রকাশঃ ছপ্তমৰ, ২০১৮

> বেটুপাতঃ সঞ্জীৱ বৰা

গ্রন্থর সম্পাদকর্ম

मुलाः १०० हेका

প্রকাশকঃ প্রায়ণ প্রকাশন সাতমাইল, গুৱাহাটী বিশ্ববিদ্যালয়ৰ সমীপত ওরাহাটী-১৪, অসম Email-purbayonindia21@gmail.com website: purbayonpublication.com

(D 2468854588

All rights reserved. No part of the publication may be reproduced, stored in retrieval system or transmitted, in any form by any means without the prior permission of the copyright owner and the publisher.

The responsibility of the facts, opinions expressed or conclusions reached in this book is entirely that of the authors. The editors and the publishers do not bear any responsibility for them.

সাম্প্ৰতিক সময়ত তৈয়াম কাৰ্বি জনগোষ্ঠীৰ লোক সংস্কৃতি হ এটি অধ্যয়ন /৫১৮ মৰাণ জনগোষ্ঠীৰ সাংস্কৃতিক স্কীয়তা /৩৪০ মিচিং জনগোষ্ঠীৰ কৃষিভিত্তিক উৎসৱ পঃৰাগ ঃ পৰম্পৰা আৰু পৰিৱৰ্তন /৩৪৮ যোৰহাট জিলাৰ অসমীয়া হিন্দু সমাজৰ 'তোলনি বিয়া'ৰ প্ৰস্পৰা /৩৫৫ স্থ বীতামণি বৰা অসমৰ খেল-খেমালি ঃ প্ৰস্পৰা আৰু পৰিবৰ্তন /৩৬০ <u>১৯ কৰবী বৈশ্য</u> অসমৰ লোক সম্পদসমূহৰ ঐতিহা আৰু পৰিবৰ্তন /৩১৬ ভ গীতাঞ্জলি খাটনীয়াৰ অসমীয়া লোক সংস্কৃতিত লোকবাদ্য /৩৭১ শ্ৰুমীনা কাকতি অসমীয়া সংস্কৃতিত তামোল-পাণঃ পৰস্পৰা আৰু পৰিৱৰ্তন /৩৭৭ অসমীয়া সংস্কৃতিত ৰান্ধনিশাল আৰু টেকীশাল ঃ পৰম্পৰা আৰু পৰিৱৰ্তন / ৩৮৪ 🗷 ৰিংকুমনি দাস কাৰ্বি সংস্কৃতিত বাঁহ ঃ প্ৰম্পৰা আৰু পৰিবৰ্তন /৩৯০ ১৯৬° হীৰা মানা দাস অসমৰ সোনোৱাল কন্থৰীসকলৰ লোক নাট্যানুষ্ঠান হগ্ৰা নাচঃ এক বিশ্লেষণাব্যক অধ্যয়ন /৩৯৮ <u>৯ তুলসী</u> সোনোৱাল পাতি ৰাডাসকলৰ পৰিবেশ্য কলা তুকুৰীয়া ওজাপালি ঃ পৰম্পৰা আৰু পৰিবৰ্তন /৪১৩ হ্ৰদীপিকা ৰাভা হঁচৰিঃ পৰম্পৰা আৰু পৰিবৰ্তন /৪২৩ ত্ৰ জয়ন্তজিৎ দাস কামৰূপীয়া ঢুলীয়া ঃ পৰম্পৰা আৰু পৰিৱৰ্তন /৪২৯ হ্র নিত্মণি দাস হাজন্তৰ জাখামাৰা গাহেনঃ এটি লোক পৰিবেশ্য কলাৰ পৰস্পৰাগত বৈশিষ্ট্য আৰু পৰিবৰ্তন /৪৩৪ হৈ শুনদা দাস অসমৰ যাত্ৰাঃ প্ৰস্পৰা আৰু পৰিৱৰ্তন /৪৪৩ ১৯ ড° ৰূপলেখা ঠাকুৰীয়া বণিয়া

গ্ৰহণ স্থায় সাহিত্য-সংকৃতি লশ্য থাক পৰিবৰ্ডন SBN- 978-93-87263-77-2

গতি ৰাভাসকলৰ পৰিবেশ্য কলা তুকুৰীয়া ওজাপালি ঃ পৰম্পৰা আৰু পৰিৱৰ্তন ভদীপিকা ৰাভা°

পৃথিৱীৰ বিভিন্ন ভাষা গোষ্ঠীৰ ভিতৰত মংগোলীয় গোষ্ঠীয়ো এটা বৃহত্তম গোষ্ঠী। ০.১ ভূমিকা ঃ বিজি সময়ত এই লোকসকলৰ অসমত প্ৰব্ৰজন ঘটিছিল। বৃহত্তৰ অসমৰ জাতি গঠন গ্ৰন্তিয়াত এই মংগোলীয়সকলৰ অৱদান অনস্বীকাৰ্য। এই গোন্ঠীৰ বড়ো শাখাৰ অন্তৰ্গত ট্ৰাউপ-শাখা হ'ল ৰাভাভাষী লোকসকল। নৃতাত্বিক বিচাৰত ৰাভাসকল মংগোলীয় আৰু ভাষাতাত্বিক দৃষ্টিত চীন-তিব্বতীয় ভাষা পৰিয়ালৰ অন্তৰ্গত। অসমত বাস কৰা জন্তাতীয় লোকসকলৰ দৰে 'ৰাভা'ও মংগোলীয় ফৈদৰ বড়ো গোন্ঠীৰেই এটি জনজাতি ৰ্ণিবিভিন্ন পণ্ডিত মণ্ডলীৰ দ্বাৰা স্বীকৃত। বাৰেবৰণীয়া কলা–সংস্কৃতি, সাহিত্য, নৃত্য-গীত, ভাষাৰে পৰিপূৰ্ণ এটি জাতি। বিশেষকৈ অসমৰ কামৰূপ,গোৱালপাৰা এই দুখন জিলাত এওঁলোকৰ বসতি সৰ্বাধিক। এই দুখন জিলাৰ উপৰিও কোকৰাঝাৰ, ধুবুৰী, দাং বিষ্টাৰ্যাও, নগাঁও আদি জিলাতো কম বেছি পৰিমাণে ৰাভা লোকসকল বসতি কৰি মাছে। ৰাভাসকলৰ কেইবাটাও ঠাল আছে। যেনে- ৰংদানী, মাইতৰী, পাতি, দাহৰী, শাহী, টোট্লা, হানা, বিটিলীয়া আৰু কোচচা বা কোচ। এই ঠালসমূহৰ ভিতৰত কেৱল বিদানী, মাইতৰী আৰু কোচসকলৰ মাজতহে ৰাভা ভাষা বা দোৱান প্ৰচলিত হৈ আছে। ০.২ অধ্যয়নৰ ক্ষেত্ৰ আৰু অধিবাসী ঃ

অসমৰ কামৰূপ (বিশেষকৈ দক্ষিণ কামৰূপ) আৰু গোৱালপাৰা এই দুখন ঘনমীয়া বিভাগ, বিকালী মহাবিদ্যালয়, ধূপধৰা