

Ahmednagar Jilha Maratha Vidya Prasarak Samaja's
New Arts, Commerce & Science College, Parner
INTERNAL QUALITY ASSURANCE CELL (IQAC)
Year 2023-24

3.3.3. Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during year:

3.3.3.1. Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year wise during the year:

Year	2023-24
Number	21

Sr. No.	Name of Teacher	Title of the Books and Chapter / Title of Paper in Proceeding	Name of conference and Title of Proceedings	Name of Publisher	National / International	ISBN/ ISSN number of Proceedings	Year
1	Rangnath K. Aher	Fundamental of Agriculture and Crop Production , Chapter-9:- Organic Farming.	-	Bharati Publication New Delhi	-	978-93-94779-73-0	2023
2	A.V. More	Ecological Crisis In Amitav Ghosh's 'The Hungry Tide'	Frontiers of Sustainable Development in Science and Environment .	Shri Dhokeshwar College Takli Dhokeshwar	National	-	2023-24
3	A.V. More	Identity Crise and Servival in Amitav Ghosh's	An International Peer Revived Open Access Gerenal	Langlit	International	ISSN2349-5189	2023-24

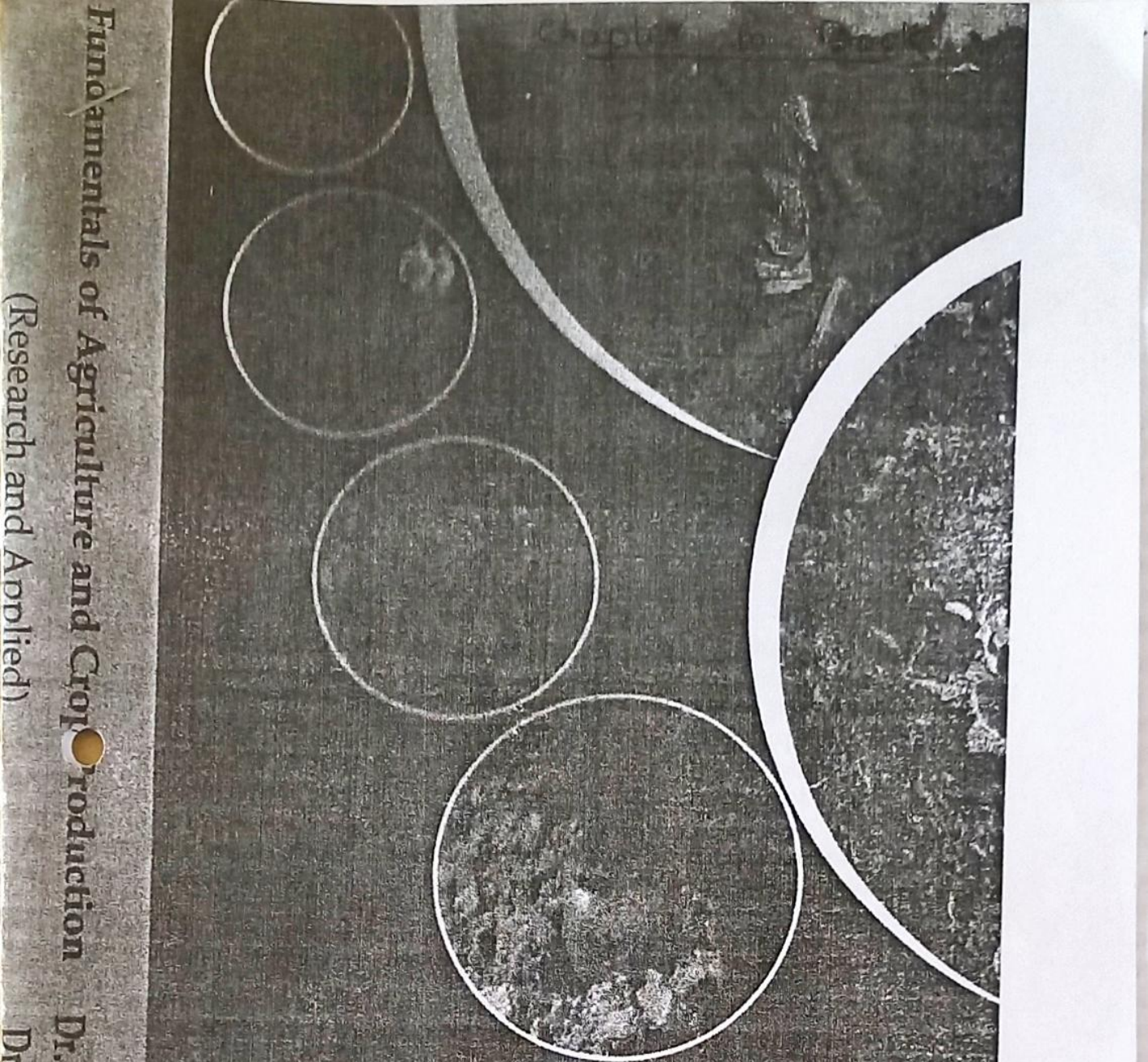
		Sea of Poppies					
4	A.V. More	Ecological Crises in Amitav Ghosh's The Hungry Tide	<i>Sanshodhak</i>	Shri Sanjay Mundada	International	ISSN 2394-5990	2023-24
5	Dr.P.P.Bhate	Ability Enhancement Courses under NEP: Scope and Importance for Language	National Education Policy: Implementation and	Shri Dhokeshwar College Takli Dhokeshwar	National	-	2023-24
6	Dr. V.G. Salve Nep 2020	A Critical Analysis and Implementation	National Education Policy: Implementation and	Shri. Dhokeshwar College, Takali Dhokeshwar	National	-	2023-24
7	Dr. Najan R.E.	Geographical Perspectives on Environment Title- Impact of Topography on Agriculture Pattern of Parner Tehsil in Ahmednagar	International Multidisciplinary Conference on Environment Agriculture and Rural Development	EAGLE LEAP Printers & Publishers Pvt. Ltd. Pune	International	ISBN-978-81-968850-8-3	2023

		District(M. S.)					
8	Dr. Ghungarde D.S.	Geographical Perspectives on Environment Title- Drought Mitigation in Action: Jalyukt Shivar Abhiyan & its Impact on water security in Walavane Village M.S.	International Multidisciplinary Conference on Environment Agriculture and Rural Development	EAGLE LEAP Printers & Publishers Pvt. Ltd. Pune	International	ISBN-978-81-968850-8-3	2023
9	Prof. Mhaske J.D.	Geographical Perspectives on Environment Title- Impact of Topography on Agriculture Pattern of Parner Tehsil in Ahmednagar District(M. S.)	International Multidisciplinary Conference on Environment Agriculture and Rural Development	EAGLE LEAP Printers & Publishers Pvt. Ltd. Pune	International	ISBN-978-81-968850-8-3	2023
10	Dr. Thokal A.V.	Geographical Prespective	International Multidisciplinary	EAGLE LEAP	International	ISBN-978-81-968850-	2023

		es on Environment Title- Impact of Topography on Agriculture Pattern of Parner Tehsil in Ahmednagar District(M. S.)	Conference on Environment Agriculture and Rural Development	Printers & Publishers Pvt. Ltd. Pune		8-3	
11	Prof. Sasane K.K.	Geographical Perspectives on Environment Title- The Role of Irrigation in Developments of Fruits & Vegetables in Ahmednagar District.	International Multidisciplinary Conference on Environment Agriculture and Rural Development	EAGLE LEAP Printers & Publishers Pvt. Ltd. Pune	International	ISBN-978-81-968850-8-3	2023
12	Dr.Aher S.S.	Geographical Perspectives on Environment Title- Agricultural Land use 1990-	International Multidisciplinary Conference on Environment Agriculture and Rural Development	EAGLE LEAP Printers & Publishers Pvt. Ltd. Pune	International	ISBN-978-81-968850-8-3	2023

		2015-16 of Parner tehsil of Ahmednagar District					
13	Dr. B.B. Shelke	The Role of information Technology in Research	International Interdisciplinary	IJMRT Vol-5, Issue 1 I/F-6.325	International	ISSN NO 2582-7359 Kada	2024
14	Prof. Dr. S. L .Kadam	Design and Development of feedback controller for scanning probe microscopy application	National Conference on Frontiers of Sustainable Development in Science and Environment	Shri Dhokeshwar College, Takali Dhokeshwar, Parner	National	-	24th Feb-2024
15	Nilesh A. Pawar	Study of the structural, magnetic and adsorption properties of Pr(Praseodymium) doped in cobalt ferrite nanoparticles	National Conference on Frontiers of Sustainable Development in Science and Environment	Shri Dhokeshwar College, Takali Dhokeshwar, Parner	National	--	24th Feb-2024
16	Ramesh B. Kharade	Study of the structural, magnetic	National Conference on Frontiers of	Shri Dhokeshwar College,	National	--	24/02/2024

		and adsorption properties of Pr(Praseodymium) doped in cobalt ferrite nanoparticles	Sustainable Development in Science and Environment	Takali Dhokeshwar, Parner			
17	Dr. H. S. Shelke	Granthaparikshan Swarup Aani Akalan	-	Dnyanarav Prakashan, Pune	National	978-93-84202-17-0	January - 2024
18	Suraj P. Gaikwad	8051 Architecture, Interfacing and programming	E-book	-	National	-	2023-24
19	Suraj P. Gaikwad	Principle of Digital Electronics	E-book	-	National	-	2023-24
20	Dr. T. S. Thopate	M. Sc. II Organic Chemistry, CHE-134	-----	YCMOU	National	978-93-95855-75-4	2023
21	Dr. T. S. Thopate	M. Sc. II Organic Chemistry, CHE-132	----- -	YCMOU	National	978-93-958-55-75-2	2023

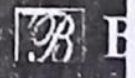


Fundamentals of Agriculture and Crop Production
(Research and Applied)

Dr. Debabrata Das
Dr. Pampi Ghosh

FUNDAMENTALS OF AGRICULTURE
AND CROP PRODUCTION
(Research and Applied)

Dr. Debabrata Das
Dr. Pampi Ghosh



9

Organic Farming

Dr. Rangnath Aher**INTRODUCTION**

Organic farming has been practiced in India for thousands of years. India's great civilization thrived thanks to organic farming, and prior to British rule, India was one of the most prosperous countries in the world. In traditional India, fertilizers, pesticides etc. in all agricultural, plant and animal products. Produced by organic methods. Organic farming is the backbone of India's economy, and cows are worshiped as gods. Cows give not only milk, but also bulls and dung. India's overpopulation and many natural disasters in the 1950's and 1960's led to severe food shortages. Therefore, hybrid seeds were introduced. Chemical fertilizers replace natural and organic fertilizers. Over the past few years, organic products have become the biggest agricultural industry. She is experiencing global growth working with modern agriculture, including organic agriculture, food, technology and innovation.

The farming being practiced for the last five decades in India has increasingly been found non-sustainable. The system is oriented towards high production without much concern for ecology and the very existence of man himself. Adverse effects of modern agricultural practices not only on the farm but also on the health of all living things and thus on the environment have been well documented all over the world itself. Current trend of agriculture which we call 'conventional' and practiced the world over is evolved in the western nations as a product of

* Research Centre and P. G. Department of Botany New Arts, Commerce and Science College, Parner, Dist- Ahmednagar, M S.

their socioeconomic environment which promoted an over riding quest for accumulation of wealth.

The modern farming is highly perfected by the Americans and Europeans who dispossessed the natives of their farms right from the early period of the new settlers in US and Europe. The large farms appropriated by the immigrants required machines to do the large scale cultural operations. These machines needed large amount of fuels besides forcing the farmers to raise the same crops again and again, in order to utilize these machines to their optimum capacities. The result was the reduction of biodiversity and labour. The high cost of the machines necessitated high profits. It related to need of high productivity. Then, only those crops with high productivity were cultivated which needed increased quantities of fertilizers and pesticides. Increasing use of pesticides resulted in the damage to environment and increased resistance of insects to them.

Organic agriculture can be seen as an attempt to achieve sustainable development based on different principles than large-scale agriculture. Now we are focusing on organic farming again. Organic farming is an integrated farming practice that continues to ensure sustainability and improve soil fertility and biodiversity. It includes minimal use of synthetic pesticides, herbicides, synthetic fertilizers, GMOs and growth hormones.

The process includes naturally growing plants and growing animals. The process includes the use of biological products and the avoidance of synthetic products to maintain soil fertility and ecological balance, thus reducing pollution and waste. In other words, organic farming is agriculture where crops are grown without the use of fertilizers and pesticides. Organic farming, sustainable farming systems, pest control and organic fertilizers from animal and plant waste and nitrogen-fixing plants. Developed in response to the environmental problems caused by the use of pesticides and synthetic fertilizers in agriculture, modern organic farming has many benefits. Many people are delighted that the introduction of chemicals into agriculture can be successful. At first, the soil is healthy. The damage from manure is barely noticeable. Pests have not developed resistance to these chemicals. The process is considered a revolution in agriculture and in this way spread all over the world.

Fast forward to the present and many people are turning their attention back to organic farming. This comes after examining many of the problems associated with traditional agriculture,

including health-related diseases such as cancer, pollution, soil and water degradation, and its impact on animals. Organic farming is a method of growing plants and animals naturally. This process includes the use of biological products and the avoidance of synthetic products to maintain soil fertility and ecological balance, thereby reducing pollution and waste.

In other words, organic farming is a farming process that involves growing and cultivating crops without the use of fertilizers and pesticides. Also, genetically modified organisms are not allowed. Crop rotation is based on ecologically balanced farming principles such as green manure, organic waste, pesticides, mineral and stone additives. Organic farming uses pesticides and fertilizers that are considered natural and avoids the use of many petrochemical fertilizers and pesticides.



2. Difference Between Organic and Conventional Farming

In conventional farming, before planting seeds, the farmer must treat or disinfect his farm with harsh chemicals to destroy the fungicides. It will fertilize the soil with a petroleum-based fertilizer. Organic farmers, on the other hand, prepare and fertilize the soil by spreading organic fertilizers such as manure, bone meal or shellfish fertilizer before planting. Before planting, farmers soak seeds in fungicides and pesticides to protect them from insects and pests. Drugs are added to water for irrigation to prevent seed theft by insects. Also, organic farmers do not soak seeds in chemical solutions or use extra water to plant new seeds. In fact, it's not even flushed down with city water, which is usually chlorinated to kill bacteria. Use it during the dry months or rely on natural rain to collect and store rainwater. When the seeds germinate, it's time to weed, and traditional farmers use herbicides to kill weeds. Organic farmers do not use these chemicals to kill offending crops.

Instead, we use Body Farm, but this is very labour intensive. Besides, organic farmers can use flames to kill plants or use animals to eat them. Regarding consumption, it is clear that anyone who eats produce is ingesting pesticides and herbicides that can cause dangerous diseases such as cancer. People understand that health is important to them, so they turn to organic food in modern literature.

3. The Need for Organic Agriculture

The need for organic farming in India arises from the unsustainability of agriculture production and the damage caused to ecology through the conventional farming practices.

- i. **Protecting multicultural agriculture:** Organic farming creates pest and disease resistant crops for the future. It can also detect the death of various crops.
- ii. **Natural and good:** Organic foods are more natural and better. Natural and superior flavor comes from a balanced and nutritious soil. Organic farming has always prioritized value.
- iii. **Promotes healthy soil and pollinators.:** Regular practice of organic farming produces many foods rich in antioxidants, vitamin E and omega-3 fatty acids. Micronutrients and minerals are higher in organically produced foods.
- iv. **Nutritional Benefits:** Organic produce contains more nutrients than produce, such as vitamins, enzymes, minerals and other micronutrients. This is because organic farms are always managed and maintained using sustainable practices.
- v. **Avoid antibiotics, medications and hormones:** Dairy and industrial meats are prone to contamination with harmful chemicals. According to an Environmental Protection Agency (EPA) report, most of the pesticides used by humans come from poultry, meat, eggs, fish and other foods. This means they eat food full of chemicals and toxins. These animals are also injected with drugs, antibiotics and growth hormones that are directly converted into meat and dairy products. Hormones in farmed fish, beef and dairy produce chemicals. These drugs only bring many problems such as genetic problems, cancer risk, tumor growth and other problems of early puberty.
- vi. **Provides a higher level of protection against pests and diseases:** Organic farming excludes synthetic products. Instead, it improves the soil, supports healthy plant growth, and protects the soil. No herbicides or pesticides are used.

Only natural methods of land development are permitted. Healthy plants grown in healthy soil are naturally disease and pest resistant. This process allows plants to acquire a strong immune system and allows the plant's cellwalls to grow.

vii. **There is a special opportunity for organic farming:** This is because cultivated crops grow best in the soil components available to the farmer. The advantage of being able to grow specialty crops is that they usually have a higher market price. Grocery prices are up to 20% more expensive than grocery stores. Many organic farmers are also able to sell directly to customers, eliminating costs other farmers typically incur.

4. Why Choose Organic Farming?

- a) **Nutritional benefits:** Organic produce contains more nutrients than organic produce, such as vitamins, enzymes, minerals and other micronutrients. This is why organic farms are managed and maintained using sustainable methods. In fact, some researchers have previously collected and tested vegetables, fruits and grains from both organic and conventional farms. The result is that food from organic farms has more nutrients than food from commercial establishments or farms. The study also confirmed that five servings of fruits and vegetables from organic farms provide adequate vitamin C. However, the same fruits and vegetables do not provide the same amount of vitamin C.
- b) **Stay away from GMOs:** Statistical data show that genetically modified foods (GMOs) make food dangerously clean, and this has a huge impact beyond our understanding. What makes them a big threat is that they are not registered. Therefore, the only way to reduce the serious effects of GMOs is to follow organic products from real sources.
- c) **Natural and healthy:** Those who try organically grown foods attest that they are more natural and tastier. Natural, great taste comes from a balanced and nutritious soil. Organic farmers always value quality over quantity.
- d) **Direct support for agriculture:** Buying food from organic farmers is a profitable investment for the future. In the past few years, traditional agriculture has received many subsidies and tax breaks from most governments. This has led to increased production of manufactured goods that increase the risk of dangerous diseases such as cancer. It is time for governments to invest in organic technologies to address these challenges and secure the future. It all starts when you purchase a product from a reputable organic source.

crops. This allows organic products to be stored longer. Organic farming is preferred because it controls pests and weeds in a non-toxic way, costs less to grow, maintains ecological balance, promotes biodiversity and protects the environment.

REFERENCES

1. Emsley, John. 2001. Going One better than Nature. *Nature*, 410.:633-634.
2. Gillman J. 2008. *The Truth About Organic Farming*. Timber Press.
3. Natarajan T. 2011. *Organic farming for Business*. Swastik Publication, Delhi.
4. Surinder Singh Rana. 2011. *Organic Farming*. Department of Agronomy, CSKHPKV, Palampur.

ISSN 2349-5189



ISSN 2349-5189

LangLit

An International Peer-Reviewed Open Access
Journal

Vol. 10 Issue 1

August 2023

Chief Editor
Dr. Prashant Mothe



www.langlit.org

Indexed: ICJ, Google Scholar, Research Gate, Academia.edu, IBI, IJC,
DIRJ



37.	SUNETRA GUPTA'S A SIN OF COLOUR: A DIASPORIC TEXT	DR. PRASHANT CHAVARE & MRS. VARSHA GAIKWAD
38.	DISSONANT VOICES IN ANITA NAIR'S THE BETTER MAN: A STUDY	DR. MANOJ SOMWANSHI & VIKRANT MANMATH KHAVALI
39.	THE WOMAN CHARACTERS IN THE SELECT FICTION OF ALICE WALKER	DR.SUSHILA SANGWAN
40.	DECONSTRUCTING THE CLASS BARRIERS IN IAS TODAY AND THE WHITE TIGER	DEEPTI CHAURASIYA
41.	JOURNEY OF GOURI FROM BELONGINGNESS TO ADAPTION IN JUMPHA LAHIRI'S NOVEL "THE LOWLAND "	DR. ANITA KASHINATH MUDKANNA
42.	HEROISM UNVEILED: A METANARRATIVE ANALYSIS OF THE HERO'S JOURNEY IN MAHABHARATA	SHUBHAM YADAV & PROF. (RET.) G.S. GAUTAM
43.	THE PLAY PARTY BY MAHESH ELKUNCHWAR AS COMEDY OF MANNERS	DR. KARE CHANDRASEN DATTATRAYA
44.	ABSURDITY IN THE PLAYS OF MAHESH ELKUNCHWAR'S "OLD STONE MANSION"	GOKUL HANUMANTRAO SURWASE
45.	THE PURPOSE OF TEACHING OF LITERATURE AT UNIVERSITY LEVEL: A STUDY	DR. RAJENDRA R. GAIKWAD
46.	GUSTATORY MARKERS OF CHILDHOOD MEMORY IN MADHUR JAFFREY'S <i>CLIMBING THE MANGO TREES: A MEMOIR OF A CHILDHOOD IN INDIA</i>	VRUSHALI V. BHOSALE KANERI
47.	EVOLUTION OF POLITICAL THEMES IN INDIAN THEATRE POSTINDEPENDENCE	DR. HITENDRA GOYAL
48.	ASSESSMENT OF READING AND LISTENING SKILLS OF STUDENTS FOR HOLISTIC DEVELOPMENT USING RUBRICS	DR. SHRUTI AGRAWAL
49.	SYMBOLISM IN THE POETRY OF ROBERT FROST	DR. EKNATH TATTE
50.	IDENTITY CRISIS AND SURVIVAL IN AMITAV GHOSH'S <i>SEA OF POPPIES</i>	ASHOK VITTHAL MORE



37.	SUNETRA GUPTA'S A SIN OF COLOUR: A DIASPORIC TEXT	DR. PRASHANT CHAVARE & MRS. VARSHA GAIKWAD
38.	DISSONANT VOICES IN ANITA NAIR'S THE BETTER MAN: A STUDY	DR. MANOJ SOMWANSHI & VIKRANT MANMATH KHAVALI
39.	THE WOMAN CHARACTERS IN THE SELECT FICTION OF ALICE WALKER	DR.SUSHILA SANGWAN
40.	DECONSTRUCTING THE CLASS BARRIERS IN IAS TODAY AND THE WHITE TIGER	DEEPTI CHAURASIYA
41.	JOURNEY OF GOURI FROM BELONGINGNESS TO ADAPTION IN JUMPHA LAHIRI'S NOVEL "THE LOWLAND "	DR. ANITA KASHINATH MUDKANNA
42.	HEROISM UNVEILED: A METANARRATIVE ANALYSIS OF THE HERO'S JOURNEY IN MAHABHARATA	SHUBHAM YADAV & PROF. (RET.) G.S. GAUTAM
43.	THE PLAY PARTY BY MAHESH ELKUNCHWAR AS COMEDY OF MANNERS	DR. KARE CHANDRASEN DATTATRAYA
44.	ABSURDITY IN THE PLAYS OF MAHESH ELKUNCHWAR'S "OLD STONE MANSION"	GOKUL HANUMANTRAO SURWASE
45.	THE PURPOSE OF TEACHING OF LITERATURE AT UNIVERSITY LEVEL: A STUDY	DR. RAJENDRA R. GAIKWAD
46.	GUSTATORY MARKERS OF CHILDHOOD MEMORY IN MADHUR JAFFREY'S <i>CLIMBING THE MANGO TREES: A MEMOIR OF A CHILDHOOD IN INDIA</i>	VRUSHALI V. BHOSALE KANERI
47.	EVOLUTION OF POLITICAL THEMES IN INDIAN THEATRE POSTINDEPENDENCE	DR. HITENDRA GOYAL
48.	ASSESSMENT OF READING AND LISTENING SKILLS OF STUDENTS FOR HOLISTIC DEVELOPMENT USING RUBRICS	DR. SHRUTI AGRAWAL
49.	SYMBOLISM IN THE POETRY OF ROBERT FROST	DR. EKNATH TATTE
50.	IDENTITY CRISIS AND SURVIVAL IN AMITAV GHOSH'S <i>SEA OF POPPIES</i>	ASHOK VITTHAL MORE

**IDENTITY CRISIS AND SURVIVAL IN AMITAV GHOSH'S *SEA OF POPPIES***

ASHOK VITTHAL MORE,
Assistant Professor in English,
Department of English
New Arts, Commerce and Science College,
Parner

ABSTRACT:

In Sea of Poppies, Ghosh explores the identity crisis and survival of alienated characters in the novel. It is an attempt to focus on individuals who lose identity due to cultural change and oppression and try their level best for survival. Ghosh examines how individuals attempt to represent themselves in various ways and reconstruct their identities by concealing their true selves before starting over to find their true selves. They represent themselves through new identities to adapt to changing situations in global panorama and cultural transmission. These displaced people migrate through a ship, the Ibis and reconstruct their new identity for survival in the displaced community on the ship. Their struggle for existence in the colonial era results in their dual identity and their segregation from their true selves due to their deliberate alienation from others in their own country. The present study investigates the colonial identity reshaped and reconstructed to cope with the new colonial environment and oppression. Amitav Ghosh focuses on the changing identities and their reconstruction as its flexible and multi-layered notion.

Keywords: Identity, Culture, Alienation, Colonial, Oppression, Survival

Introduction:

The study investigates the identity, identity crisis, reconstruction of identity and struggles for survival in colonialism in Amitav Ghosh's *Sea of Poppies*. It examines how cultural oppression and migration oblige them to hide their original identity and reconstruct their identity to adapt to the changing scenario in colonialism. It also investigates multiple layers of social, historical, economic, cultural and political scenarios in the colonial era.

Amitav Ghosh is a well-recognised contemporary Indian English novelist. He was born in Kolkata on July 11, 1956, and grew up in India, Sri Lanka, and Bangladesh. He completed his education at the Doon School in Dehradun. He studied higher education at St. Stephen's College, Delhi University, and the Delhi School of Economics. Ghosh received the Scholarship for a D.Phil. in social anthropology at St. Edmund Hall, Oxford. First, he worked for the Indian Express newspaper in Delhi. He also worked as a faculty member in colleges and universities. The Indian government awarded him the Padma Shri in 2007. His contribution to Indian English literature is noteworthy. His works are classified into two parts: fiction and non-fiction. Famous fiction works include *The Circle of Reason*, *Sea of Poppies*, *The Shadow Lines*, *Calcutta Chromosome*, *Glass Palace*, *Hungry Tide*, and *Gun Island*. Non-fiction works include *In an Antique Land*, *Dancing in Cambodia and Burma*, *Countdown*, *The Imam and India*, and *The Great Derangement: Climate Change and the Unthinkable*.

**Objectives:**

The paper aims to highlight the crucial factors that affect true identity and the reconstruction of identity for survival in displaced places. Identity construction and reconstruction are prominent issues influenced by colonialism, cultural transmission, displacement and oppression. It also examines the social, historical, economic, cultural and political layers minutely and meticulously.

Literature Review:

The subaltern studies oppressed and subjugated subalterns and their quest for identity creates an identity crisis. Ranjit Guha and Gayatri Spivak dealt with the subaltern, a marginalised class oppressed by power hegemony. In the British colonial era, the underclass people, though liberated, suffered a lot through unjust practices prevalent in Indian Culture. Indian women suffered, though the British emphasised the freedom of Indian women from the unjust practice of Sati, but the natives were oppressed and obliged to contribute to ritual. The subjugated, oppressed, migrated underclass characters suffer from losing their identity and try to reconstruct for survival.

Discussion and Arguments:

Sea of Poppies is Amitav Ghosh's historical novel in early nineteenth-century India. The novel deals with cultural, racial, and religious discrimination and oppression of the underclass at multiple levels through unjust practices prevalent. They were oppressed by British colonisers as well as unjust practices prevalent in Indian culture. They travelled through the land-river-ocean to an alien island and reconstructed their identity to adapt to the community as they were displaced. The identity is created through one's name, social class, race, caste, religion, relationships, environment and cultural, social, economic and historical background. It appears to be affected by colonialism and political, cultural, and socio-economic forces that continuously change characters' roles and paths to reconstruct new identities in new milieus. Identity reconstructing is crucial in this work because colonial upheaval disrupts the patterns of individuals' roles in the new social environment.

The identity reconstruction takes place on the Ibis ship to adapt to the new environment for survival at a displaced place to hide their real identity. The significant characters reconstruct their identity: Deeti as Aditi, Kalua as Maddow Colver, Zachary Reid as Malum Zikri, Jodu as Azad Naskar and Raja Neel Ratan as Neel. Deeti is a high-class opium seed farmer's daughter married to disable Hukum Singh, who has an Opium addiction who is raped by Kesari Singh and gives birth to Kabutari and is obliged to go on Sati, elopes with Kalua, a low-class person and changes her name as Aditi. Kalua marries Deeti and also becomes Maddow Colver to hide his identity. Zachary Reid becomes Malum Zikri, an Afro-American son of a Freedwoman and an American man. Jodu, an orphan from Ghazipur, becomes Azad Naskar because of his ambition to work on the ship. Neel Rattan Halder is a wealthy king whose dynasty has been ruling the zemindary of Raskhali for centuries. There is a reconstruction of identity for survival. Paulette Lambert -an orphan French girl, also hides her identity to save Mr Burnham, who exploits her.

The novel's dramatic turn of events, the main protagonist's destiny, and her interactions with a motley cast of other characters—with whom she prefers to elope from land to river to escape from going to Sati on her husband's funeral pyre and experiences climate travel by



sea—might lead one to believe that it is a historical novel set in the colonial era. Deeti emphasises the crisis between capitalism and socialism on the one hand and the struggle for hierarchical dominance on the other. As evidenced by her choice, Deeti can also be understood to change into a new persona and accept fate, which resulted in her decision to marry Kalua, who rescued her from sati. Deeti becomes Aditi, which means the Goddess who releases from sin and has a desire to lead. Even so, she did not feel like she was living in the same way as before. A strange sense of contentment and resignation penetrated her heart as though she had seriously slipped away and been brought into her next life at the right moment. She had shed the old Deeti's body, and the burden of its karma paid the cost that her stars had demanded of her. She was now free to make her path and opt for whom she longed to spend it. She got married to Kalua, a low class man and reconstruct her identity as Kalua's wife. Deeti becomes Aditi on Ibis to save herself from orthodox relatives.

Conclusion:

Identity is not fixed, and it changes to adapt to new images by choice and requirement of the situation for survival in an adverse situation in colonial era. The characters have their identity and they lose their identity with changing circumstances. They adapt with new changes and creates and recreates their identity. The identity crisis is common among the characters as they got to conceal their true selves and reshape and revise their role in the community. The power, the cultural constraints, oppression, colonial insecurity and discrimination are the root causes of reconstruction of identity for survival.

REFERENCES:

1. Ghosh, Amitav. (2008) *Sea of Poppies*, London: Penguin
2. Abrams, M.H. (2005) *Glossary of Literary Terms*. Banglore: Prism Books
3. Bhabha, K, Homi.(1994) *The Location of Culture*. London: Routledge
4. Beverley, John.(1999) *Subalternity and representation: arguments in cultural theory*. Durham: Duke in University Press
5. Said, Edward W. (1978) *Orientalism*, UK: Pantheon Books
6. Spivak, Gayatri Chakravorty, (1988) *Can the subaltern Speak?*, India: Macmillan
7. Aspea, Kazi. (2019). *Voice of the Voiceless: A Subaltern Study of The Hungry Tide*.
8. Guha, Ranjit. "Introduction". *Subaltern Studies*. Ed. Ranjit Guha. Vol: 1. Delhi: Oxford University Press, 1982.
9. Sivaramakrishnan K. "Situating the Subaltern: History and Anthropology in the Subaltern Study Project". Reading Subaltern Studies. Ed. David Ludden. Delhi: Permanent Black, 2008.
10. Dhawan, R.K. *The Novels of Amitav Ghosh*. New Delhi: Prestige Books, 1999



UGC CARE LISTED
ISSN No. 2394-5990

इतिहासाचार्य वि. का. राजवाडे मंडळ, धुळे
या संस्थेचे त्रैमासिक
॥ संशोधक ॥

पुरवणी अंक ४९ - मार्च २०२४ (त्रैमासिक)

- शके १९४५
- वर्ष : ९२
- पुरवणी अंक : ४९

संपादक मंडळ

- प्राचार्य डॉ. सर्जेराव भामरे
- प्रा. डॉ. मृदुला वर्मा
- प्राचार्य डॉ. अनिल माणिक बैसाणे
- प्रा. श्रीपाद नांदेडकर

अतिथी संपादक

- डॉ. मृणालिनी शेखर
- प्रो. (डॉ.) पांडुरंग भोसले
- प्रो. (डॉ.) कामायनी सुर्वे

* प्रकाशक *

श्री. संजय मुंदडा

कार्याध्यक्ष, इ. वि. का. राजवाडे संशोधन मंडळ, धुळे ४२४००१
दूरध्वनी (०२५६२) २३३८४८, ९४२२२८९४७९, ९४०४५७७०२०

Email ID : rajwademandaldhule1@gmail.com

rajwademandaldhule2@gmail.com

कार्यालयीन वेळ

सकाळी ९.३० ते १.००, सायंकाळी ४.३० ते ८.०० (रविवारी सुट्टी)

सदस्यता वर्गणी : रु. २५००/-

विशेष सूचना : संशोधक त्रैमासिकाची वर्गणी चेक/ड्राफ्टने
'संशोधक त्रैमासिक राजवाडे मंडळ, धुळे' या नावाने पाठवावी.

अक्षरजुळणी : सौ. सीमा शिंत्रे, पुणे.

टीप : या नियतकालिकेतील लेखकांच्या विचारांशी मंडळ व शासन सहमत असेलच असे नाही.



INDEX

1. **Indian Classical Theatre: A Colossal Influence on Modern Indian Drama**
- Dr. Anand Uddhav Hipparkar ----- 9
2. **Myth and Realism in Hayavadana by Girish Karnard**
- Dr. Anil Gaman Ahire ----- 15
3. **Intersections of Indian Knowledge Systems, Culture, and Identity in Indian English Literature**
- Ankit Wadatkar ----- 19
4. ***Manache Shloka* by Samarth Ramdas Swami: Guide for Psychological Well-Being**
- Dr. Archana Pandit ----- 24
5. **Gender Disparity: An Ongoing Battle for Equality in India**
- i) Archana Singh, ii) Dr. Rajendra Sarode ----- 28
6. **Indian Knowledge Systems (IKS) and Its Impact on Literary Discourse**
- Dr Sandeep Hanmantrao Patil ----- 33
7. **Indian Knowledge System and its relevance to literature**
- Dr. Anuradha Ghodke ----- 38
8. **English Literary Criticism : 16th to 19th Century Literary Criticism**
- Dr. Kamble Satwa Ramchandra ----- 42
9. **What Makes Us Human: A Multifaceted Investigation**
- Dr. Laxman Arun Kshirsagar ----- 46
10. **Concept of Consciousness: East precedes West**
- Dr. Neelkanth Jagannath Dahale ----- 50



32. **Unrevealed Facts and Facets of Caste and Societal System in India as Depicted in *Sita Warrior of Mithila* (2017)**
 - i) L.Vijayalakshmi, ii) Prof. Dr. Shilpagauri Prasad Ganpule ----- 148
33. **Ecological Crisis in Amitav Ghosh's 'The Hungry Tide'**
 - Ashok Vitthal More ----- 154
34. **Present status and views of Teacher Educators towards Teaching of Phonetics in Training Colleges: A Study**
 - Dr. Vijay Santu Patole ----- 158
35. **Indian Knowledge System: Vedic Period to the Contemporary Indian English Drama**
 - Dr. Ayodhya Kalyan Jadhav ----- 164
36. **Sanskrit Theatre: Milestone in the Indian Drama**
 - Dr. Santosh Dadu Ghangale ----- 168
37. **Toru Datt's Verse : Myths into Poetic Rendering**
 - Dr. Mrunalini Vasant Shekhar ----- 171
38. ***IKS and Indian Folktales***
 - Avinash Bhagwan Shelke ----- 175
39. **The Role of Tradition in Kamala Markandya's *Nectar in a Sieve***
 - Smt. Dipali Sadashiv Suryawanshi ----- 179
40. **A kaleidoscopic survey of Indian Classical Drama (Sanskrit Theatre): Its Historical significance and Development**
 - Dr. Ganesh Chintaman Wagh ----- 183
41. **भारतीय ज्ञान परंपरा आणि गोंदिया जिल्ह्यातील 'बहुरूपी' लोककला**
 - भूमेश्वर शंकर शेंडे ----- 189



ECOLOGICAL CRISIS IN AMITAV GHOSH'S 'THE HUNGRY TIDE'

Ashok Vitthal More

Assistant Professor in English, Department of English

New Arts, Commerce and Science College, Parner

E-mail- postcol2019@gmail.com

Contact: +919011353000

Abstract:

Ecological challenges are critical to national growth. Typically, progress is hampered by the unexpected arrival of humans, which disrupts ecological and unbalanced biodiversity. Amitav Ghosh's literary works addressed environmental issues and highlighted how they affect the ecosystem. Migrants and the underclass suffer as a result of over-settlement, over-urbanisation, and deforestation throughout India. This study aims to investigate the ecological crisis that impedes environmental protection. The Sundarbans, a coastal region between India and Bangladesh, revolves around water. Water swallows and regurgitates land with each tide cycle. The 1970s tiger protection initiative in the Sundarbans leads to the ruthless state-led displacement of Bangladeshi refugees from the islands. In 2000, the government imposed significant portions of the islands on a private business for an ecotourism project. These events are the backdrop for Amitav Ghosh's novel *The Hungry Tide*. The novel recounts the first incident and presents a political critique of the second development. This study investigates the author's use of water as both a metaphor and a material presence in the text to examine how the novelist articulates the rupture of social hierarchies and expresses dissatisfaction with the violation of human rights for conservation.

Keywords: Ecosystem, Environment, Biodiversity, Over-urbanisation, Deforestation

Introduction :

The present study focuses on the ecological crisis in Amitav Ghosh's *The Hungry Tide*. Ecological issues are significant due to humans' undue intrusion into nature and their effects on the environment. It also focuses on how humans and Nature could coexist if they didn't affect each other. It aims to create awareness among people for environmental conservation. It acquaints people with the power of nature and its ecology and environmental concerns. Man and Nature are integral and can not be separated due to their bonding. The lives of men have been dependent on Nature since they started agriculture. Nature can be revealed through ecology- the scientific study of the relationship between humans and nature. The present study limits and focuses on the ecological crisis in Amitav Ghosh's *The Hungry Tide*.

Amitav Ghosh is a well-recognized contemporary Indian English novelist. He was born in Kolkata on July 11, 1956, and grew up in India, Sri Lanka, and Bangladesh. He completed his education at the Doon School in Dehradun. He studied higher education at St. Stephen's College, Delhi University, and the Delhi School of Economics. Ghosh received the Scholarship for a D.Phil. in social anthropology at St. Edmund Hall, Oxford. First, he worked for the Indian Express newspaper in Delhi. He also worked as a faculty member in colleges and universities. The Indian government awarded him the Padma Shri in 2007. His contribution to Indian English literature is noteworthy. His works



can be classified into two parts: fiction and nonfiction. Famous fiction works include *The Shadow Lines*, *Calcutta Chromosome*, *Glass Palace*, *Hungry Tide*, *Ibis Trilogy*, and *Gun Island*. Non-fiction works include *In an Antique Land*, *Dancing in Cambodia and Burma*, *Countdown*, *The Imam and India*, and *The Great Derangement: Climate Change and the Unthinkable*. The

Objectives:

The paper highlights crucial issues, such as examining Ghosh's main environmental storylines and themes. The study recognises how the Sundarbans depict the precarious balance between humans and the environment. The paper evaluates the book's contribution to and effectiveness in raising readers' environmental consciousness.

Literature Review:

The Sundarbans is a large archipelago of islands in the Bay of Bengal, and "The Hungry Tide," written by Amitav Ghosh, is a moving depiction of the intertwining of human lives, socio-cultural realities, and the powerful, unexpected dynamics of nature there. The book is not merely a story of human attempts and aspirations; it also paints a clear picture of environmental difficulties, interspecies connections, and the ongoing struggle between people and nature's unbridled force. (Mukherjee, 2010).

The term "eco-criticism," which derives from the Greek words "oikos," which means "house" or "environment," and "kritikos," which means "discerning judge," refers to an approach to literary and cultural criticism that looks at the complex interaction between people and their environment in literature. While books that express concerns about the natural world and how humans affect it make up environmental literature. This section defines the term "eco-criticism" and recounts the development of ecological literature, emphasising the connections between them. (DeLoughrey, Elizabeth M., 2011)

Discussion and Arguments:

The narrative revolves around the Sundarbans, a vast, mysterious, and unstable delta that crosses

Eastern India and Southern Bangladesh. Major plot points are played by the human characters and the terrain, usually described as a shifting maze of rivers, islands, and tidal waterways. Ghosh paints vivid pictures of the Bengal tigers that lurk in the mangroves, the cyclones that may suddenly change a person's path in life, and the waves that come and go. The novel's characters, Piya, the devoted cetologist, Fokir, and the determined Kanai, all represent different ties to the land and waters of the Sundarbans. While Piya bases her existence on the tide patterns and approaches the mangroves with a scientific eye, Fokir's knowledge is more instinctive and has been passed down through the centuries. On the other hand, Kanai has to tread carefully because he is both an outsider and has family ties to the area. With the help of these people, Ghosh paints a picture of the Sundarbans as a region where culture and environment coexist harmoniously.

In an era when these concerns are of global concern, literature by authors such as Ghosh provides a critical lens through which ecological disasters, sea level rise, and environmental degradation may be analysed. Such books enhance literary traditions and contribute to broader discussions on cohabitation and environmental sustainability by fusing narrative with in-depth ecological understanding. Additionally, the novel offers a case study of the more significant challenges faced by endangered ecosystems worldwide by concentrating on a particular and distinctive site like the Sundarbans.

The river's significance is highlighted since the narrative regularly explores the complex and often perilous relationship between humans and their natural environment. Ghosh illustrates the varied fauna and plants of the Sundarbans, emphasising the region's ecological relevance. The narrative highlights the impacts of climate change by acknowledging the region's increasing frequency of hurricanes. The struggle to preserve the ecosystem and the Bengal tiger serves as a reminder of the conservation efforts made by both domestic and foreign groups. The



novel highlights the intimate connection between tradition, culture, and the land, primarily via the character Piya. Because they depict the complex web of ecological, cultural, and human elements inside the Sundarbans, these topic elements are essential to the novel's ecocritical point of view.

The novel's evocative descriptions and character interactions illustrate the complex and often dangerous links between humans and the natural world. The river, in particular, is a significant metaphor and source of inspiration for these interactions and emphasises the novel's eco-critical point of view. The textual analysis reveals that Amitav Ghosh's storytelling effectively conveys eco-critical subjects and highlights the intricate links between the natural and human worlds in the Sundarbans. Additional research, like theme coding and reader response surveys, will help us better understand the novel's eco-critical impact.

"The Hungry Tide" by Amitav Ghosh eloquently captures the relationship between humans and their surroundings. Throughout the book, the Sundarbans and humankind maintain a delicate equilibrium that demonstrates how living in the delta is more than coexistence—a never-ending dance with survival. This motif keeps coming up because it shows how the people in the area are strongly connected to the environment, even if it can sometimes be hostile. The frequency of this topic's appearances indicates how vital it is to the plot and how understanding the book's larger environmental message is.

The book describes the Sundarbans as a site of frequent tragedy mixed with breathtaking natural beauty. Because the scenery changes due to storms, tides, and other natural events, it is a place of wonder and dread. Environmental disasters like this one draw attention to the ecosystem's fragility and, in turn, to more widespread concerns about climate change and its consequences on a global scale.

Ghosh's detailed descriptions of the Sundarbans' biodiversity—which includes everything from deadly tigers to a wide variety of aquatic creatures—highlight the complexity and richness of the local

ecosystem. By showing the range of species that share the same waterways and the delicate balance they maintain, Ghosh draws attention to the area's biological value and crafts an intriguing tale about the interdependence of species.

One of the book's central themes is the struggle between exploitation and conservation. The unique biodiversity of the Sundarbans is being protected and preserved. However, the local population usually depends on the land and its resources for their livelihood, often leading to overuse. Ghosh tackles this paradox with various characters and subplots, raising thought-provoking issues regarding the ethics and realities of survival and conservation.

Thematic coding in "The Hungry Tide" draws attention to how ecological themes are intricately woven. More than merely describing the Sundarbans, Ghosh's story raises important questions about how humans relate to the environment. This article's questions highlight the novel's literary value in environmental debate and offer new avenues for ecocritical investigation.

"The Hungry Tide" by Amitav Ghosh is a compelling tale that provides deep insights into the intricacies of human-nature connections, especially in the fragile ecology of the Sundarbans. It stands out at the junction of literature and environmental discourse. Rather than being limited to being a vehicle for storytelling, the text becomes a web of narratives about personal, cultural, and ecological resilience. Ghosh imagines a world where the environment is a living thing that is both shaped and shaped by its inhabitants rather than merely a backdrop. The book's eco-critical analysis highlights Ghosh's wide-ranging investigation of environmental issues and his perceptive understanding of how they are changing social and physical environments. The author's layers of environmental commentary are made visible through the thematic coding, and the overt and covert ecological themes are emphasised through the textual analysis. The reader response poll highlights the book's impact even more by demonstrating how literature can encourage



environmental knowledge and advocacy. The novel's sustained appeal and the insights gained from this study show the value of ongoing eco-critical literary inquiry. Future studies might broaden the scope to encompass other South Asian writers who investigate the relationships between culture and environment or go more into analysing Ghosh's other writings in comparison. It's evident in the end that literature could be more than just a tool of escape; it may also work as a catalyst for change by promoting understanding, empathy, and conservation efforts.

Conclusion:

Environmental concerns endanger human life and cause profound climate change. Nature has turned hostile to people searching for justice due to humans' reckless behaviour, ignoring its regenerative and life-giving properties. Eco-catastrophism gives an apocalyptic vision while warning us to take the necessary precautions to prevent catastrophe. In light of the present situation of environmental decline, conservationists and writers worldwide are calling on us to take action and stop the destruction of our environment. The worldwide problem has resulted from the ecosystem's failure to meet our unusual demands. Amitav Ghosh, a well-known Indian writer, talks about social, political, cultural, and environmental themes in a fresh manner. In his work, *The Hungry Tide*, Ghosh investigates nature's annoyance and human suppression, as well as the voices that advocate the need to preserve nature. The novel illustrates the global issue in a local context.

Amitav Ghosh's *The Hungry Tide* promotes awareness among people regarding the importance and need to preserve and maintain our planet for ourselves and future generations.

References:

1. Ghosh, Amitav. (2002) *The Hungry Tide*, India: Harper Collins Harper
2. Abrams, M.H. (2005) *Glossary of Literary Terms*. Banglore: Prism Books
3. Bhabha, K, Homi.(1994) *The Location of Culture*. London: Routledge
4. Beverley, John.(1999) *Subalternity and representation: arguments in cultural theory*. Durham: Duke in University Press
5. Said, Edward W. (1978) *Orientalism*, UK: Pantheon Books
6. Spivak, Gayatri Chakravorty, (1988) *Can the subaltern Speak?*, India: Macmillan
7. Aspea, Kazi. (2019). Voice of the Voiceless: A Subaltern Study of The Hungry Tide.
8. Guha, Ranjit. "Introduction". *Subaltern Studies*. Ed. Ranjit Guha. Vol: 1. Delhi: Oxford University Press, 1982.
9. Sivaramakrishnan K. "Situating the Subaltern: History and Anthropology in the Subaltern Study Project". *Reading Subaltern Studies*. Ed. David Ludden. Delhi: Parmanent Black, 2008.
10. Dhawan, R.K. *The Novels of Amitav Ghosh*. New Delhi: Prestige Books, 1999





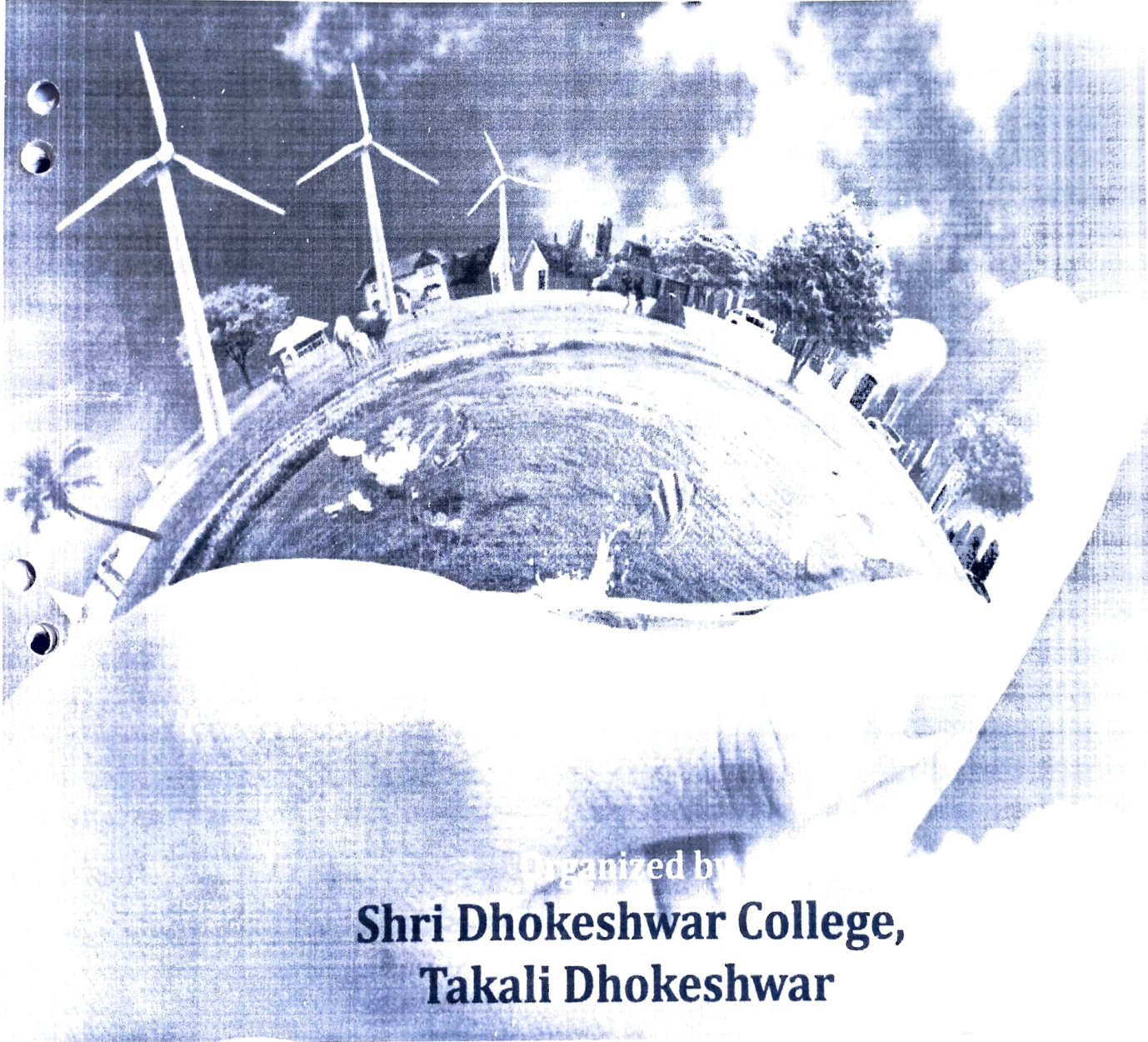
Ahmednagar Jilha Maratha Vidya Prasarak Samaj's

SHRI DHOKESHWAR COLLEGE

• Takali Dhokeshwar, Tal. Parner, Dist. Ahmednagar, Maharashtra, Pin - 414304 • Office(02488) 282414

National Conference on

“Frontiers of Sustainable Development in Science and Environment”



Organized by

**Shri Dhokeshwar College,
Takali Dhokeshwar**

**Abstract Book
February- 2024**

Website: shridhokeshwarcollege.com

Email: tdcollege@gmail.com

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
Shri Dhokeshwar College Takali Dhokeshwar

Affiliated to Savitribai Phule Pune University Pune,

"NAAC Reaccredited **B⁺⁺** Grade (CGPA 2.86) (Cycle IIIrd)",



National Conference on
“Frontiers of Sustainable Development in
Science and Environment”

(FSDSE- 2024)

24th February 2024

Organised By

Shri Dhokeshwar College
Takali Dhokeshwar
Dist. Ahmednagar, (M.S.) India 414 304

ABSTRACT BOOK

ABOUT COLLEGE

Shri Dhokeshwar College, Takali Dhokeshwar was established in 1994. It is affiliated with Savitribai Phule Pune University. The college is reaccredited with B⁺⁺ grade by NACC. The college is recognized under 2(f) and 12(b) by the University Grants Commission, New Delhi. The college has Arts, Commerce and Science faculties. The college organizes various academic programs for the development of the students. The college provides access to higher education, especially for students who are economically backward and in hilly remote areas. The college strives to develop the all-around personality of students and hence is very keen to provide coaching in curricular, co-curricular, and extra-curricular activities. To provide for whole man is the objective of our institution. To be very modest, it won't be out of place to say that we have succeeded in achieving this goal to a certain extent.

Table of Contents

Sr. No.	Name of the Author	Title of the Abstract	Page No.
1.	S.R. Adik & B.T. Pawar	Identification and Characterization of <i>Klebsiella variicola</i> collected From Shevgaon , Ahemednagar	01
2.	Mr. Chaudhari Somnath Aba	Use of botanical insecticides for sustainable agriculture: Future perspectives	02
3.	Tuwar A. R. and Arangale K. B*.	Biodiversity of Succulent Plants from Newasa Tehsil of Maharashtra	03
4.	Kadam A.B., Kamble S.A.	Study of preliminary phytochemical analysis of <i>Plectranthus caninus</i> .	04
5.	Dandekar S.D., Bagal J.G.	Study of phytochemical analysis and Antibacterial activity in <i>Caralluma fimbriata</i> Wall.	05
6.	Zaware R. P, Aher R. K,	Induced Mutagenesis and Variability Study in the M1 Generation of Pea <i>Pisum sativum</i> L.	06
7.	Sangita D. Jadhav, Vijata B. Hase and Samidha S. Halnar	Fungicidal efficacy of Root Extract of <i>Xanthium strumarium</i> L. against Fungal Pathogens	07
8.	Sangita D. Jadhav, Vijata B. Hase and Samidha S. Halnar	Fungicidal efficacy of Root Extract of <i>Xanthium strumarium</i> L. against Fungal Pathogens	08
9.	T. S. Jagadale D.D. Ahire and S. G. Auti	Finger Millet: Good Source of Nutrition for 21 st Century	09
10.	Dr Khilari A.M and Dr Sharma P.P	Effect of Foliar spray of <i>Arthrospira plantensis</i> (Spirulina) filtrate on Vegetative Growth, Yield of some leafy vegetables.	10
11.	S.R. Adik & B.T. Pawar	Identification and Characterization of <i>Klebsiella variicola</i> collected From Shevgaon , Ahemednagar	11
12.	Rushikesh A. Labade and Narayan M. Ghangaonkar	Impact of water treatments on phytochemicals and mineral (Potassium) concentrations in Banana peels	12
13.	Wagh N.G., Ghanwat S. P.	Formulation and Evaluation Nutraceutical Dosage form of Corn Silk (<i>Stigma maydis</i>).	13
14.	Pushpa Ghogare and Rangnath Aher	Organic Farming: A Sustainable Agriculture Practice	14-15
15.	Swati G. Wagh	Blue Green Algae Like Cyanobacterial Diversity and Abundance in Maize Field of Ahmednagar District (M.S.) India	16
16.	Sangita D. Jadhav, Vijata B. Hase and Samidha S. Halnar	Fungicidal efficacy of Root Extract of <i>Xanthium strumarium</i> L. against Fungal Pathogens	17
17.	Santosh B Rathod	Effect of Dilution on the Thermodynamic Parameters of some Transition Metal Salt by Viscosity Method	18
18.	Narsale B. S., Thube D. R., Mhaske S. D., Dhole A. J. & Daule P. N.	Synthesis & Characterization of 1,8 dioxo-octahydroxanthones using Biopolymer	19

		catalyst XPA	
19.	Mhaske S. D., Thube D. R., Narsale B. S. & Dhole A.J. Daule P.N.	Applications of Novel XPA catalyst in synthesis of Pyrrole derivatives	20
20.	Dudhade Vaishnavi Raosaheb, Mundhe Ganesh Nana, T. S. Thopate*	General Purpose of Catalysis in Green Chemistry	21
21.	Mundhe Ganesh Nana, Dudhade Vaishnavi Raosaheb, T. S. Thopate*	Role Of Green Chemistry: The Sustainability of an Innovative Approach.	22
22.	S.T.Tambe	Municipal solid waste management	23
23.	Ms.Archana Thube Ms.Karishma Sayyed Ms. Pallavi Yewale	Evaluation of Chemical Constituents in Selected Energy Drink	24-25
24.	Ms.Karishma Sayyed Ms.Archana Thube Ms. Pallavi Yewale	Evaluation of Chemical Constituents in Selected Energy Drink	26-27
25.	Ms. Pallavi Yewale Ms.Karishma Sayyed Ms.Archana Thube	Evaluation of Chemical Constituents in Selected Energy Drink	28-29
26.	Lende Rajendra Kashinath , Khemnar Mahtu Tatyaba Katore Lakshiman Damu , Harde Harshda Namdev Shirsath Vrushali Sudam	Measurement of rainwater and accordingly water management and crop management around the area of Sangamner Tehsil (MS)	30-33
27.	Macchindra B. Kadam, Padi Pratap Reddy and Sayujjata R. Vaidya	Identification, Synthesis and Characterization of Potential Process Related Compounds of Polmacoxib	34-37
28.	S.A. Veer	Environment and Science Importance and Challenges	38
29.	Dr.Gaikwad Vijay Vishnu	Scope of Studying Environmental Sciences	39
30.	Rohit Ajinath Kamble	Advancements in Sustainable Development: A Frontier in Science and Environment	40
31.	S.A.Tingare, S. K. Tilekar	Development of Smart Water Quality Monitoring System	41
32.	Rohokale Sima Lahu	E-Waste and Electronics: The Impact on the Environment	42
33.	S. N. Patil, J. D. Deshpande and A. M. Pawar	IoT Based Smart Real Time Electronic system for Food Grain Storage in warehouse Application	43
34.	Ejaz Nazir Shaikh	Review on: Perovskite recent progress and synthesis using Sol-Gel, characteristic, Applications.	44-45
35.	Amolik Rahul Maykal	Frontiers of Sustainable Development in Science and Environment	46-47
36.	Mr. Pratik Prakash Mane	Urban Planning and Sustainability: Navigating Environmental Challenges	48
37.	Mr.Santosh B.Kokate	Rural Sustainable Environmental Management	49
38.	Dr.Vijay N. Suroshi	Global Environmental Issues and Human Wellbeing	50

39.	S. FAKIR and AGALE N. K	Sustainable Development For Wind Enrgy In Ahmednagar District	51
40.	Khemnar M.T, Karale M.L and Rashinkar S.V	Mixed Farming - An Overview	52
41.	Gavit P. M.	Historical Environmental Policy of Chhatrapati Shivaji Maharaj	53
42.	Khemnar M.T, Karale M.L and Rashinkar S.V	Mixed Farming - An Overview	54-57
43.	Shinde Sagar Pandit	"Renewable Energy Technologies: Innovations and Applications"	58
44.	Vinod Madhukar Tupe	Irrigation Energy Technology: Development and its Positive Impact on Environment."	59
45.	Mr Deepak Bansode	Embracing Sustainability: Navigating the Intersections of Climate Change Mitigation and Resilience	60-61
46.	Nitin D. Wable , Tanaji P Gujar, Pradip B Shelke*	Synthesis of Nickel Sulphide(NiS) ,Cadmium Sulphide(CdS) Supercapacitor Electrodes by Simple Chemical Methods	62-63
47.	A. K Paimode ., S. L. Kadam	Nanotechnology for Sustainable Development of Environment	64
48.	Chemate Rohini Bansi	Physics For Environment and Sustainable Development	65
49.	Tanaji P Gujar Nitin D. Wable , Pradip B Shelke*	Synthesis of Nickel Sulphide(NiS) ,Cadmium Sulphide(CdS) Supercapacitor Electrodes by Simple Chemical Methods	66-67
50.	Mr. Virendra S. Dhanashetti	Exploring the Inherent Tensions at the Nexus of Education for Sustainable Development and Neoliberalism	68
51.	Tanaji P Gujar Nitin D. Wable ,, Pradip B Shelke	Synthesis of Nickel Sulphide(NiS) ,Cadmium Sulphide(CdS) Supercapacitor Electrodes by Simple Chemical Methods	69-70
52.	Lokhande D. M.	Environment and Science Importance and Challenges	71
53.	Wagh S. R.	Diversity of Gall Midges (Diptera : Cecidomyiidae) From Rahata Tahsil of Ahmednagar District (MS)	72
54.	T. S. Barve , S. S. Kekade, S. N. Pokale	Prevalence and Infection by Cestode Parasites, its Seasonal Variation and Impacts on productivity.	73
55.	Khomane T.S Saraf S.A	The Elaborate structure of spider silk (web)some localities from Ahmednagar City	74
56.	Zaware R.V, Harkal A. D	Foraging behaviour of <i>Apis mellifera</i> on flowers of <i>Helianthus annus</i> , <i>Allium cepa</i> , <i>Brassica nigra</i> , at central region of Maharashtra: A Review	75
57.	Popat P. Pathare	Seasonal Incidence of Insect Pests Associated with Mulberry plants of Parner Taluka Ahmednagar District (M.S.) India.	76
58.	Gangotri V.M.	Sugar industries & physico-chemical characteristics of ground water nearby area.	77

59.	Dalavi S. D and Pawar B. A.	Phytoplankton Composition of Mandohol Dam in relation to Fish Culture, Ahmednagar District, Maharashtra	78
60.	Thokal J. A. and Wagh S. R.	A review on diversity of Ichthyofauna from Ghod Dam	79
61.	Dr. Jijabhau Sitaram Ghule	Environmental and political policy-making	80-81
62.	Bidve Prajkta Ramesh	The Effect Study of Vehicular Pollutants on Roadside Plant	82
63.	Dr. Priyanka Pandharmise, Dr Sanghita Jadhav	Preliminary phytochemical screening and HPTLC analysis of leaf extract of <i>Crotalaria Pallida</i> from Vidarbha region, MS, India	83
64.	Walve Puja Sudam	The Effect Study of Vehicular Pollutants on Roadside Plant	84
65.	Mulay A.M., Gahile, Y. R. and Nikam T.D	Antimicrobial activity of medicinally important plant <i>Artemisia pallens</i>	85
66.	Pawar K. W. and Gawali S. P.	Exploration of Some Less Vegetables Edible Plants From The Part of Bhimashankar Ghats (M.S.) India	86
67.	Mr. Sunil Pandurang Gawali	Metal-organic frameworks for energy-related applications: A Micro review	87
68.	Dudhade Vaishnavi Raosaheb, Mundhe Ganesh Nana, T. S. Thopate	General Purpose of Catalysis in Green Chemistry	88
69.	Anant Trimbakrao Nikalje	The Impact of Science and Technology on Sustainable Future in Agriculture	89
70.	Rupesh Barku Khose	Development of a novel heterogeneous catalytic system for organic transformation	90
71.	Nilesh A Pawar, Ramesh B Kharade	Study of the structural, magnetic and adsorption properties of Pr (Praseodymium) doped in cobalt ferrite nanoparticles	91
72.	Pushpa Ghogare and Rangnath Aher	Phyto-Pharmacology of <i>Caralluma adscendens</i> Roxb	92
73.	Abhishek Rajendra Sangale	Use of Solar Energy in Industrial Applications, Sustainable and Eco-Friendly Methods	93
74.	Abhishek Rajendra Sangale	Use of Solar Energy In Industrial Applications, Sustainable And Eco-Friendly Methods	94
75.	Shankar S. Kekade , D. M. Phase , S. I. Patil	Effect of sintering temperature on electronic properties of nanocrystalline La _{0.7} Sr _{0.3} MnO ₃	95
76.	Shaikh Aarzoog Dagu	Degradation of Insecticide -Chlorpyrifos by Nitrogen Fixing Bacterium, Rhizobium sp.	96
77.	Namdev M. Walhekar	Challenges of the twenty-first century	97
78.	Nutan V. Sadgir	Synthesis, spectroscopic characterization, XRD crystal structure, DFT and antimicrobial study of (2E)-3-(4-isopropylphenyl)-1-(4-fluorophenyl)-prop-2-en-1-one	98
79.	Mulay A.M., Gahile, Y. R. and Nikam T.D	Antimicrobial activity of medicinally important plant <i>Artemisia pallens</i> Wall.	99
80.	Sudarshan D. Tapsale and S G	Metal-organic frameworks Nanoparticles	100

	Patil		
81.	Khamkar Manisha Tukaram	Research Papers on Role of Mathematics in Environment	101
82.	Jagtap Arti Balasaheb	Policies for Sustainable Development	102
83.	CA Rhishikesh Dasharath Khose	Advancing Sustainable Climate Solutions: Frontiers in Mitigation and Adaptation	103-105
84.	Anuradha A. Kamble, Pratiksha S. Jadhav*, Riyaj R. Inamdar*, Narayan M. Ghangaonkar*, Ranganath K. Aher.	Study of the diversity of flora Hanga river basin, Ahmednagar District, Maharashtra (India).	106
85.	Ashok V. More	Ecological Crisis In Amitav Ghosh's ' <i>The Hungry Tide</i> '	107
86.	S. R. Yeole, S. K. Aher, R. K. Aher,	Study of Impact of Allelochemical as a Bio weedicidē for Sustainable Agriculture	108
87.	A.T. Ayanar and A. R. Tuwar	Soil Fertility Improvement by Soil Microorganisms.	109
88.	Swati Laxman Sagar	Global Warming	110-116
89.	Ram S. Barkule	Effect Co ⁶⁰ g-ray irradiation on the structural and morphological properties of CoZnF NPs and their major applications	117
90.	Rupali Gorde	Cyber Crime and Security	118
91.	I. R. Ustad, S.B. Pagare	To study of Carbohydrate, Protein and Lipid of Freshwater Edible Gastropod (<i>Bellamya bengalensis</i>) with regarding seasonal variation Ahmednagar District, Maharashtra.	119-126
92.	Attar Shafiya Yasin	Scope of Studying Environmental Sciences	127
93.	Dr P.R. Bodke	"विज्ञान आणि पर्यावरणातील शाश्वत विकासाच्या मर्यादा"	132-133

Ecological Crisis In Amitav Ghosh's '*The Hungry Tide*'

Ashok V. More

Assistant Professor in English,

New Arts, Commerce and Science College, Parner

postcol2019@gmail.com

Abstract:

Ecological challenges are critical to national growth. Typically, progress is hampered by the unexpected arrival of humans, which disrupts ecological and unbalanced biodiversity. Amitav Ghosh's literary works addressed environmental issues and highlighted how they affect the ecosystem. Migrants and the underclass suffer as a result of over-settlement, over-urbanization, and deforestation throughout India. This study aims to investigate the ecological crisis that impedes environmental protection. The Sundarbans, a coastal region between India and Bangladesh, revolves around water. Water swallows and regurgitates land with each tide cycle. The 1970s tiger protection initiative in the Sundarbans leads to the ruthless state-led displacement of Bangladeshi refugees from the islands. In 2000, the government imposed significant portions of the islands on a private business for an ecotourism project. These events are the backdrop for Amitav Ghosh's novel *The Hungry Tide*. The novel recounts the first incident and presents a political critique of the second development. This study investigates the author's use of water as both a metaphor and a material presence in the text to examine how the novelist articulates the rupture of social hierarchies and expresses dissatisfaction with the violation of human rights for conservation.

Keywords: Ecosystem, Environment, Biodiversity, Over-urbanisation, Deforestation



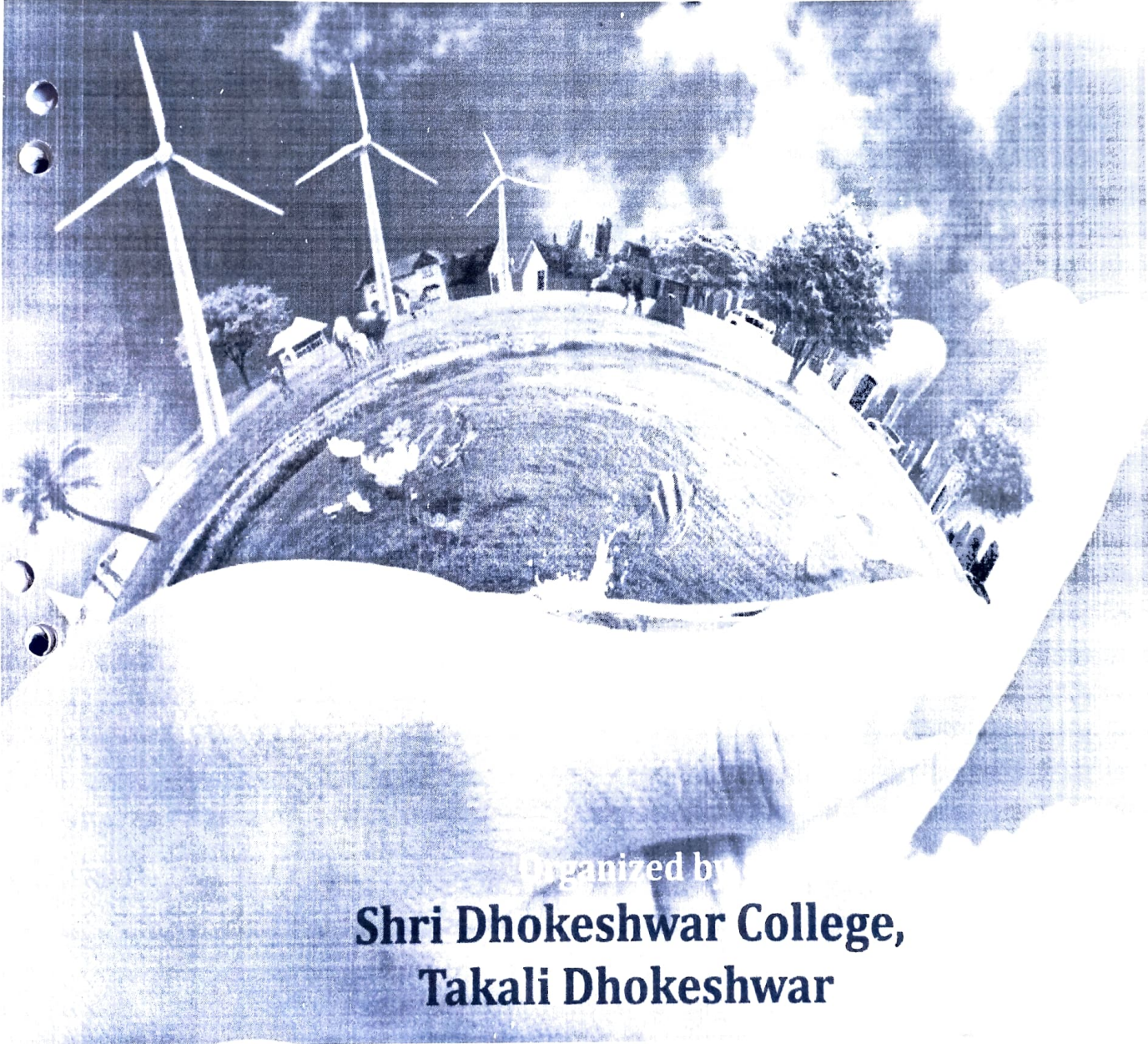
Ahmednagar Jilha Maratha Vidya Prasarak Samaj's

SHRI DHOKESHWAR COLLEGE

• Takali Dhokeshwar, Tal. Parner, Dist. Ahmednagar, Maharashtra, Pin - 414304 • Office(02488) 282414

National Conference on

“Frontiers of Sustainable Development in Science and Environment”



Organized by

**Shri Dhokeshwar College,
Takali Dhokeshwar**

**Abstract Book
February- 2024**

Website: shridhokeshwarcollege.com

Email: tdcollege@gmail.com

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
Shri Dhokeshwar College Takali Dhokeshwar

Affiliated to Savitribai Phule Pune University Pune,

"NAAC Reaccredited **B⁺⁺** Grade (CGPA 2.86) (Cycle IIIrd)",



National Conference on
“Frontiers of Sustainable Development in
Science and Environment”

(FSDSE- 2024)

24th February 2024

Organised By

Shri Dhokeshwar College
Takali Dhokeshwar
Dist. Ahmednagar, (M.S.) India 414 304

ABSTRACT BOOK

ABOUT COLLEGE

Shri Dhokeshwar College, Takali Dhokeshwar was established in 1994. It is affiliated with Savitribai Phule Pune University. The college is reaccredited with B⁺⁺ grade by NACC. The college is recognized under 2(f) and 12(b) by the University Grants Commission, New Delhi. The college has Arts, Commerce and Science faculties. The college organizes various academic programs for the development of the students. The college provides access to higher education, especially for students who are economically backward and in hilly remote areas. The college strives to develop the all-around personality of students and hence is very keen to provide coaching in curricular, co-curricular, and extra-curricular activities. To provide for whole man is the objective of our institution. To be very modest, it won't be out of place to say that we have succeeded in achieving this goal to a certain extent.

Table of Contents

Sr. No.	Name of the Author	Title of the Abstract	Page No.
1.	S.R. Adik & B.T. Pawar	Identification and Characterization of <i>Klebsiella variicola</i> collected From Shevgaon , Ahemednagar	01
2.	Mr. Chaudhari Somnath Aba	Use of botanical insecticides for sustainable agriculture: Future perspectives	02
3.	Tuwar A. R. and Arangale K. B*.	Biodiversity of Succulent Plants from Newasa Tehsil of Maharashtra	03
4.	Kadam A.B., Kamble S.A.	Study of preliminary phytochemical analysis of <i>Plectranthus caninus</i> .	04
5.	Dandekar S.D., Bagal J.G.	Study of phytochemical analysis and Antibacterial activity in <i>Caralluma fimbriata</i> Wall.	05
6.	Zaware R. P, Aher R. K,	Induced Mutagenesis and Variability Study in the M1 Generation of Pea <i>Pisum sativum</i> L.	06
7.	Sangita D. Jadhav, Vijata B. Hase and Samidha S. Halnar	Fungicidal efficacy of Root Extract of <i>Xanthium strumarium</i> L. against Fungal Pathogens	07
8.	Sangita D. Jadhav, Vijata B. Hase and Samidha S. Halnar	Fungicidal efficacy of Root Extract of <i>Xanthium strumarium</i> L. against Fungal Pathogens	08
9.	T. S. Jagadale D.D. Ahire and S. G. Auti	Finger Millet: Good Source of Nutrition for 21 st Century	09
10.	Dr Khilari A.M and Dr Sharma P.P	Effect of Foliar spray of <i>Arthrospira plantensis</i> (Spirulina) filtrate on Vegetative Growth, Yield of some leafy vegetables.	10
11.	S.R. Adik & B.T. Pawar	Identification and Characterization of <i>Klebsiella variicola</i> collected From Shevgaon , Ahemednagar	11
12.	Rushikesh A. Labade and Narayan M. Ghangaonkar	Impact of water treatments on phytochemicals and mineral (Potassium) concentrations in Banana peels	12
13.	Wagh N.G., Ghanwat S. P.	Formulation and Evaluation Nutraceutical Dosage form of Corn Silk (<i>Stigma maydis</i>).	13
14.	Pushpa Ghogare and Rangnath Aher	Organic Farming: A Sustainable Agriculture Practice	14-15
15.	Swati G. Wagh	Blue Green Algae Like Cyanobacterial Diversity and Abundance in Maize Field of Ahmednagar District (M.S.) India	16
16.	Sangita D. Jadhav, Vijata B. Hase and Samidha S. Halnar	Fungicidal efficacy of Root Extract of <i>Xanthium strumarium</i> L. against Fungal Pathogens	17
17.	Santosh B Rathod	Effect of Dilution on the Thermodynamic Parameters of some Transition Metal Salt by Viscosity Method	18
18.	Narsale B. S., Thube D. R., Mhaske S. D., Dhole A. J. & Daule P. N.	Synthesis & Characterization of 1,8 dioxo-octahydroxanthones using Biopolymer	19

		catalyst XPA	
19.	Mhaske S. D., Thube D. R., Narsale B. S. & Dhole A.J. Daule P.N.	Applications of Novel XPA catalyst in synthesis of Pyrrole derivatives	20
20.	Dudhade Vaishnavi Raosaheb, Mundhe Ganesh Nana, T. S. Thopate*	General Purpose of Catalysis in Green Chemistry	21
21.	Mundhe Ganesh Nana, Dudhade Vaishnavi Raosaheb, T. S. Thopate*	Role Of Green Chemistry: The Sustainability of an Innovative Approach.	22
22.	S.T.Tambe	Municipal solid waste management	23
23.	Ms.Archana Thube Ms.Karishma Sayyed Ms. Pallavi Yewale	Evaluation of Chemical Constituents in Selected Energy Drink	24-25
24.	Ms.Karishma Sayyed Ms.Archana Thube Ms. Pallavi Yewale	Evaluation of Chemical Constituents in Selected Energy Drink	26-27
25.	Ms. Pallavi Yewale Ms.Karishma Sayyed Ms.Archana Thube	Evaluation of Chemical Constituents in Selected Energy Drink	28-29
26.	Lende Rajendra Kashinath , Khemnar Mahtu Tatyaba Katore Lakshiman Damu , Harde Harshda Namdev Shirsath Vrushali Sudam	Measurement of rainwater and accordingly water management and crop management around the area of Sangamner Tehsil (MS)	30-33
27.	Macchindra B. Kadam, Padi Pratap Reddy and Sayujjata R. Vaidya	Identification, Synthesis and Characterization of Potential Process Related Compounds of Polmacoxib	34-37
28.	S.A. Veer	Environment and Science Importance and Challenges	38
29.	Dr.Gaikwad Vijay Vishnu	Scope of Studying Environmental Sciences	39
30.	Rohit Ajinath Kamble	Advancements in Sustainable Development: A Frontier in Science and Environment	40
31.	S.A.Tingare, S. K. Tilekar	Development of Smart Water Quality Monitoring System	41
32.	Rohokale Sima Lahu	E-Waste and Electronics: The Impact on the Environment	42
33.	S. N. Patil, J. D. Deshpande and A. M. Pawar	IoT Based Smart Real Time Electronic system for Food Grain Storage in warehouse Application	43
34.	Ejaz Nazir Shaikh	Review on: Perovskite recent progress and synthesis using Sol-Gel, characteristic, Applications.	44-45
35.	Amolik Rahul Maykal	Frontiers of Sustainable Development in Science and Environment	46-47
36.	Mr. Pratik Prakash Mane	Urban Planning and Sustainability: Navigating Environmental Challenges	48
37.	Mr.Santosh B.Kokate	Rural Sustainable Environmental Management	49
38.	Dr.Vijay N. Suroshi	Global Environmental Issues and Human Wellbeing	50

39.	S. FAKIR and AGALE N. K	Sustainable Development For Wind Enrgy In Ahmednagar District	51
40.	Khemnar M.T, Karale M.L and Rashinkar S.V	Mixed Farming - An Overview	52
41.	Gavit P. M.	Historical Environmental Policy of Chhatrapati Shivaji Maharaj	53
42.	Khemnar M.T, Karale M.L and Rashinkar S.V	Mixed Farming - An Overview	54-57
43.	Shinde Sagar Pandit	"Renewable Energy Technologies: Innovations and Applications"	58
44.	Vinod Madhukar Tupe	Irrigation Energy Technology: Development and its Positive Impact on Environment."	59
45.	Mr Deepak Bansode	Embracing Sustainability: Navigating the Intersections of Climate Change Mitigation and Resilience	60-61
46.	Nitin D. Wable , Tanaji P Gujar, Pradip B Shelke*	Synthesis of Nickel Sulphide(NiS) ,Cadmium Sulphide(CdS) Supercapacitor Electrodes by Simple Chemical Methods	62-63
47.	A. K Paimode ., S. L. Kadam	Nanotechnology for Sustainable Development of Environment	64
48.	Chemate Rohini Bansi	Physics For Environment and Sustainable Development	65
49.	Tanaji P Gujar Nitin D. Wable , Pradip B Shelke*	Synthesis of Nickel Sulphide(NiS) ,Cadmium Sulphide(CdS) Supercapacitor Electrodes by Simple Chemical Methods	66-67
50.	Mr. Virendra S. Dhanashetti	Exploring the Inherent Tensions at the Nexus of Education for Sustainable Development and Neoliberalism	68
51.	Tanaji P Gujar Nitin D. Wable ,, Pradip B Shelke	Synthesis of Nickel Sulphide(NiS) ,Cadmium Sulphide(CdS) Supercapacitor Electrodes by Simple Chemical Methods	69-70
52.	Lokhande D. M.	Environment and Science Importance and Challenges	71
53.	Wagh S. R.	Diversity of Gall Midges (Diptera : Cecidomyiidae) From Rahata Tahsil of Ahmednagar District (MS)	72
54.	T. S. Barve , S. S. Kekade, S. N. Pokale	Prevalence and Infection by Cestode Parasites, its Seasonal Variation and Impacts on productivity.	73
55.	Khomane T.S Saraf S.A	The Elaborate structure of spider silk (web)some localities from Ahmednagar City	74
56.	Zaware R.V, Harkal A. D	Foraging behaviour of <i>Apis mellifera</i> on flowers of <i>Helianthus annus</i> , <i>Allium cepa</i> , <i>Brassica nigra</i> , at central region of Maharashtra: A Review	75
57.	Popat P. Pathare	Seasonal Incidence of Insect Pests Associated with Mulberry plants of Parner Taluka Ahmednagar District (M.S.) India.	76
58.	Gangotri V.M.	Sugar industries & physico-chemical characteristics of ground water nearby area.	77

59.	Dalavi S. D and Pawar B. A.	Phytoplankton Composition of Mandohol Dam in relation to Fish Culture, Ahmednagar District, Maharashtra	78
60.	Thokal J. A. and Wagh S. R.	A review on diversity of Ichthyofauna from Ghod Dam	79
61.	Dr. Jijabhau Sitaram Ghule	Environmental and political policy-making	80-81
62.	Bidve Prajkta Ramesh	The Effect Study of Vehicular Pollutants on Roadside Plant	82
63.	Dr. Priyanka Pandharmise, Dr Sanghita Jadhav	Preliminary phytochemical screening and HPTLC analysis of leaf extract of <i>Crotalaria Pallida</i> from Vidarbha region, MS, India	83
64.	Walve Puja Sudam	The Effect Study of Vehicular Pollutants on Roadside Plant	84
65.	Mulay A.M., Gahile, Y. R. and Nikam T.D	Antimicrobial activity of medicinally important plant <i>Artemisia pallens</i>	85
66.	Pawar K. W. and Gawali S. P.	Exploration of Some Less Vegetables Edible Plants From The Part of Bhimashankar Ghats (M.S.) India	86
67.	Mr. Sunil Pandurang Gawali	Metal-organic frameworks for energy-related applications: A Micro review	87
68.	Dudhade Vaishnavi Raosaheb, Mundhe Ganesh Nana, T. S. Thopate	General Purpose of Catalysis in Green Chemistry	88
69.	Anant Trimbakrao Nikalje	The Impact of Science and Technology on Sustainable Future in Agriculture	89
70.	Rupesh Barku Khose	Development of a novel heterogeneous catalytic system for organic transformation	90
71.	Nilesh A Pawar, Ramesh B Kharade	Study of the structural, magnetic and adsorption properties of Pr (Praseodymium) doped in cobalt ferrite nanoparticles	91
72.	Pushpa Ghogare and Rangnath Aher	Phyto-Pharmacology of <i>Caralluma adscendens</i> Roxb	92
73.	Abhishek Rajendra Sangale	Use of Solar Energy in Industrial Applications, Sustainable and Eco-Friendly Methods	93
74.	Abhishek Rajendra Sangale	Use of Solar Energy In Industrial Applications, Sustainable And Eco-Friendly Methods	94
75.	Shankar S. Kekade , D. M. Phase , S. I. Patil	Effect of sintering temperature on electronic properties of nanocrystalline La _{0.7} Sr _{0.3} MnO ₃	95
76.	Shaikh Aarzoog Dagu	Degradation of Insecticide -Chlorpyrifos by Nitrogen Fixing Bacterium, Rhizobium sp.	96
77.	Namdev M. Walhekar	Challenges of the twenty-first century	97
78.	Nutan V. Sadgir	Synthesis, spectroscopic characterization, XRD crystal structure, DFT and antimicrobial study of (2E)-3-(4-isopropylphenyl)-1-(4-fluorophenyl)-prop-2-en-1-one	98
79.	Mulay A.M., Gahile, Y. R. and Nikam T.D	Antimicrobial activity of medicinally important plant <i>Artemisia pallens</i> Wall.	99
80.	Sudarshan D. Tapsale and S G	Metal-organic frameworks Nanoparticles	100

	Patil		
81.	Khamkar Manisha Tukaram	Research Papers on Role of Mathematics in Environment	101
82.	Jagtap Arti Balasaheb	Policies for Sustainable Development	102
83.	CA Rhishikesh Dasharath Khose	Advancing Sustainable Climate Solutions: Frontiers in Mitigation and Adaptation	103-105
84.	Anuradha A. Kamble, Pratiksha S. Jadhav*, Riyaj R. Inamdar*, Narayan M. Ghangaonkar*, Ranganath K. Aher.	Study of the diversity of flora Hanga river basin, Ahmednagar District, Maharashtra (India).	106
85.	Ashok V. More	Ecological Crisis In Amitav Ghosh's ' <i>The Hungry Tide</i> '	107
86.	S. R. Yeole, S. K. Aher, R. K. Aher,	Study of Impact of Allelochemical as a Bio weedicidē for Sustainable Agriculture	108
87.	A.T. Ayanar and A. R. Tuwar	Soil Fertility Improvement by Soil Microorganisms.	109
88.	Swati Laxman Sagar	Global Warming	110-116
89.	Ram S. Barkule	Effect Co ⁶⁰ g-ray irradiation on the structural and morphological properties of CoZnF NPs and their major applications	117
90.	Rupali Gorde	Cyber Crime and Security	118
91.	I. R. Ustad, S.B. Pagare	To study of Carbohydrate, Protein and Lipid of Freshwater Edible Gastropod (<i>Bellamya bengalensis</i>) with regarding seasonal variation Ahmednagar District, Maharashtra.	119-126
92.	Attar Shafiya Yasin	Scope of Studying Environmental Sciences	127
93.	Dr P.R. Bodke	"विज्ञान आणि पर्यावरणातील शाश्वत विकासाच्या मर्यादा"	132-133

Ability Enhancement Courses under NEP: Scope and Importance for Languages

Dr. Pranjali P. Bharate

Assistant Professor

New Arts, Commerce and Science College, Parner

The NEP2020 considers English only an international language which everyone should learn for the convenience in life, not the basis of intelligence. Even the person who knows only regional or national language can be intelligent. National Education Policy 2020 was approved by the Union Cabinet on 29th July 2020. Language The NEP2020 has advocated that "Where ever possible, the medium of instruction until at least Grades 5, but preferably till Grade 8 and beyond, will be the home language/ mother tongue/ local language/ regional language" for public and private school. Mandated by the University Grants Commission, Ability Enhancement Courses (AEC) aim to hone the social and leadership skills that are crucial for students to succeed in their professional and personal lives. These courses are designed to help students enhance their skills in communication, language, and personality development. They also promote a deeper understanding of subjects like social sciences and ethics, culture and human behaviour, human rights and the law.

The English language helps individuals to transcend international boundaries and get a global reach. For example, a book written in English will get far better reach than a book written in any of the regional languages. A regional language has limitations; it cannot be understood by anyone who doesn't know it; as a result, the audience will be minimal. A common language like English will eradicate this limitation and help everyone to connect with wider audiences. Similar is the condition for any content presented in English.

The worldwide reach of the English language is the main reason for setting English as the language of the internet. By knowing the English language, a person can easily access all the information on any topics that are available on the internet. English content like songs, movies, news, entertaining programmes, public events, and all can be enjoyed by everyone who knows the language. Like the words of Frank Smith, "One language sets you in a corridor for life. Two languages open every door along the way". Let's try to learn more languages and open every opportunity in our lives.

Keywords: Teacher Training, Regional language, International Language, Steps of Education Ministry are worth appreciating, Savour of our mother tongue. Skill Based Education, New Education Policy 2020.

These courses are taught by experienced professionals who adopt a participant-centric style of teaching. Emphasis is laid on experiential learning and a host of activities are included in the lesson plans to ensure student engagement. Theatre is also used as a teaching tool. The above declaration of NEP2020 shows how our leaders are treating English. The NEP2020 considers English only an international language which everyone should learn for the convenience in life, not the basis of intelligence. Even the person who knows only regional or national language can be intelligent. National Education Policy 2020 was approved by the Union Cabinet on 29th July 2020. It outlines the visions of education in India. The NEP2020 has advocated that "Where ever possible, the medium of instruction until at least Grades 5, but preferably till Grade 8 and beyond, will be the home language/ mother tongue/ local language/ regional language" for public and private school.

- Emphasis on Three Language System:
- At least two of the three languages should be native
- But it should not be imposed on the students.
- Role and significance of English Language:
- Has global importance.
- Link language.
- Job oriented language.
- Language of science, aviation, computers, diplomacy
- Many books , papers and journals are in English only
- Language of internet.
- Language of media and aviation industries.

Steps of Education Ministry are worth appreciating:

The Education Ministry has set up a committee for promotion and growth of Indian Languages. The NEP believes that children learn better in their home language while English is favoured in labour market.

- It is contradictory believe
- Only oblivion.
- Myth of English language:
- We are destroying our mother tongue for the obsession of English.
- We are learning English at the cost of our own languages. Obsession with English Language.
- We all are killing off or at least neglecting our mother tongue by our obsession with English.
- It is a means of destroying one's community.

- With the loss of language, a community loses its culture.
- Loss of culture means loss of a community.

Savour of our mother tongue.

Mother tongues lead to better understanding of what is taught UNESCO notes that being educated in a familiar language "facilitates an understanding of sound-symbol or meaning-symbol correspondence". Mother tongues make easy to learn a New Language: Many Pedagogical studies show that after acquiring basic literacy and communication skills in mother tongue, it becomes much easier to transform these skills to learn new language.

The Realty:

- The reality has other face.
- Since English is favored in market, we are bound to learn English.
- Without English we cannot survive in this competitive world
- Keeping this in mind NEP has only given suggestion, has not banned English. This is appreciable.

The English language plays a very important role in our lives. As a result of globalisation and with the help of the English language, the entire world has now become familiar to all people. It is considered the principal language of communication by many nations, and everyone has accepted it as the global language. Do you want to know more about the topic? Read the article for cues and tips, and prepare a mesmerising speech on the importance of the English language – one of the interesting speech topics for kids.

Table of Contents

- Sample Speeches on the Importance of the English Language
- Speech about the Importance of Learning English
- Importance of Learning English Speech
- Frequently Asked Questions on the Importance of English Language

Sample Speeches on the Importance of the English Language

A couple of sample speeches are given below. Go through them, utilise the resources, and prepare a speech about the importance of the English language on your own.

Speech about the Importance of Learning English

Have you ever wondered about our condition if there was no common language like English to share our thoughts and feelings? There are numerous languages in our world. Most countries have a

national language, and there are multiple regional languages within a nation. The English language is a great boon in such situations; it serves as a common language and helps everyone to communicate. The English language bridges the gap between nations and offers everyone the possibility of attaining wide exposure. The adoption of the English language as the principal source of communication has resulted in increasing international relationships in travel and tourism, education, business, entertainment, science, technology, and so on.

The English language helps individuals to transcend international boundaries and get a global reach. For example, a book written in English will get far better reach than a book written in any of the regional languages. A regional language has limitations; it cannot be understood by anyone who doesn't know it; as a result, the audience will be minimal. A common language like English will eradicate this limitation and help everyone to connect with wider audiences. Similar is the condition for any content presented in English.

The worldwide reach of the English language is the main reason for setting English as the language of the internet. By knowing the English language, a person can easily access all the information on any topics that are available on the internet. English content like songs, movies, news, entertaining programmes, public events, and all can be enjoyed by everyone who knows the language. Like the words of Frank Smith, "One language sets you in a corridor for life. Two languages open every door along the way". Let's try to learn more languages and open every opportunity in our lives.

Speech on the Importance of Learning English

The English language was initially the national language of England. Later, as a result of British imperialism and colonisation, the language was introduced to many nations. Eventually, it became the primary and secondary language of their colonies, such as India, Australia, Sri Lanka, Canada etc. Gone are the times when the British ruled over more than half the world, but their language is still ruling almost half the entire world.

Today, nearly sixty-seven countries all over the world have declared English as their official language, and twenty-seven countries consider English as their secondary language. Without a second thought, we can declare the English language as one of the most dominant languages in the world.

The English language is the key to opening the door to the world. It is one of the most used languages in the world. The knowledge of the English language helps everyone to attain personal and

professional growth. As a result, people all over the world have started to learn English as a second language. Many nations have included English as their second language in their school curriculums to assist students in learning English at a young age. Almost all the materials and subjects for learning are drafted in English to make it more accessible for everyone all around the world. The initiative of using the English language as a medium of instruction in schools and colleges brings a commonality to the structure of education and brings multiple positive impacts to the students.

Good communication skills in English are considered one of the most important soft skills required for an employee. Other than this benefit provided by the English language, it helps us understand different nations' cultures. A piece of good knowledge in English guides us to travel to any new nation. With the support of good understanding and communication skills, a person can easily transfer ideas and thoughts to one another. An insight of the English language increases the chance of setting up a good career.

The impacts brought by the English language on our lives are boundless. Let's realise the true potential of language and remember the words of Roger Bacon – "Knowledge of languages is the doorway to wisdom.

List some advantages of the English language.

- English is considered the principal language of communication by many nations, and everyone has accepted it as the global language.
- The English language knowledge helps everyone attain personal and professional growth.
- A piece of good knowledge in English guides us to travel to any new nations.
- English helps every content creator to receive a wider audience.
- The English language helps us to enjoy content like songs, movies, news, entertaining programmes, public events and so on.

References:

1. New Education Policy 2020 Highlights : School and higher education major changes
<https://www.hindustantimes.com/education/new-education-policy-2020-live-updates-importanttakeaways/story-yYm1QacNyFW4uTTU3g9bJO.html> Jul 30, 2020.
2. NEP 2020 : Implementation of New Education Policy in our education system.
<https://www.hindustantimes.com/education/nep-2020-implementation-of-new-education-policy-in-oureducation-system/story-bw4OiekFCamI7NPoNkgAoJ.html> Oct 22, 2020
3. Draft National Education Policy 2019,
<https://innovate.mygov.in/wpcontent/uploads/2019/06/mygov15596510111.pdf>



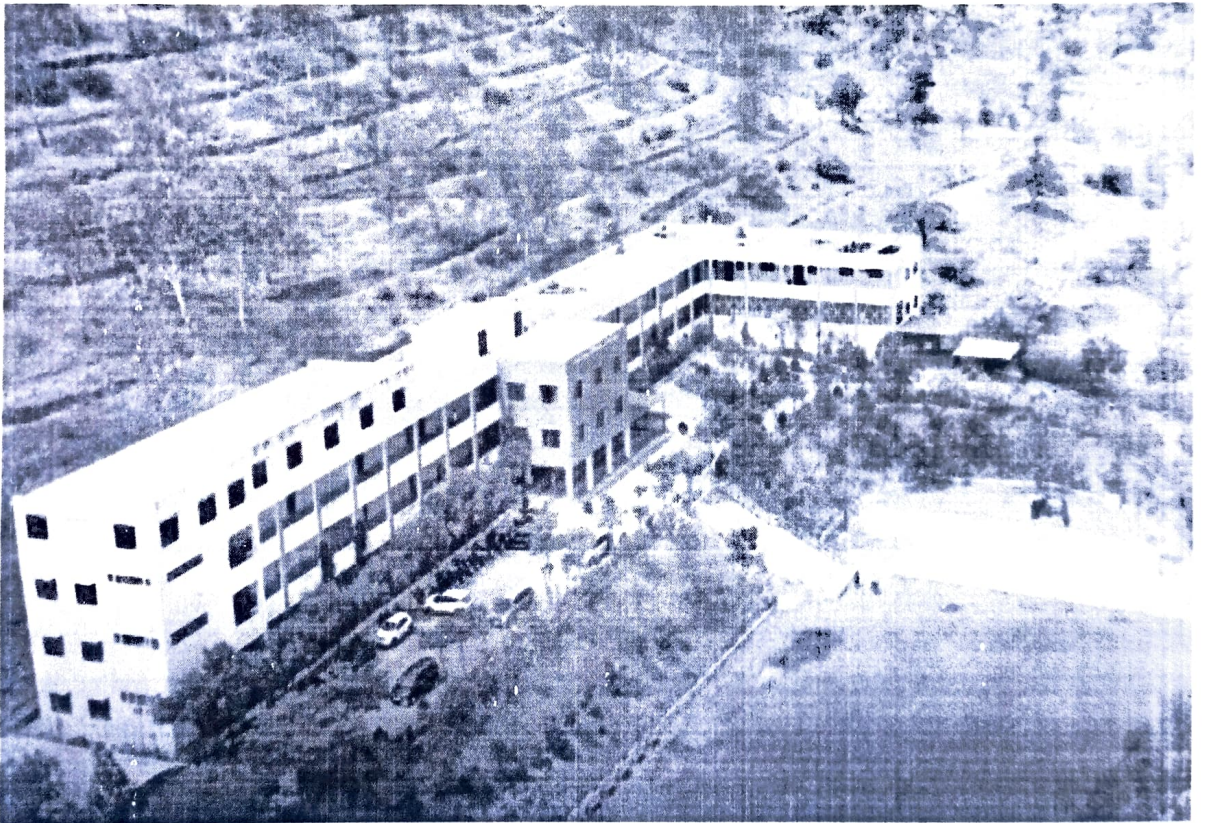
Ahmednagar Jilha Maratha Vidya Prasarak Samaj's

SHRI DHOKESHWAR COLLEGE

Takali Dhokeshwar, Parner, Dist - Ahmednagar - 414304 (M.S.) India.

One Day National Level Conference On

“National Education Policy: Implementation and Challenges”



Organized by

Shri Dhokeshwar College, Takali Dhokeshwar

8th Feb, 2024

Index

Sr.No	Name of Author	Name of the Abstract	Page no.
1.	Dr. Pranjali P. Bharate	Ability Enhancement Courses under NEP: Scope and Importance for Language	01
2.	Dr. Dattatray Sheshrao Ghungarde & Dr. Ashok V. Thokal	NEP2020 Implementation: A Comprehensive Analysis of Credit Pattern For UG Programme	06
3.	Mr Deepak Bansode	New education policy and skill development setting	07
4.	Shoukat Fakir, Agale N. K	Historical Review of Education Policy In India	09
5.	Mrs.Amita Bhalerao	New Education Policy 2020 of India	10
6.	Asst. Prof. Mandilkar. P. B	Advantage of NEP 2020	12
7.	Prof.Dr.Vijay Vishnu Gaikwad	National Education Policy: Implementation and Advantages	13
8.	Mr. Mane Mohan Narayan	New Education Policy: Implementation and Challenges	16
9.	Shinde Sagar Pandit	National Education Policy: Challenges to library	17
10.	Gadekar Apeksha Ramchandra	National Education Policy 2020	18
11.	Dr. Vishal G. Salve	Nep 2020: A Critical Analysis and Implementation	19
12.	C.A Khose Rhishikesh Dasharath	Navigating the Psychological Landscape: Teachers' Responses to the Implementation of India's New Education Policy (NEP)"	24
13.	Nilesh Sarjerao Salve	Interrelation of Technology Integration and NEP 2020: An Analytical study	25
14.	Dr. D.B.Kolhe	Principles of National Education Policy 202	30
15.	Dr. Thorat Shantabai Sitaram	New Education Policy: Implementation and Challenges"	32
16.	Prof.Mohan Vetal	National Education Policy : Implementation and Challenges	33
17.	Dr. Anand P. Pandit	A Review Study of National Education Policy 2020	34
18.	Mr. Anil Kale	National Education Policy: Implementation and challenges	35
19.	Dr.Bhushan P. Bhusare- Ramesh P. Zaware	The National Education Policy 2020 (NEP 2020): Implementation necessity and Future challenges	36
20.	Mrs.Bharti Santosh Yenare	Mathematics in New Education Policy -2020	37
21.	Prof. Darade P.P.	National Education Policy: Issues and Challenges	38
22.	Mrs.Varsharani Chandrakant Gadhawe	Impact of New Education Policy 2020 on Higher Education	42
23.	Dr. Aher R. K.	Importance of National Education Policy in Imparting Quality Education	43
24.	Mr.Kokate Santosh Bhaskar	NEP 2020: The Opportunity For Rural & Geographical Tough Areas	44
25.	Dr.Gangotri Vaishali Madhav	Challenges in Implementation of NEP 2020	45

26.	Prof. S.A. Veer	National Education Policy : Implementation and Challenges	46
27.	Rohokale Sima Lahu	A New Vision for India's Higher Education System	48
28.	Dhus Manoj Banshi	A New Approach in Ethical and Inclusion Education	49
29.	Chemate Rohini Bansi	Changing Role of Teacher Educators in View of NEP 2020	50
30.	Dalvi Samir Dadabhau	A study on NEP 2020: Implementation and Challenges.	51
31.	Mr. Virendra Dhanashetti	Issues with the NEP- 2020	53
32.	Mr. Kishor Kamble	New Education Policy (NEP) 2020	57
33.	Mr. Pratik Prakash Mane	National Education Policy and Enhancement of English Language Teaching and Learning in Rural Area.	58
34.	Prof.D. M. Lokhande	National Education Policy: Implementation and Challenges	59
35.	Amolik Rahul Maykal	Holistic Skill Development in Implementing New Education Policy 2020	60
36.	Chaudhari Somnath Aba	National Education Policy (2020): A Critical Analysis	61
37.	Zaware Ramesh Prabhu	Impact of National Education Policy 2020 and opportunities for stakeholders	62
38.	Sabale Priyanka Kacheshwar	Advantages of New Education Policy	63
39.	Tikone Komal Subhash	Disadvantages of NEP 2020	64
40.	Paimode Amol Kisan	NEP 2020 for Transforming Higher Education in India	65
41.	Jagtap Arti Balasaheb	Equitable and inclusive education	66
42.	Pingat Savita Pandurang	Important Features of the New Education Policy 2020	67
43.	Gaikwad Sanjay .B	Research Internship at Higher Education Institutions/Research Institutions	68
44.	Tingre Shailaja Arvind	Role of Indian Art and Culture in NEP 2020	69
45.	Aarzo Dagu Shaikh	Endeavour aspects of NEP 2020in developing India	70
46.	Dr. Bodke P. R.	New Education Policy : Implementation and Challenges	71
47.	Mrs.Ashwini Bhausaheb Satpute	Impact of New Education Policy 2020 on School Education	73
48.	Prof.Dr.Raghunath Dhondiba Shelke	National Education Policy 2020	74
49.	Mrs. Shilpa Sanjay Mahajan	Role Of Academic Libraries In Context Of National Education Policy	75
50.	Prof. Ravindra Sampat Wale	National Education Policy (Nep): Fundamental Pillars & Pitfalls	76
51.	Dr.Sopan Bhanudas Dahatonde	NEP 2020: Equity and inclusion in Higher Education	78
52.	Mr. Tushar A. Galbote	Importance of New Education Policy	82

53.	Dr. Deepak Pandharinath Sontakke	New Education Policy 2020: Challenges and Implementation	85
54.	Khamkar Manisha Tukaram	Teacher education in National Education policy 2020	86
55.	दुर्गा सुहास रायकर	राष्ट्रीय शैक्षणिक धोरण २०२०	87
56.	अश्विनी बाबू भोसले	नवीन शैक्षणिक धोरण : 'स्वरूप आणि दिग्दर्शक'	90
57.	डॉ. विजाभाऊ शिवाराव भूते	राष्ट्रीय शैक्षणिक धोरण आणि तात्कीय प्रक्रिया	92
58.	प्रा. लक्ष्मण धिकाजी कोठावळे	नवीन शैक्षणिक धोरण आणि संत माहितीवरील मूल्यशिक्षण	94
59.	प्रा. श्रीकांत गोपीनाथ आल्हाट	नवीन राष्ट्रीय शैक्षणिक धोरण 2020: स्वरूप, मूल्य आणि आव्हाने	95
60.	लहरे माया नारायण	नवीन शैक्षणिक धोरण :- शैक्षणिक संकूल संकल्पना	96
61.	प्रा. शांता रंगनाथ गडगे	नवीन राष्ट्रीय शैक्षणिक धोरणाची गरज	99
62.	प्रा. विशाल रामदास रोकडे	नवीन शैक्षणिक धोरण आराखडा : उद्दिष्टे, फायदे व आव्हाने	101
63.	डॉ. हनुमंत गायकवाड	राष्ट्रीय शिक्षा नीति	104
64.	श्री संजय नाना बागल	बहुविद्याशाखीय वशक्षण आवण समग्र विकास	105
65.	गंडाळ आबासाहेब तान्हाजी	नवीन शैक्षणिक धोरण :- शैक्षणिक संकूल संकल्पना	110
66.	प्रा. प्रकाश महादू गावित	अहमदनगर जिल्ह्यातील नवीन राष्ट्रीय शैक्षणिक धोरण 2020 - अंमलबजावणी व आव्हाने	113
67.	डॉ. विजय निवृत्ती सुरोशी	राष्ट्रीय शैक्षणिक धोरण : 1968, 1986 व 2020	114
68.	प्रा. श्रीमती स्वाती रमेश फापाळे	नवीन शैक्षणिक धोरण आणि सताचे मूल्यशिक्षण	115
69.	प्रा. डॉ. एकनाथ जाधव	“राष्ट्रीय शिक्षा नीति 2020 और भारतीय भाषाएँ”	116
70.	तेजश्री संजय उदावत	ग्रंथालय आणि माहितीशास्त्र	117
71.	डॉ. विजयकुमार राउत	राष्ट्रीय शिक्षा नीति 2020: चुनौतिया और संभावनाएँ	118
72.	सुनील अबादास आहिरे	‘भारतीय शिक्षण व्यवस्था आणि नव शैक्षणिक धोरण’	119

NEP 2020: A Critical Analysis and Implementation

Dr. Vishal G. Salve

Assistant Professor

New Arts, Commerce and Science College, Parner

Ahmednagar (MH) 414302

9423050955

Abstract:

A comprehensive framework called the New Education Policy (NEP) 2020 aims to revolutionize the educational systems in India. The policy aims to educate students through a comprehensive and multidisciplinary approach, emphasizing the development of their emotional, social, and cognitive abilities. However, there are a number of obstacles to the policy's implementation, such as a lack of funding, a shortage of trained personnel, and a lack of infrastructure. NEP 2020's critical analysis shows that despite the policy's lofty goals and good intentions, there could be major obstacles in the way of its execution. The current education system is still largely teacher-driven, despite the policy's emphasis on the need for a student-centric approach.

Furthermore, the NEP suggests major curriculum modifications; however, its implementation may be hampered by a lack of infrastructure and qualified teachers to support the new approaches. The digital divide in the nation may limit the efficacy of the NEP 2020's promotion of technology use in education. Furthermore, given the current lack of qualified trainers and resources, it is unclear how the policy's significant shift towards vocational educations will be carried out. All things considered, the NEP 2020 is a positive step toward changing the Indian educational system. The government's capacity to handle implementation-related issues like funding, infrastructure, teacher preparation, and the digital divide will determine whether or not it is successful.

Keywords: Teacher Training, Technology Integration, Holistic Education, Multidisciplinary Education, Skill Based Education, New Education Policy 2020.

Introduction:

An extensive framework for the advancement of education in India is provided by the National Education Policy (NEP) 2020. The goal of NEP 2020 is to transform India's educational system to meet 21st-century needs and establish a knowledge-based society. The goal of the policy is to restructure the educational system and give students a more comprehensive and real-world education. Following extensive consultation with stakeholders, including educators, policymakers, and the public, the Indian government launched it in July 2020.

A number of changes to the educational system are suggested by NEP 2020, including the implementation of a new curricular and pedagogical structure (5+3+3+4), a multidisciplinary approach to education, the promotion of technology in the classroom, the formation of the National Education Technology Forum (NETF), and the establishment of a National Assessment Center (NAC) to evaluate student learning outcomes. Since its inception, NEP 2020 has been continuously implemented. The National Implementation Committee (NIC) and State Implementation Committees (SICs) are two of the committees that the government has established to supervise the policy's execution. A task force has also been established by the government to create a comprehensive implementation roadmap for NEP 2020. Its vision and all-encompassing approach to the advancement of the educational system have garnered significant praise. On the other hand, there are some reservations and objections to its application.

The 2020 New Education Policy: On July 28, 2020, the Union Cabinet of India approved the National Education Policy (NEP). After a 34-year break, it seeks to significantly alter the nation's educational system and give all students access to a fair, inclusive, and multidisciplinary education. It also seeks to establish a learner-centric system that equips students with the skills they need to meet the challenges of the twenty-first century. NEP 2020 also seeks to guarantee ongoing professional development and training for teachers, as well as flexibility in the curriculum and the use of technology in the classroom. Since its release, the policy has been the subject of intense discussion and debate. While some stakeholders have praised it as a significant reform, others have expressed concerns about how it will be implemented.

Analysis of Data

Exam Reforms:

The policy encourages the use of formative and summative assessments and suggests a move away from rote learning toward conceptual understanding.

Financial Resources:

The National Institute of Public Finance and Policy (NIPFP) report emphasizes that substantial financial resources are required for the successful implementation of the policy. According to the report, there would be a need for an additional investment of between Rs. 1 lakh crore and Rs. 1.5 lakh crore per year to implement NEP 2020.

Holistic Education:

This method of teaching acknowledges the significance of fostering a person's intellectual, social, emotional, and physical growth on all levels. The policy acknowledges that education contributes to the development of well-rounded people who are able to face life's challenges. It does this by helping students acquire the knowledge, skills, attitudes, and values that are essential for leading a fulfilling

life. Holistic education helps shape a student's personality in the intellectual, social, emotional, and physical domains, thereby equipping them for the challenges of the future. It also contributes to the development of an equitable and inclusive society. By emphasizing the value of whole person development, holistic education can lessen inequality and guarantee that all students have access to high-quality instruction.

Lack of Stakeholder Consultation in the Development of NEP 2020:

The Center for Equity Studies (CES) report highlights that during the policy's development, there was little to no consultation with civil society organizations and marginalized communities. This might make it more difficult for the policy to meet these communities' needs.

Multidisciplinary Education:

The policy deviates from the conventional rote-learning method by recognizing the value of students' developing critical thinking, problem-solving, and creative skills. Students will benefit from this multidisciplinary approach by gaining a wider perspective and becoming more flexible, adaptive, and well-rounded individuals. The NEP places a strong emphasis on giving pupils a multidisciplinary education. This implies that a wide variety of subjects, such as the arts, humanities, sciences, and languages, will be taught to the students. The goal of this approach is to give students a well-rounded education so they can acquire a variety of skills and knowledge.

Research and Innovation:

The policy advocates for the creation of a National Research Foundation (NRF) to support research across all disciplines and acknowledges the significance of research and innovation in education.

Teacher Training:

To enhance a teacher's ability to teach, a continuous process of improving their professional competencies, knowledge, and skills is known as teacher training. In order to guarantee that teachers have the most recent information and abilities in their fields, the policy places a strong emphasis on the necessity of frequent and continuous training and development programs. The focus it places on ongoing professional development (CPD) The NEP 2020 emphasizes the necessity of teachers' ongoing professional development to advance their expertise and abilities as educators. The policy suggests that in order to improve their abilities and knowledge, teachers should have access to frequent training programs, workshops, and seminars.

Finding of the Study

Implementation of Challenges: One of the main conclusions from the research is that there are a lot of obstacles in the way of implementing NEP 2020 because there is not enough infrastructure, resources, or capacity available at different levels. The policy has lofty objectives, but in order to meet these targets, large investments and changes are required.

Assessment and Evaluation: The NEP 2020 suggests moving away from rote learning and toward a competency-based approach to assessment and evaluation. This is a step in the right direction.

Emphasis on Vocational Education: In tackling India's employment issues, the NEP 2020 places a strong emphasis on the value of vocational education and skill development.

Multilingualism: The NEP 2020 places a strong emphasis on skill development and vocational education, which is a step in the right direction towards resolving India's employment issues.

Teacher Training and Professional Development: The policy's emphasis on teachers' multidisciplinary training and ongoing professional development is a step in the right direction toward raising educational standards.

Suggestions

Clarity and Guidance: More clarification and direction are needed regarding how the policy's various components should be implemented. Clear guidelines, frameworks, and training programs should be made available by the government to assist stakeholders in comprehending and successfully implementing the policy.

Inclusivity and Equity: Inclusion and equity in education are highlighted in the NEP 2020. To reach all facets of society, especially those from underprivileged backgrounds, the government must, nevertheless, make sure the policy is carried out successfully.

Infrastructure and Resource Allocation: Large investments in resources, infrastructure, and capacity building are necessary for the NEP 2020 to be implemented. In order to successfully implement the policy, especially in rural and remote areas, the government should give it top priority and devote sufficient funding.

Monitoring and Evaluation: A move toward a competency-based approach to assessment and evaluation is suggested by the NEP 2020.

Partnerships and Cooperation: NEP 2020 calls for partnerships and cooperation amongst a range of stakeholders, including the public sector, private sector, academic institutions, and civil society. Through programs like knowledge-sharing platforms, research collaborations, and public-private partnerships, the government should encourage cooperation and partnerships.

Conclusion:

The paper's overall conclusion is that, despite providing a thorough vision for education reform in India, the NEP 2020's implementation is beset with difficulties and constraints. The government's capacity to resolve these issues and guarantee that all interested parties participate in the education reform process will determine whether NEP 2020 is a success or a failure.

Reference

A Critical Study Of NEP 2020: Issues, Approaches, Challenges, Oppertunities And Criticism
Venkateshwarlu. B . Peer Reviewed and Refereed Journal: VOLUME:10, ISSUE:2(5),
February:2021.

Analysis of the Indian National Education Policy 2020 towards to achieving its
objectives:https://www.researchgate.net/publication/343769198_Analysis_of_the_Indian_National_Education_Policy_2020_towards_Achieving_its_Objectives

National Education Policy 2020. https://www.mhrd.gov.in/sites/upload_files/mhrd/files/nep/NEP_Final_English.pdf referred on 10/08/2020.

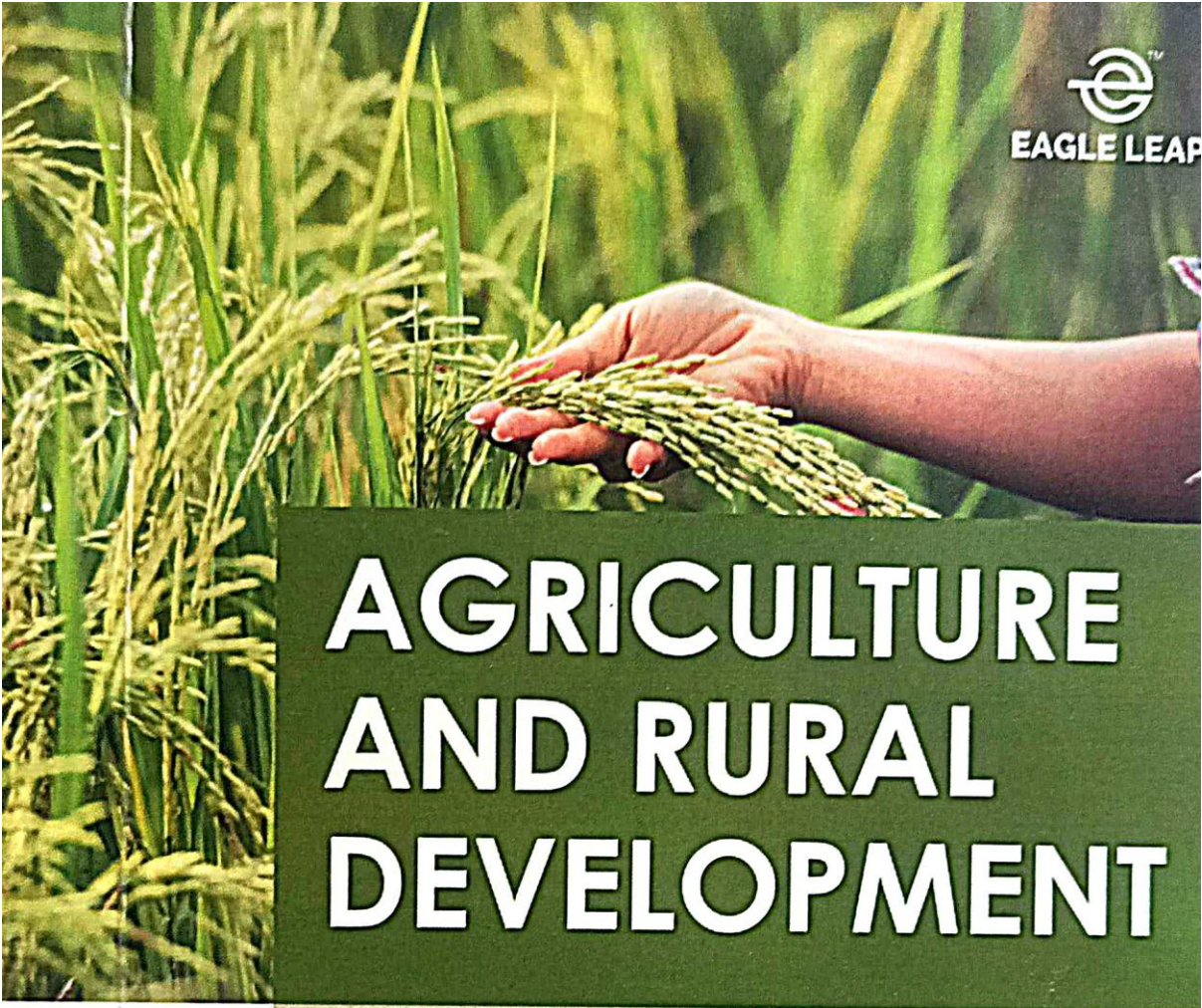
Critical analysis Of the Education Policy 2020 in India – B. Anu Vaishale & SOEL . Chennai
<http://www.probono-india.in/blog-detail.php?id=207>

New Education Policy 2020 Highlights : School and higher education major changes
<https://www.hindustantimes.com/education/new-education-policy-2020-live-updates-importanttakeaways/story-yYm1QaeNyFW4uTTU3g9bJO.html> Jul 30, 2020.

NEP 2020 : Implementation of New Education Policy in our education system.
<https://www.hindustantimes.com/education/nep-2020-implementation-of-new-education-policy-in-oureducation-system/story-bw4OiekFCamI7NPoNkgAoJ.html> Oct 22, 2020

Draft National Education Policy 2019.
<https://innovate.mygov.in/wpcontent/uploads/2019/06/mygov15596510111.pdf>

Critical Analysis of NEP 2020 and Its Implementation- Mr. Chinmaya Mallik
<https://www.ijnrd.org/papers/IJNRD2306594.pdf>



AGRICULTURE AND RURAL DEVELOPMENT

Academic year
2023-24

www.eagleleappublication.com

Titel : Environment, Agriculture and Rural
Development

Editor : Dr. Anil Ashok Landge,
Dr. Babasaheb Kacharu Wani,
Dr. Rajendra Sitaram Pawar.

Publisher
Address : Sandesh Dadarao Pahulkar
Chinchwad, Pune MH 411033

Printing &
Publish : Eagle Leap Printers And Publisher Pvt. Ltd.
SNO 57/4/5 Balaji Colony, Nr. Hanuman Mandir,
Bijali Nagar, Shivnagari, Chinchwad,
Pune MH 411033
Mo : 8600071634
Email : eagleleap.pp@gmail.com

ISBN : 978-81-968850-2-1

Publishing
Date : 12 January 2024



All rights reserved. No part of this publication may be reproduced or transmitted, in any form or by any means without permission.

30.	Levels of Rural Literacy Rates by Tahsil's of Ahmednagar District from 1971 to 2011 Dr. Pandurang Yadavrao Thombare	3
31.	The Role of Irrigation in Development of Fruits and Vegetables in Ahmednagar District (MH) Mr. Kiran Kundlik Sasane, Dr. Sanjay Sangale	3
32.	Impact of Topography on Agriculture Pattern of Parner Tehsil in Ahmednagar District (M.S.) Jyotsna D. Mhaske, Dr. Raghunath E. Najan, Dr. Ashok V. Thokal	3
33.	Study of Urban Fringe in Pimpri Chinchwad City Mrs. Sandhya Gore, Dr. Jyotiram More	3
34.	Role of Statistics in Agriculture: An Indian Perspective Dr. Mahesh Lavate, Dr. Sanjay Mishra	3
35.	Site Suitability Assessment for Percolation Tanks in Rahata Taluka, Maharashtra, India: A Geospatial Analysis C. M. Bansode, V. R. Sonawane	3
36.	Land-use Changes in Kahadia Island: A Remote Sensing Perspective on Mangrove Forest Dynamics Rupeshwari Sunil Dandgawhal, Dr. Hemlata Patel	35
37.	Agricultural Land use in 1990-91 to 2015-16 of Parner Tehsil of Ahmednagar District (MS) Dr. Aher Sanjay Sukhdev	36
38.	Impact of Yeldari Irrigation Project on Agricultural Development in Parbhani District Santosh Kundlik Jadhav, Dr. Vanmala R. Tadvi	37
39.	Status of Tribal Women in Ahmednagar District (Maharashtra) Dr. Vasudev Shivaji Salunke, Pramila Popatrav Zaware	38
40.	The Role and Impact of Tourism Industry in Development of India Archana Rajendra Doifode, Rajendra Kanhu Doifode	38

Impact of Topography on Agriculture Pattern of Parner Tehsil in Ahmednagar District (M.S.)

Jyotsna D, Mhaske., Dr. Rghunath E. Najan, Dr. Ashok
V. Thokal,

Assistant .Prof. Department of Geography, New Arts,
commerce & Science College, Parner Dist. – Ahmednagar
414302. Email:

jyotsnamhasket@gmail.com, mr.njan@gmil.com,
ashokthokal@gmail.com

Abstract: Topography is one of the physical factors. Physical factors of a region such as relief features, soil, climate, natural vegetation, availability of water and minerals are important to decide the land use of the region. The agricultural production and soil properties of any region are affected by the topography of that region. Studying the mountain plateau and plain landforms of the region, the agricultural production is largely in the plains. Below that is the production of the plateau region and there are some limitations for farming in the hilly regions. There are some limitations in the use of irrigation facilities in the plateau regions while new machinery can be used for farming in flat areas.

Present paper analyse the physical aspects and its impact on general land use and agricultural land use of parner tehsil of Ahmednagar District (M.S.). Central part of the tehsil is mostly occupied by plateau lies North West to south west in this region, also north part of the tehsil occupied by same lies west to east and some patches lies in south part of the tehsil including forty five villages. It is found that there is limitation for agriculture only pulses and rain fed crops are dominant feature of these villages except some villages like Pimpri Jalsen, Wadeghavhan, and Narayanghavhan because of canal

Year - 2024

irrigation. Surrounding to plateau area of the tehsil major village taking cash crops like onion, Greenpeace, and fruits and vegetables.

Key Words: Topography, Land use, Plateau cash crop Rain fed.

1. Introduction:

Topography is the measurement of elevation and slope it study of variation in elevation over a certain distance. Topography the field of geoscience that studies the shape and features of the earth surface. The term topography comes from Greek (topos, place, and graphia, writing), and it originated in ancient Greece as a comprehensive description of an area (Malpas, 2012). From a perspective, topographical studies are characterized by observation and recording of landscape features, such as terrain characteristics (rugged or smooth), hill and mountain relief, slope angles, and drainage patterns for specific areas (Christopherson & Birkeland, 2015). The altitude of the region determines the maturity of the soil. In the mountainous regions, the soil is immature, while in the plateau region, the soil is found to be somewhat mature, while in the plains, the soil has fine properties and is composed of fine particles. As the agriculture of a region is cultivated in the region, altitude, slope, soil and climate of that region can be seen to have an effect on the agriculture of that region.

The Indian subcontinent is a geographically vast nation in Asia. Due to this vast terrain, there is a great deal of diversity in its present natural structure. It consists of mountains, plateaus and plains. Considering the total area of India, approximately 29.3% is occupied by mountains and hills, 27.7% by plateaus and 43% by plains. Due to its diversity, development in the Indian subcontinent is also diverse. Geologically, Maharashtra is an important part of the Indian Peninsula. Most of the Indian Peninsula is covered by the Maharashtra Plateau and it is part of the ancient Deccan Plateau. The Maharashtra Plateau is made up of layers of lava from volcanic eruptions. Parner Taluka in Ahmednagar District of Maharashtra is a part of this Deccan Trap.

There are 14 tehsils in Ahmednagar District. Parner is one of which belong to the Deccan Plateau. The plateau is 850 meter mean sea level. The Kanhur Plateau is the center part of study's plateau.

Study area-

For the present study, Parner tehsil of Ahmednagar district has been selected as the study area in the state of Maharashtra. The Parner tehsil lies in Ahmednagar district consists of 131 villages and one urban center. Parner tehsil lies in the rain fed zone of Maharashtra.

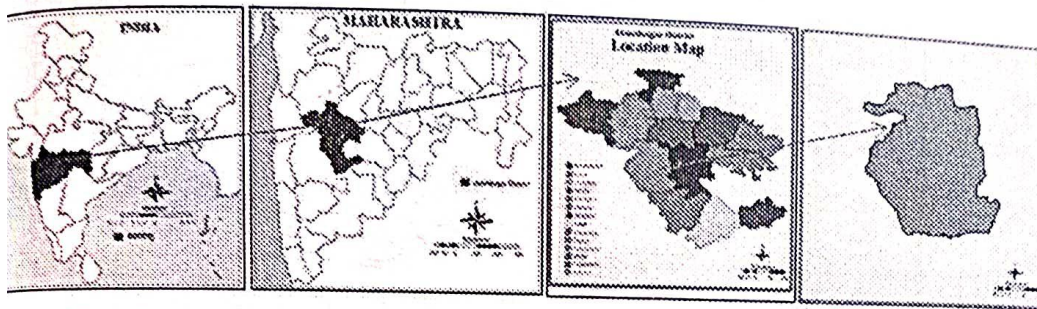


Figure 1 Location map of Parner Tehsil

Geographical location: Geographically Parner tehsil is located on the Deccan plateau. The extension of tehsil is $18^{\circ}49'40''N$ to $19^{\circ}21'13''N$ latitude and $74^{\circ}10'22''E$ to $74^{\circ}38'34''E$ Longitude. The region is bounded by river Kukadi, Ghod & Sina. Parner tehsil is surrounded by,

Ganmer tehsil in northwest, Rahuri tehsil in northeast, Nagar tehsil in east, Shrigonda tehsil in southern side & Pune districts boundary belongs to western side of Parner tehsil. Total geographical area of Tehsil is 1930.28 sq. km. For administrative purpose tehsil is divided into 8 circles.

Database and Methodology:-

Secondary data will be collected from the satellite image, maps, SOI toposheets, website, census, socio economic review, books and journals, Gazetteer and various government offices

Environment, Agriculture and Rural Development

Year - 2024

Objectives:-

1. To study the topography of Parner Taluka
2. Impact of Topography on Agriculture Pattern

Result and Discussion:

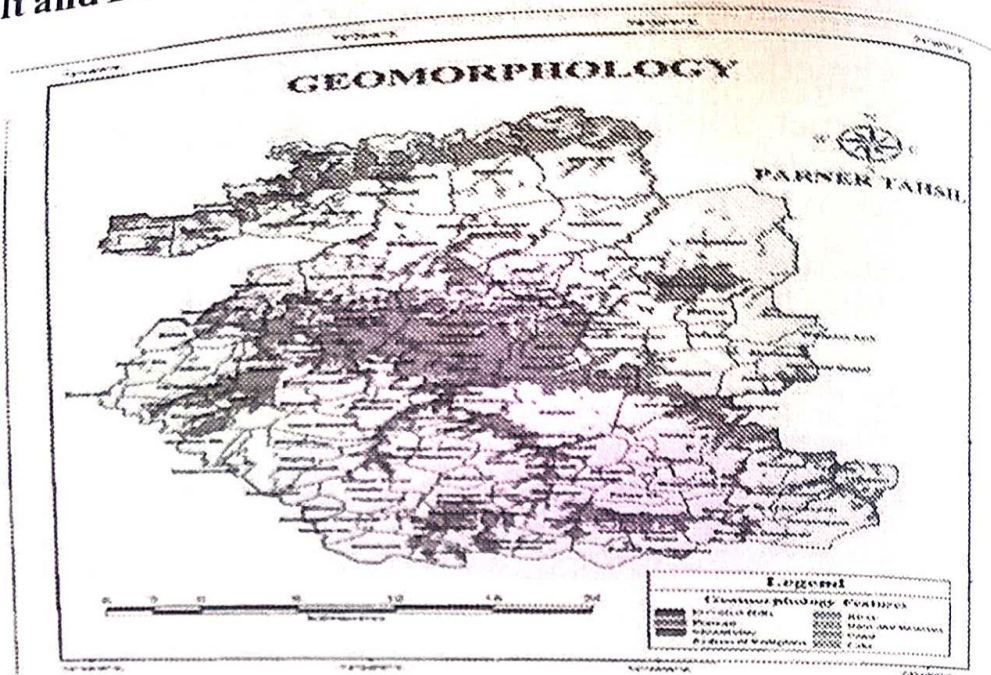


Figure 1 Topography map of Parner Tehsil

Table Number 1: Topography wise villages and Total Geographical Area.

Sl.No	Topography	Villages	TGA
1	Elevated hills		
2	Plateau	Dongrwdi, Palaspur Pokhar, Deswade, Mandvekh, Bhangadwadi, Nandur Pathar, Koregaon, Kasare, Takali Dhokeshwar, Kaknewadi, PimpalgaonTurk, Bhondre, Gargundi, PimpalgaonRotha, Akkaiwadi, Wadgaon Darya, PimpriPathar, Kanhyr, Wesdare, Tikhol, Bahirohawadi, Kimhi, Karandi, Wiroli, Hatalkhundi, Punevadi(NW), Siddheshwarwadi, Darodi, Padali Darya, Shirasola, Pabal, Randhe, Shirapur, PimpriJalsen, Shahjapur, Diskal, Supa, Ravatale, PimpriGayali, Bhojare, Narayangavhan, Kalamkarwadi, Wadegavhan, Mawalewadi, and Kurund.	58199.13
2	Mountains	Supa(E), PimpriGayali (E), Parner (W)	

3	Pedirwan Pedi plan	<p>MhasobaZap, Estalvedias, Wazawadi, Khandakarwad V. Palimha, Tal. Venkate, Wadgaon, Dharyalavari, Kasandgaon, Dhotea BK, Dhotea Kh, Dhotea, Wadgaon, Wadgaon, Kasulitarya, Hiyatekarada, Malkop, Bhalvau, Wadgaon, Anli, Dethane, Soud, Bhandara, Satula, Adtri, Jamgaon, Kalkop, Padali, Karan, Doregaon, - Parate, Panch, Gopnadi, Raleganidhi, Wadgaon, Fuzpalm, Kalar, Sarvagaon, Gokhadi, Bhalvade, Jadhavadi, Sherikavari, Aikoti, Mhasikavadi, Padali, Ale, Reawadi, Chembhat, Wadgaon BK, Wadgaon, Shirmale, Devitavara, Wadgaon, Khand, Gopnadi, Sangavara, Morwadi, Jawal, Patharwadi, Nighoj, Dhawarwadi, Gadhigaon, Gopnadi, M, baseKh, Hakigatpur, Majampur, Kohokadi, Loni, Haveli, Hamra, Waghade BK, Mhasga, Mangachi, Wadgaon, Haveli, Ghanegaon, Jatogaon, PalveKh, Apadgaon, Walwaga, Raniangaon, Bui, Chhatrapati, Babardi, Kadur, Padali, Raniangaon, Palve BK, Yadavwadi, Soltangpur, Ralegaon, Thalpal</p>	155499.87
---	-----------------------	---	-----------



Figure number2: Village Map of Parner tehsil (Source: MRSAC)

Figure number2: Village Map of Parner tehsil (Source: MRSAC)

Sr. no	Topography	Villages	Area Hl.	Cereals	Pulses	Others	Fodder Crops	Sugarcane	Oilseeds	Vegetables	Cattle	Bovine	Total Cattle
1	Plateau	46	58199.13	14045	2770	0	3999	689	8974	1380	898	170	59
2	Plateau			5163	6653	5043	3122	142	205	1250	3517	135	0
				19208	9423	5043	7121	831	9179	2630	4415	305	59
	Total												

Year - 2024

1	Fieldment PediplainRu hli	85	155430 47	306 45	488 5	0	914 7	2628	197 83	2683	124 4	61 5	16
2	Fieldment PediplainKh RGR			147 20	133 30	747 4	675 0	374	725	2646	300 5	31 2	2
	Total	131		453 65	182 15	747 4	158 97	3002	205 08	5329	424 9	72 7	16

Table Number 2: Cropping pattern of Parner Tehsil

Topography and cropping pattern of the Study Area:

Table number 2 and figure number 1 shows the distribution of topography in the study area.

A. Elevated hills: topographical map shows the small patches in the central and north most part of the tehsil, Dashabai Dongar is the highest elevated peak in the tehsil. No cropping pattern found in this category.

B. Plateau: Table number 2 and figure number 1 shows the distribution of topography and cropping pattern in the study area. Total geographical area of the villages of the plateau area is 58199.13 hectares. The villages includes in this category of topography are Dongrwadi, PalaspurPokhari, Deswade, Mandvekh, Bhangadwadi, NandurPathar, Koregaon, Kasare, TakaliDhokeshwar, Kaknewadi, Pimpalgaon Turk, Bhondre, Gargundi, PimpalgaonRotha, Akkalwadi, Wadgaon Darya, PimpriPathar, Kanhur, Wesdare, Tikhol, Bahirobawadi, Kinhi, Karandi, Wiroli, Hataalkhindi, Punewadi(NW), Siddheshwarwadi, Darodi, padali Darya, Shirasola, Pabal, Randhe, Shirapur, PimpriJalsen, Shahjapur, Diskal, Supa, Rayatale, PimpriGawali, Bhoyare Narayangavhan, Kalamkarwadi, Wadegavhan, Mawalewadi and Kurund. Total forty six villages are includes in plateau topography.

Cropping pattern: A cereal is first ranking crop which is occupied 19208 hectare area. Jowar, Bajara and wheat are major crops in cereals crops. Pulses is second ranking crops cultivated in the study area includes gram, *hulgautavali*, *chavali* and *math* occupied 9423 hectares area. Third ranking crop is onion which occupied 9179 hectare area, taking as cash crop. Fourth ranking crop is fodder crop which includes maize, lucern, ginni grass etc. Dairy

farming is joint business for agriculture in the villages of plateau region. Other major crops are oil seeds, green pease, vegetables occupied 5043,4415 and 2630 hectares area respectively. Sugarcane, flower and fruits are minor crops in this category. These minor crops are grown in plain and irrigated area. This discussion clearly indicates that impact of topography determines cropping pattern.

C. Pediment Pedit plain: Table number 2 and figure number 1 shows the distribution of topography and cropping pattern in the study area. Total geographical area of the villages of the Pediment Pedit plain area is 155430.47 hectares. The villages includes in this category of topography are Mhasoba Zap, Katalvedhe, Waranwadi, Khadakwadi(S), Palashi, Tas, Venkute, Wadgaon, Dhavalpuri, Gajadipur, Dhotre BK, DhotreKh, Dhoki, Wdgaonsavatal, KarjuleHarya, Hivarekorada, Malkup, Bhalavani, WadgaonAmli, DaithaneGunjl, Bhndgon, SarolaAdvi, Jamgaon, Kalkup, PadaliKanhur, Goregon, Parner, Panoli, Gatewadi, Ralegansidhhi, Wadule, Pimpalner, Kalas, Savargaon, Garkhindi, Bbhulwade, Jadhavwadi, Sherikasari, Alkuti, Mhaskewadi, Padali Ale, Renwadi, Chombhut, Wadaner BK, Wadzire, Shirsule, Devibhoyare, WadgaonGund, GanjiBhoyare, Sangavisurya, Morwadi, Jawal, Patharwadi, Nighoj, Dhawanwadi, Gadilgaon, Gunore, MhaseKh., Hakigatpur, Majampur, Kohokadi, Loni Haveli, Hanga, Waghunde, BK, Mhasne, Mungashi, Wadner Haveli, Ghanegaon, Jategaon, PalweKh., Apadhup, Walwane, Ranjangaon, RuiChhatrapati, Baburdi, Kadus, PadaliRanjangaon, Palve BK, Yadavwadi, Sultanpur and RalegnTherpal. Total eighty five villages are includes in Pediment Pedit plain topography.

Cropping pattern: A cereal is first ranking crop which is occupied 45365 hectare area. Jowar, Bajara and wheat are major crops in cereals crops. Second ranking crop is onion which occupied 20508 hectare area, taking as cash crop. Pulses is third ranking crops cultivated in the study area includes gram, *hulgautavali*, *chavali* and *math* occupied 18215 hectares area. Fourth ranking crop is fodder crop which includes maize, lucern, ginni grass etc. occupied 15897

hectares area. Dairy farming is joint business for agriculture in the villages of in this region. Other major crops are oil seeds, green pease, vegetables and sugarcane occupied 7474, 5329, and 4249 hectares area respectively. Flower and fruits are minor crops in this category. These minor horticultural crops are grown in plain and irrigated area. This discussion clearly indicates that impact of topography determines cropping pattern.

*** Findings and Conclusion:** Above discussion reveals that topography of Parner tehsil is dominated by plateau and pediment plain area. The topography of the region determines the maturity of the soil. In the mountainous regions, the soil is immature, while in the plateau region, the soil is found to be somewhat mature, while in the plains, the soil has fine properties and is composed of fine particles. As the agriculture of a region is cultivated in the regions, the altitude, slope, soil and climate of that region can be seen to have an effect on the agriculture of that region. So cropping pattern of Parner tehsil is dominated by cereal, pulses, and fodder and onion crops.

References:

- Panchayat Samiti office Parner Tehsil.
- Talukakrushivibhag, Parner.
- Socio economic abstract, Ahmednagar district. 2022
- www.agricensusnic.in
- MRSAC
- Wikipedia map.
- Dr.KishorChudhri Ph.D. Thesis

Geographical Perspectives on Environment



Academic year
2023-24

EDITORIAL BOARD



Dr. Anil Ashok Landge
Associate Professor and Head
Department of Geography



Dr. Babasaheb Kacharu Wani
Assistant Professor
Department of Geography



Dr. Rajendra Sitaram Pawar
Associate Professor
Department of Geography

EAGLE LEAP
PRINTERS AND PUBLISHER PRIVATE LIMITED

Office address : SNO 57/4/5 Balaji Colony
Nr. Hanuman Mandir Bijali Nagar
shivnagar Chinchwad ,Pune,
Maharashtra,India,411033

E-mail : egaleleap.pp@gmail.com
Contact : 8600071634 / 7083766990
Website : www.egaleleap.in
www.researchindex.co.in

ISBN :978-81-968850-8-3



Titel : Geographical Perspectives on Environment

**Editor : Dr. Anil Ashok Landge,
Dr. Babasahab Kacharu Wani,
Dr. Rajendra Sitaram Pawar.**

**Publisher Address : Sandesh Dadarao Pabulkar
Chinchwad, Pune MH 411033**

**Printing & Publish : Eagle Leap Printers And Publisher Pvt. Ltd.
SNO 57/4/5 Balaji Colony, Nr. Hanuman Mandir,
Bijali Nagar, Shivnagari, Chinchwad,
Pune MH 411033
Mo : 8600071634
Email : eagleleap.pp@gmail.com**

ISBN : 978-81-968850-8-3

Publishing Date : January 2024



All rights reserved. No part of this publication may be reproduced or transmitted, in any form or by any means without permission.

Editor

Dr. Anil Ashok Landge **Dr. Babasahab Kacharu Wani**
Associate Professor and Head Assistant Professor
Department of Geography Department of Geography

Dr. Rajendra Sitaram Pawar
Associate Professor
Department of Geography

Lonknete Dr. Balasahab Vikhe Patil (Padma Bhushan Awardee)
Pravara Rural Education Society's, Padmashri Vikhe Patil College of
Arts, Science and Commerce, Pravaranagar A/P: Loni Kd, Tal:
Rahata, Dist: Ahmednagar (M.S.)

CONTENTS

Sr.	Name of the Topic & Author's	Page No.
1.	Impact of Climate Change on Biodiversity in India: A Comprehensive Analysis Dr. Pramod A. Wadate, Dr. Bhagyashree R. Dhobale	01
2.	Spatial Change in Crop Combination Pattern of Junnar Tahsil of Pune, District (MS) Dr. Sharad B. Kaphale, Dr. Jyotiram C. More	14
3.	Assessment of the NDVI and TCC Greenness in the detection of vegetation based on Landsat satellites in the Upper Mutha basin, Pune District Dr. Kishor R. Sonawane, Dr. Jyotiram C. More, Mrs. Minal K. Sonawane	22
4.	A Comprehensive Assessment of the Environmental Impact of NH-6 in Khandesh Region: A Search for Sustainable Solutions Jae More, Dr. Dattatraya Harpale, Dr. Smia Harane	43
5.	Variation in Hardness of Drinking Water in Rahuri Tahsil of Ahmednagar District (M.S.) Dr. Sopan N. Shingote	56
6.	Role of Wind Energy Resources for Sustainable Development in Ahmednagar District Shoukat Fakir, Agale N. K	61
7.	Using Geospatial Technology of submergence area under flood in the Wainanganga basin, India Ravindra S. Bhagal	67
8.	Application of GIS and RS in Agriculture Mr. Gaikwad Prabhakar Madhukar, Dr. Sudarshan A. Aher, Dr. Rajendra S. Pawar	76
9.	A Review Study on Application of Remote Sensing for Irrigation Water Resource Management Anand Purushottam Pandit	82
10.	Exploring the Mula River in Pune District: A Comprehensive Study on its Background, Importance, and Water Quality Significance Nitin Prashant Vibhute, Dr. Ramakant Narayan Kasbate	92
11.	Evaluating the Quality of Groundwater through Various Methods Smt. Sonali Madhavrao Aware Dr. Rajendra Bhausaheb Zolekar, Dr. Snehal Nirvuti Kasar, Dr. Anil Ashok Landge	101
12.	Impacts of Climate Change on Sustainable Agriculture: A Review Bhushan Dengale, Shubham Shelke, Sanjay Giri Anil Wabale	112
13.	Study of Beach Tourism Carrying Capacity of Beaches in the Raigad District of Maharashtra Dr. Arnol M. Bibc	125
14.	Drought Mitigation in Action: Jalukta Shivar Abhiyan and its Impact on Water Security in Walavane Village, Maharashtra Dr. Dattatray Sheshrao Ghungarde	132
15.	Morphometric Analysis of Panzara Basin using Geospatial Technique Mr. D. S. Nikumbh, Dr. S. C. Gorane	140
16.	Blue Green Algae from Wheat Fields of Ahmednagar District Vikhe J. V., Wabale A. S., Kharde M. N.	152
17.	Review of Impact of Light Pollution in Environments Pathan A. S., Anarthe S. S.	162
18.	Analysis of Growth in Floriculture of Sangamer Tehsil, Ahmednagar District Maharashtra, India Thorat Ashok Maruti, Pagar Sanjay Dagu	170

Drought Mitigation in Action: Jalukta Shivar Abhiyan & its Impact on Water Security in Walavane Village, Maharashtra

Dr. Dattatray Sheshrao Chungarde

Associate Professor

Dept. of Geography,

New Arts, Commerce & Science College,
Parner, Dist.: Ahmednagar

Pin code: 414302

Mob. No.: 9822572733, 9422932733

Email: dsghungarde@gmail.com

Abstract

The Maharashtra government launched the Jalukta Shivar Abhiyan to make 5,000 villages drought-free by 2019. It emphasizes belief that every raindrop should percolate into farmers' Activities included stream improvement, dam construction, channel work, and farm pond creation. The goal was to promote public participation and community empowerment in water management. For the latest updates, check official government sources or recent news articles. ^[1]

This research paper investigates the effectiveness of the Jalukta Shivar Abhiyan (JSA) water conservation scheme in mitigating the impact of irregular rainfall and subsequent water scarcity in a drought-stricken village of Walavane, Maharashtra. The study encompasses a thorough review of JSA works, assessing their influence on water requirements, runoff from rainfall, and their role in water conservation scenario in the village. Utilizing a mixed methodology involving primary field surveys and secondary data from official sources, the research analyzes the impact of the scheme on different slope categories and specific water conservation measures. Despite notable improvements in runoff retardation

Year - 2024

findings reveal a deficit of 1185 T.C.M. in meeting the village's water requirements, emphasizing the need for continued analysis and complementary water management practices, water recycling and reuse, efficient irrigation practices, community education and harvesting, and soil conservation, community education and agro forestry and soil conservation and alleviate water participation to achieve sustainable agriculture and alleviate water scarcity challenges in the region.

Key words: Jalukta Shivar Abhiyan, Water Conservation, Rainfall Runoff, Drought Mitigation, Sustainable Agriculture.

Introduction

Irregular and discontinuous rainfall during crop growth has led to continuous scarcity- conditions in Maharashtra. The last few years have seen a huge impact of these conditions on the agricultural sector. The Rainfed crop production is showing significant fluctuations. This situation is mainly due to scarcity of water. The various measures under water conservation can definitely be planned and implemented to make water available for drinking and sustainable agriculture. To overcome this scarcity situation, the government of Maharashtra has launched a water conservation scheme named 'Jalukta Shivar Abhiyan' (JSA) in 2015. The slogan 'Water for all-Drought free Maharashtra 2019' has been well announced by this scheme. Various comprehensive watershed development works were done under this scheme. ^[2]

The drought stricken village Walavane was selected in the year 2016 under this scheme. The village is situated at 3 Km from Nagar-Pune state highway (SH-27). The present research paper attempts to review the work done under 'Jalukta Shivar Abhiyan' scheme and its impact on various sectors in this village.

Objectives

- The main objectives of present research paper are;
- To review of works done under 'Jalukta Shivar Abhiyan' scheme in the Walavane village.
 - To assess the impact of water conservation on Water requirements in the village

Database and Methodology

To fulfil the above objectives, data has been collected from various primary and secondary sources. The primary data collected through field survey. The secondary data is obtained from various sources viz, Agricultural department of Ahmednagar, Village Krushi Sahayak and Talathi office etc.

On the basis of the statistical data extracted from the village referred of Walavane village, the comparative study has been carried out before and after implementation of the scheme. The data has been processed, tabulated and prepared graphs for purpose of analysis.

Study area

Walavane is a village in Parner taluka in Ahmednagar district of state of Maharashtra, India. The village is situated around 4 km from Nagar-Pune state highway (SH-27) and 30 km away from Ahmednagar district headquarters. The Geographical location of village is 18°56'41.5"N latitude and 74°33'47.8"E longitude. The village has average elevation of 546 m from mean sea level. The River passes from the outskirts of the Walavane village. The geographical area of the village is 1533.55 hect which is 0.7% of Tehsil's land. The village receives an average annual rainfall of 1150 mm. The minimum and maximum temperature ranges between 10 to 44°C.

The village has population of 1919 persons of which 944 males while 973 are females as per Population Census 2011. Average Sex Ratio of Walavane village is 1029 which is higher than Maharashtra state average of 929. In Walavane village population of children with age 0-6 is 220 which make up 11.46 % of total population of village. Child Sex Ratio for the Walavane village is 864, lower than Maharashtra average of 894. Walavane village has lower literacy rate compared to Maharashtra. In 2011, literacy rate of Walavane village was 75.81 % compared to 82.34 % of Maharashtra. In Walavane Male literacy stands at 86.23 % while female literacy rate was 65.90 %.^[9]



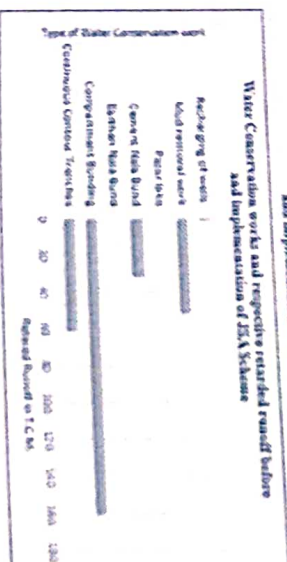
Figure No. 1: Location map of study area

before as well as after implementation of this scheme in the village. It also shows the retarded runoff by respective water conservation work in thousand cubic meters (T.C.M.).

Table No. 1: Water Conservation works and respective retarded runoff before and after implementation of JSA Scheme

No.	Type of Work	Before JSA Scheme		After JSA Scheme		Increase in Retarded Runoff (T.C.M)
		Number	Retarded Runoff (T.C.M)	Number	Retarded Runoff (T.C.M)	
1	Contour Bund	20	9	190	10.20	461.2
2	Tree plantation	55	12.10	185	17.10	168.6
3	Check dam	1	3.50	5	17.50	8.5
4	Grass Strip Bund	5	15	9	9	8.5
5	Grass Strip Bund	4	15	4	15	8.5
6	Grass Strip Bund	4	15	5	15	8.5
7	Grass Strip Bund	4	15	5	15	8.5
8	Grass Strip Bund	4	15	5	15	8.5
9	Grass Strip Bund	4	15	5	15	8.5
10	Grass Strip Bund	4	15	5	15	8.5
11	Grass Strip Bund	4	15	5	15	8.5
12	Grass Strip Bund	4	15	5	15	8.5
13	Grass Strip Bund	4	15	5	15	8.5
14	Grass Strip Bund	4	15	5	15	8.5
15	Grass Strip Bund	4	15	5	15	8.5
16	Grass Strip Bund	4	15	5	15	8.5
17	Grass Strip Bund	4	15	5	15	8.5
18	Grass Strip Bund	4	15	5	15	8.5
19	Grass Strip Bund	4	15	5	15	8.5
20	Grass Strip Bund	4	15	5	15	8.5
21	Grass Strip Bund	4	15	5	15	8.5
22	Grass Strip Bund	4	15	5	15	8.5
23	Grass Strip Bund	4	15	5	15	8.5
24	Grass Strip Bund	4	15	5	15	8.5
25	Grass Strip Bund	4	15	5	15	8.5
26	Grass Strip Bund	4	15	5	15	8.5
27	Grass Strip Bund	4	15	5	15	8.5
28	Grass Strip Bund	4	15	5	15	8.5
29	Grass Strip Bund	4	15	5	15	8.5
30	Grass Strip Bund	4	15	5	15	8.5
31	Grass Strip Bund	4	15	5	15	8.5
32	Grass Strip Bund	4	15	5	15	8.5
33	Grass Strip Bund	4	15	5	15	8.5
34	Grass Strip Bund	4	15	5	15	8.5
35	Grass Strip Bund	4	15	5	15	8.5
36	Grass Strip Bund	4	15	5	15	8.5
37	Grass Strip Bund	4	15	5	15	8.5
38	Grass Strip Bund	4	15	5	15	8.5
39	Grass Strip Bund	4	15	5	15	8.5
40	Grass Strip Bund	4	15	5	15	8.5
41	Grass Strip Bund	4	15	5	15	8.5
42	Grass Strip Bund	4	15	5	15	8.5
43	Grass Strip Bund	4	15	5	15	8.5
44	Grass Strip Bund	4	15	5	15	8.5
45	Grass Strip Bund	4	15	5	15	8.5
46	Grass Strip Bund	4	15	5	15	8.5
47	Grass Strip Bund	4	15	5	15	8.5
48	Grass Strip Bund	4	15	5	15	8.5
49	Grass Strip Bund	4	15	5	15	8.5
50	Grass Strip Bund	4	15	5	15	8.5
51	Grass Strip Bund	4	15	5	15	8.5
52	Grass Strip Bund	4	15	5	15	8.5
53	Grass Strip Bund	4	15	5	15	8.5
54	Grass Strip Bund	4	15	5	15	8.5
55	Grass Strip Bund	4	15	5	15	8.5
56	Grass Strip Bund	4	15	5	15	8.5
57	Grass Strip Bund	4	15	5	15	8.5
58	Grass Strip Bund	4	15	5	15	8.5
59	Grass Strip Bund	4	15	5	15	8.5
60	Grass Strip Bund	4	15	5	15	8.5
61	Grass Strip Bund	4	15	5	15	8.5
62	Grass Strip Bund	4	15	5	15	8.5
63	Grass Strip Bund	4	15	5	15	8.5
64	Grass Strip Bund	4	15	5	15	8.5
65	Grass Strip Bund	4	15	5	15	8.5
66	Grass Strip Bund	4	15	5	15	8.5
67	Grass Strip Bund	4	15	5	15	8.5
68	Grass Strip Bund	4	15	5	15	8.5
69	Grass Strip Bund	4	15	5	15	8.5
70	Grass Strip Bund	4	15	5	15	8.5
71	Grass Strip Bund	4	15	5	15	8.5
72	Grass Strip Bund	4	15	5	15	8.5
73	Grass Strip Bund	4	15	5	15	8.5
74	Grass Strip Bund	4	15	5	15	8.5
75	Grass Strip Bund	4	15	5	15	8.5
76	Grass Strip Bund	4	15	5	15	8.5
77	Grass Strip Bund	4	15	5	15	8.5
78	Grass Strip Bund	4	15	5	15	8.5
79	Grass Strip Bund	4	15	5	15	8.5
80	Grass Strip Bund	4	15	5	15	8.5
81	Grass Strip Bund	4	15	5	15	8.5
82	Grass Strip Bund	4	15	5	15	8.5
83	Grass Strip Bund	4	15	5	15	8.5
84	Grass Strip Bund	4	15	5	15	8.5
85	Grass Strip Bund	4	15	5	15	8.5
86	Grass Strip Bund	4	15	5	15	8.5
87	Grass Strip Bund	4	15	5	15	8.5
88	Grass Strip Bund	4	15	5	15	8.5
89	Grass Strip Bund	4	15	5	15	8.5
90	Grass Strip Bund	4	15	5	15	8.5
91	Grass Strip Bund	4	15	5	15	8.5
92	Grass Strip Bund	4	15	5	15	8.5
93	Grass Strip Bund	4	15	5	15	8.5
94	Grass Strip Bund	4	15	5	15	8.5
95	Grass Strip Bund	4	15	5	15	8.5
96	Grass Strip Bund	4	15	5	15	8.5
97	Grass Strip Bund	4	15	5	15	8.5
98	Grass Strip Bund	4	15	5	15	8.5
99	Grass Strip Bund	4	15	5	15	8.5
100	Grass Strip Bund	4	15	5	15	8.5

Figure No. 2: Water Conservation works and respective retarded runoff before and after implementation of JSA Scheme



(Source: Compiled by researcher based on Secondary data)

The above table (Table 2) and bar chart (Figure 2) outlines the impact of the "Jalyukt Shivar" Scheme on water runoff retardation through various conservation efforts. Before the implementation of the scheme, the data suggests that there were 129 sites with a retarded runoff of 263.60 T.C.M (Thousand Cubic Meters). After the scheme, a remarkable improvement is observed, with 124 sites contributing to a substantially increased retained runoff of 306.8 T.C.M. This represents a notable increment of 306.8 T.C.M in overall retardation of runoff.

The secondary data reveals diverse outcomes examining specific conservation measures. Continuous Contour Trench, Compartment Bunding, and Cement Nala Bunds show considerable advancements in runoff retardation, with marked increases in the number of sites and the volume of retained water. Conversely, Earthen Nala Bunds and Pazar Lakes exhibit no change in their impact, suggesting that their effectiveness remained constant before and after the implementation of the "Jalyukt Shivar" Scheme.

Notably, Mud Removal Work and Recharging of Wells emerge as new initiatives post-scheme implementation. The removal from 26 sites resulted in a significant increment of 52 T.C.M in retarded runoff, while the recharging of 5 wells contributed an additional 1 T.C.M. These outcomes collectively emphasize the positive impact of the JSA Scheme in enhancing water conservation efforts and mitigating runoff.

Impact of JSA Scheme on overall water requirements of village

The first section of the table (Table 3) outlines the water requirements for the village, categorizing them into two main purposes. For crops, the water demand is substantial, totaling 1763.90 T.C.M. (Thousand Cubic Meters). Additionally, a minimum amount of water, 0.48 T.C.M., is specified for drinking purposes.

Table No. 3: Impact of JSA Scheme on overall water requirements

Sr. No.	Particulars	Water (T.C.M)
1	For Crops	1763.90
2	For Drinking purpose	0.48
A	Total Requirement of water for village	1764.38
B	Total runoff received from rainfall	579.18
1	Due to Previous works	263.60
2	Due to near completed works under JSA scheme	306.80
C	Retarded runoff under water conservation works of JSA Scheme	570.40
D	Runoff flowing out of village catchment area/boundaries	8.78
	Runoff with respect to village water requirements	-1185.2

(Source: Compiled by researcher based on Secondary data)

will be assessed.

The second part of the table focuses on the water received from rainfall and subsequent runoff. The village receives a total runoff of 579.18 T.C.M. from rainfall. Within this, contributions are detailed, with 263.60 T.C.M. attributed to previous works and 306.80 T.C.M. from the completed works under the JSA scheme. The section also accounts for 570.40 T.C.M. of retarded runoff due to water conservation efforts. However, it's noted that 8.78 T.C.M. of runoff flows out of the village catchment area. These values provide insights into the dynamics of water inflow and conservation within the village.

The final part of the table calculates the runoff in relation to the village's water requirements. The figure is -1185.2 T.C.M., indicating a deficit in meeting the specified water needs. This negative value suggests that the water conservation measures undertaken by the "Jalyukt Shivar" Scheme, while contributing to overall retention, might not be sufficient to fully satisfy the village's water requirements. Further analysis and potentially additional water management strategies may be necessary to address this deficit and ensure sustainable water availability for both agricultural and domestic purposes in the village.

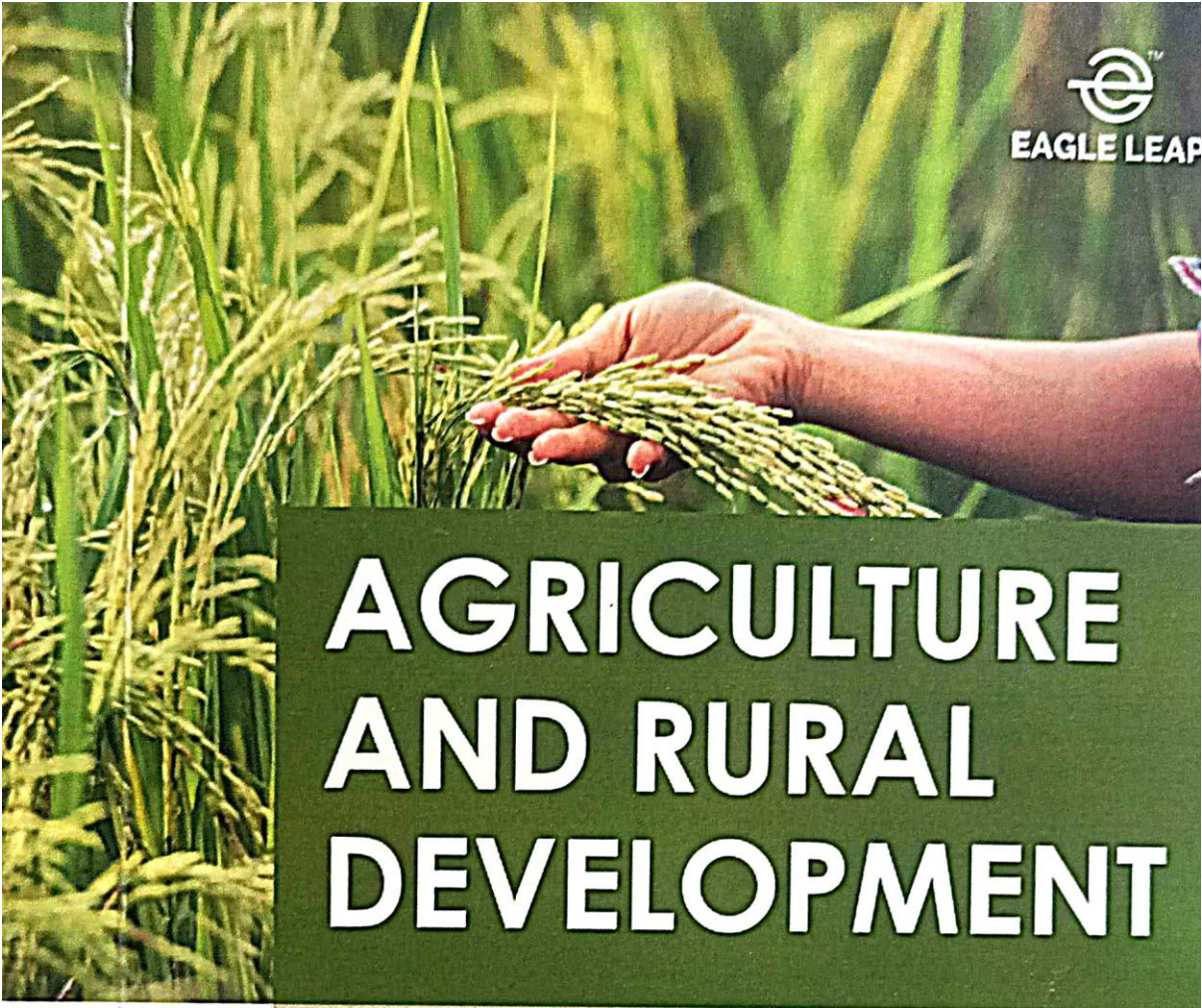
Conclusion

In conclusion, the research on the "Jalyukt Shivar" (JS) Malavane village underscores the critical role of water conservation efforts in mitigating the impact of irregular rainfall and persistent water scarcity in Maharashtra. The study meticulously examined diverse contributions of different terrains to water runoff, highlighting the importance of considering slope categories in effective resource management. The positive impact of JS runoff retardation is evident, with substantial improvements observed in various conservation measures. However, the analysis also reveals a deficit in meeting the village's water requirements, indicating that while the JSA scheme has made strides in enhancing water conservation, further strategies may be necessary to address sustainable water availability. Despite notable improvements in runoff retardation, the findings reveal a deficit in meeting the village's water requirements, emphasizing the need for continued analysis and complementary water management strategies such as rainwater harvesting, efficient irrigation practices, water reuse, and agro forestry and soil conservation, community education and participation to achieve sustainable agriculture and address water scarcity challenges in the region. This research serves as a valuable contribution to understanding the nuanced challenges of water management in agricultural landscapes and emphasizes the need for continuous evaluation and adaptation of conservation initiatives.

References

1. Dr. R. Bhavani (2016): "Comparison of Run-off Computation Using Strang's Table and 'Dry Damp Wet' Method", *International Journal of Science Technology & Engineering*, Volume 2 | Issue 10 | April 2016, ISSN (online): 2349-4069 (IJSTE/Volume 2/Issue 11/197)
2. www.wcd.maharashtra.gov.in

3. https://en.wikipedia.org/wiki/Jalyukt_Shivar_Abhiyan
4. Government of India (2011): District Census Handbook, Ahmednagar
5. Department of Agricultural, Ahmednagar District
6. Office of Talathi, Chas Village.
7. Krushi Sahayak, Chas Village.



AGRICULTURE AND RURAL DEVELOPMENT

Academic year
2023-24

www.eagleleappublication.com

Titel : Environment, Agriculture and Rural
Development

Editor : Dr. Anil Ashok Landge,
Dr. Babasaheb Kacharu Wani,
Dr. Rajendra Sitaram Pawar.

Publisher
Address : Sandesh Dadarao Pahulkar
Chinchwad, Pune MH 411033

Printing &
Publish : Eagle Leap Printers And Publisher Pvt. Ltd.
SNO 57/4/5 Balaji Colony, Nr. Hanuman Mandir,
Bijali Nagar, Shivnagari, Chinchwad,
Pune MH 411033
Mo : 8600071634
Email : eagleleap.pp@gmail.com

ISBN : 978-81-968850-2-1

Publishing
Date : 12 January 2024



All rights reserved. No part of this publication may be reproduced or transmitted, in any form or by any means without permission.

30.	Levels of Rural Literacy Rates by Tahsil's of Ahmednagar District from 1971 to 2011 Dr. Pandurang Yadavrao Thombare	3
31.	The Role of Irrigation in Development of Fruits and Vegetables in Ahmednagar District (MH) Mr. Kiran Kundlik Sasane, Dr. Sanjay Sangale	3
32.	Impact of Topography on Agriculture Pattern of Parner Tehsil in Ahmednagar District (M.S.) Jyotsna D. Mhaske, Dr. Raghunath E. Najan, Dr. Ashok V. Thokal	3
33.	Study of Urban Fringe in Pimpri Chinchwad City Mrs. Sandhya Gore, Dr. Jyotiram More	3
34.	Role of Statistics in Agriculture: An Indian Perspective Dr. Mahesh Lavate, Dr. Sanjay Mishra	3
35.	Site Suitability Assessment for Percolation Tanks in Rahata Taluka, Maharashtra, India: A Geospatial Analysis C. M. Bansode, V. R. Sonawane	3
36.	Land-use Changes in Kahadia Island: A Remote Sensing Perspective on Mangrove Forest Dynamics Rupeshwari Sunil Dandgawhal, Dr. Hemlata Patel	35
37.	Agricultural Land use in 1990-91 to 2015-16 of Parner Tehsil of Ahmednagar District (MS) Dr. Aher Sanjay Sukhdev	36
38.	Impact of Yeldari Irrigation Project on Agricultural Development in Parbhani District Santosh Kundlik Jadhav, Dr. Vanmala R. Tadvi	37
39.	Status of Tribal Women in Ahmednagar District (Maharashtra) Dr. Vasudev Shivaji Salunke, Pramila Popatrav Zaware	38
40.	The Role and Impact of Tourism Industry in Development of India Archana Rajendra Doifode, Rajendra Kanhu Doifode	38

Impact of Topography on Agriculture Pattern of Parner Tehsil in Ahmednagar District (M.S.)

Jyotsna D, Mhaske., Dr. Rghunath E. Najan, Dr. Ashok
V. Thokal,

Assistant .Prof. Department of Geography, New Arts,
commerce & Science College, Parner Dist. – Ahmednagar
414302. Email:

jyotsnamhasket@gmail.com, mr.njan@gmil.com,
ashokthokal@gmail.com

Abstract: Topography is one of the physical factors. Physical factors of a region such as relief features, soil, climate, natural vegetation, availability of water and minerals are important to decide the land use of the region. The agricultural production and soil properties of any region are affected by the topography of that region. Studying the mountain plateau and plain landforms of the region, the agricultural production is largely in the plains. Below that is the production of the plateau region and there are some limitations for farming in the hilly regions. There are some limitations in the use of irrigation facilities in the plateau regions while new machinery can be used for farming in flat areas.

Present paper analyse the physical aspects and its impact on general land use and agricultural land use of parner tehsil of Ahmednagar District (M.S.). Central part of the tehsil is mostly occupied by plateau lies North West to south west in this region, also north part of the tehsil occupied by same lies west to east and some patches lies in south part of the tehsil including forty five villages. It is found that there is limitation for agriculture only pulses and rain fed crops are dominant feature of these villages except some villages like Pimpri Jalsen, Wadeghavhan, and Narayanghavhan because of canal

Year - 2024

irrigation. Surrounding to plateau area of the tehsil major village taking cash crops like onion, Greenpeace, and fruits and vegetables.

Key Words: Topography, Land use, Plateau cash crop Rain fed.

1. Introduction:

Topography is the measurement of elevation and slope it study of variation in elevation over a certain distance. Topography the field of geoscience that studies the shape and features of the earth surface. The term topography comes from Greek (topos, place, and graphia, writing), and it originated in ancient Greece as a comprehensive description of an area (Malpas, 2012). From a perspective, topographical studies are characterized by observation and recording of landscape features, such as terrain characteristics (rugged or smooth), hill and mountain relief, slope angles, and drainage patterns for specific areas (Christopherson & Birkeland, 2015). The altitude of the region determines the maturity of the soil. In the mountainous regions, the soil is immature, while in the plateau region, the soil is found to be somewhat mature, while in the plains, the soil has fine properties and is composed of fine particles. As the agriculture of a region is cultivated in the region, altitude, slope, soil and climate of that region can be seen to have an effect on the agriculture of that region.

The Indian subcontinent is a geographically vast nation in Asia. Due to this vast terrain, there is a great deal of diversity in its present natural structure. It consists of mountains, plateaus and plains. Considering the total area of India, approximately 29.3% is occupied by mountains and hills, 27.7% by plateaus and 43% by plains. Due to its diversity, development in the Indian subcontinent is also diverse. Geologically, Maharashtra is an important part of the Indian Peninsula. Most of the Indian Peninsula is covered by the Maharashtra Plateau and it is part of the ancient Deccan Plateau. The Maharashtra Plateau is made up of layers of lava from volcanic eruptions. Parner Taluka in Ahmednagar District of Maharashtra is a part of this Deccan Trap.

There are 14 tehsils in Ahmednagar District. Parner is one of which belong to the Deccan Plateau. The plateau is 850 meter mean sea level. The Kanhur Plateau is the center part of study's plateau.

Study area-

For the present study, Parner tehsil of Ahmednagar district has been selected as the study area in the state of Maharashtra. The Parner tehsil lies in Ahmednagar district consists of 131 villages and one urban center. Parner tehsil lies in the rain fed zone of Maharashtra.

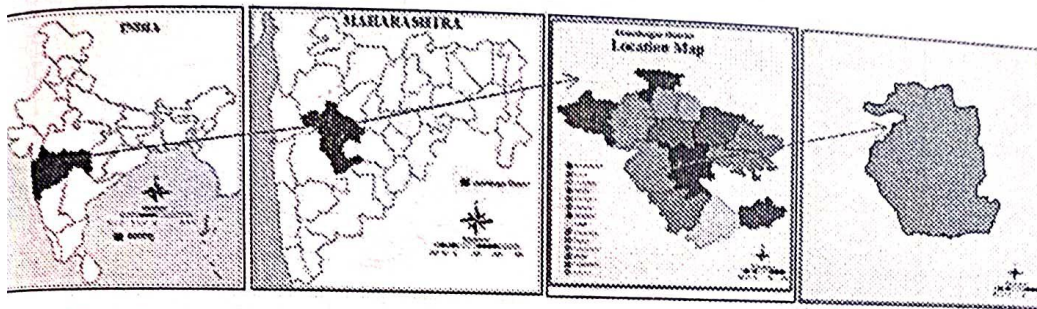


Figure 1 Location map of Parner Tehsil

Geographical location: Geographically Parner tehsil is located on the Deccan plateau. The extension of tehsil is $18^{\circ}49'40''N$ to $19^{\circ}21'13''N$ latitude and $74^{\circ}10'22''E$ to $74^{\circ}38'34''E$ Longitude. The region is bounded by the river Kukadi, Ghod & Sina. Parner tehsil is surrounded by,

Ganesh tehsil in northwest, Rahuri tehsil in northeast, Nagar tehsil in east, Shrigonda tehsil in southern side & Pune districts boundary belongs to the western side of Parner tehsil. Total geographical area of Tehsil is 1930.28 sq. km. For administrative purposes, the tehsil is divided into 8 circles.

Database and Methodology:-

Secondary data will be collected from satellite images, maps, SOI toposheets, website, census, socio-economic review, books and journals, Gazetteer and various government offices.

Environment, Agriculture and Rural Development

Year - 2024

Objectives:-

1. To study the topography of Parner Taluka
2. Impact of Topography on Agriculture Pattern

Result and Discussion:

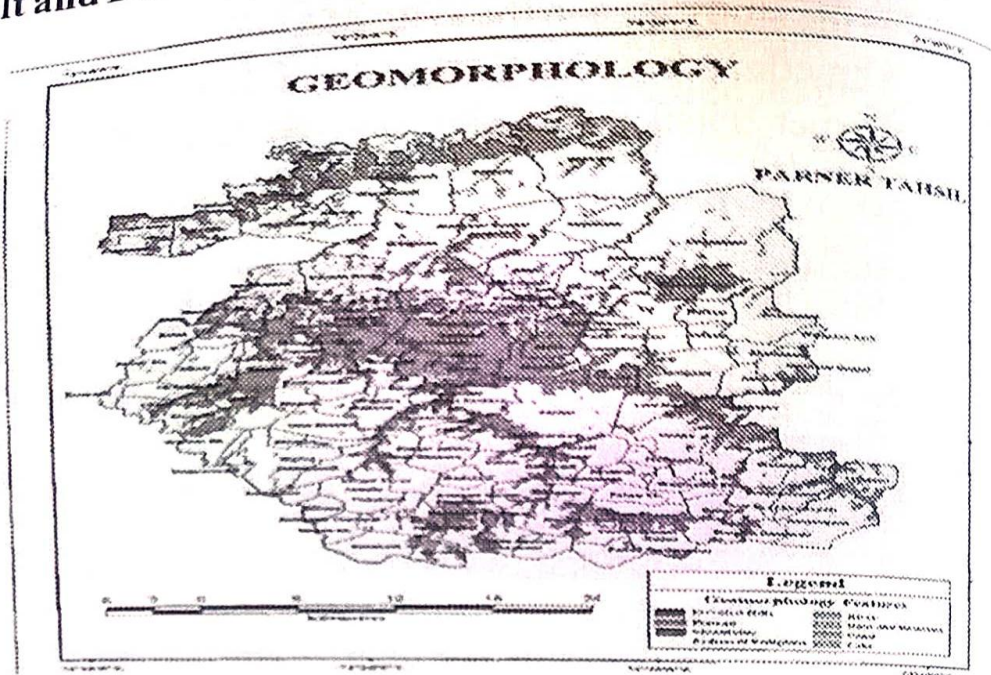


Figure 1 Topography map of Parner Tehsil

Table Number 1: Topography wise villages and Total Geographical Area.

Sr.No	Topography	Villages	TGA
1	Elevated hills		
2	Plateau	Dongrwdi, Palaspur Pokhar, Deswade, Mandvekh, Bhangadwadi, Nandur Pathar, Koregaon, Kasare, Takali Dhokeshwar, Kaknewadi, PimpalgaonTurk, Bhondre, Gargundi, PimpalgaonRotha, Akkaiwadi, Wadgaon Darya, PimpriPathar, Kanhyr, Wesdare, Tikhol, Bahirohawadi, Kimhi, Karandi, Wiroli, Hatalkhundi, Punevadi(NW), Siddheshwarwadi, Darodi, Padali Darya, Shirasola, Pabal, Randhe, Shirapur, PimpriJalsen, Shahjapur, Diskal, Supa, Ravatale, PimpriGayali, Bhevare, Narayangavhan, Kalamkarwadi, Wadegavhan, Mawalewadi, and Kurund.	58199.13
2	Mountains	Supa(E), PimpriGayali (E), Parner (W)	

3	Pediment	MhasobaZap, Estalvedas, Wazawadi, Khandakwadi V. Palimha, Tal. Venkate, Wadgaon, Dharyalwari, Kasandgaon, Dhotea BK, Dhotea Kh, Dhotea, Wadgaonwarah, Kasulwari, Haryakuraha, Malkop, Bhalvau, Wadgaon, Anli, Dethane, Soud, Bhandara, Satula, Adri, Jamgaon, Kalkop, Padali, Karan, Doregaon, - Parati, Panch, Gopnadi, Ralegaonidhi, Wadole, Fuzpalm, Kalar, Sarvanga, Gokhadi, Bhalwade, Jadhavadi, Sherikawari, Aikoti, Mhasikawadi, Padali, Ale, Reawadi, Chembhat, Wadner BK, Wadine, Shirmale, Devitoyara, Wadgaon, Kund, Gani, Bhorega, Sangatpurya, Morwadi, Jawal, Patharwadi, Nighoj, Dharwarwadi, Gadhigaon, Gwora, MhaseKh, Hakigatpur, Majampur, Kohokadi, Loni, Haveli, Hazra, Waghande BK, Mhasga, Mangachi, Wadner, Haveli, Ghanegaon, Jalogaon, PalweKh, Apadgaon, Walwaga, Raniangaon, Bui, Chhatrapati, Babardi, Kadur, Padali, Raniangaon, Palve BK, Yadavwadi, Soltangpur, Ralegaon, Theopal	155499.87
	Pedi plain		



Figure number2: Village Map of Parner tehsil (Source: MRSAC)

Figure number2: Village Map of Parner tehsil (Source: MRSAC)

Sr. no	Topography	Villages	Area H.	Cereals	Pulses	Others	Fodder Crops	Sugarcane	Oilseeds	Vegetables	Cattle	Bovine	Total Cattle
1	Plateau	46	58199.13	14045	2770	0	3999	689	8974	1380	898	170	59
2	Plateau			5163	6653	5043	3122	142	205	1250	3517	135	0
				19208	9423	5043	7121	831	9179	2630	4415	305	59
	Total												

Year - 2024

1	Fieldment PediplainRu hli	85	155430 47	306 45	488 5	0	914 7	2628	197 83	2683	124 4	61 5	16
2	Fieldment PediplainKh RGR			147 20	133 30	747 4	675 0	374	725	2646	300 5	31 2	2
	Total	131		453 65	182 15	747 4	158 97	3002	205 08	5329	424 9	72 7	16

Table Number 2: Cropping pattern of Parner Tehsil

Topography and cropping pattern of the Study Area:

Table number 2 and figure number 1 shows the distribution of topography in the study area.

A. Elevated hills: topographical map shows the small patches in the central and north most part of the tehsil, Dashabai Dongar is the highest elevated peak in the tehsil. No cropping pattern found in this category.

B. Plateau: Table number 2 and figure number 1 shows the distribution of topography and cropping pattern in the study area. Total geographical area of the villages of the plateau area is 58199.13 hectares. The villages includes in this category of topography are Dongrwadi, PalaspurPokhari, Deswade, Mandvekh, Bhangadwadi, NandurPathar, Koregaon, Kasare, TakaliDhokeshwar, Kaknewadi, Pimpalgaon Turk, Bhondre, Gargundi, PimpalgaonRotha, Akkalwadi, Wadgaon Darya, PimpriPathar, Kanhur, Wesdare, Tikhol, Bahirobawadi, Kinhi, Karandi, Wiroli, Hataalkhindi, Punewadi(NW), Siddheshwarwadi, Darodi, padali Darya, Shirasola, Pabal, Randhe, Shirapur, PimpriJalsen, Shahjapur, Diskal, Supa, Rayatale, PimpriGawali, Bhoyare Narayangavhan, Kalamkarwadi, Wadegavhan, Mawalewadi and Kurund. Total forty six villages are includes in plateau topography.

Cropping pattern: A cereal is first ranking crop which is occupied 19208 hectare area. Jowar, Bajara and wheat are major crops in cereals crops. Pulses is second ranking crops cultivated in the study area includes gram, *hulgautavali*, *chavali* and *math* occupied 9423 hectares area. Third ranking crop is onion which occupied 9179 hectare area, taking as cash crop. Fourth ranking crop is fodder crop which includes maize, lucern, ginni grass etc. Dairy

farming is joint business for agriculture in the villages of plateau region. Other major crops are oil seeds, green pease, vegetables occupied 5043,4415 and 2630 hectares area respectively. Sugarcane, flower and fruits are minor crops in this category. These minor crops are grown in plain and irrigated area. This discussion clearly indicates that impact of topography determines cropping pattern.

C. Pediment Pedit plain: Table number 2 and figure number 1 shows the distribution of topography and cropping pattern in the study area. Total geographical area of the villages of the Pediment Pedit plain area is 155430.47 hectares. The villages includes in this category of topography are Mhasoba Zap, Katalvedhe, Waranwadi, Khadakwadi(S), Palashi, Tas, Venkute, Wadgaon, Dhavalpuri, Gajadipur, Dhotre BK, DhotreKh, Dhoki, Wdgaonsavatal, KarjuleHarya, Hivarekorada, Malkup, Bhalavani, WadgaonAmli, DaithaneGunjl, Bhndgon, SarolaAdvi, Jamgaon, Kalkup, PadaliKanhur, Goregon, Parner, Panoli, Gatewadi, Ralegansidhhi, Wadule, Pimpalner, Kalas, Savargaon, Garkhindi, Bbhulwade, Jadhavwadi, Sherikasari, Alkuti, Mhaskewadi, Padali Ale, Renwadi, Chombhut, Wadaner BK, Wadzire, Shirsule, Devibhoyare, WadgaonGund, GanjiBhoyare, Sangavisurya, Morwadi, Jawal, Patharwadi, Nighoj, Dhawanwadi, Gadilgaon, Gunore, MhaseKh., Hakigatpur, Majampur, Kohokadi, Loni Haveli, Hanga, Waghunde, BK, Mhasne, Mungashi, Wadner Haveli, Ghanegaon, Jategaon, PalweKh., Apadhup, Walwane, Ranjangaon, RuiChhatrapati, Baburdi, Kadus, PadaliRanjangaon, Palve BK, Yadavwadi, Sultanpur and RalegnTherpal. Total eighty five villages are includes in Pediment Pedit plain topography.

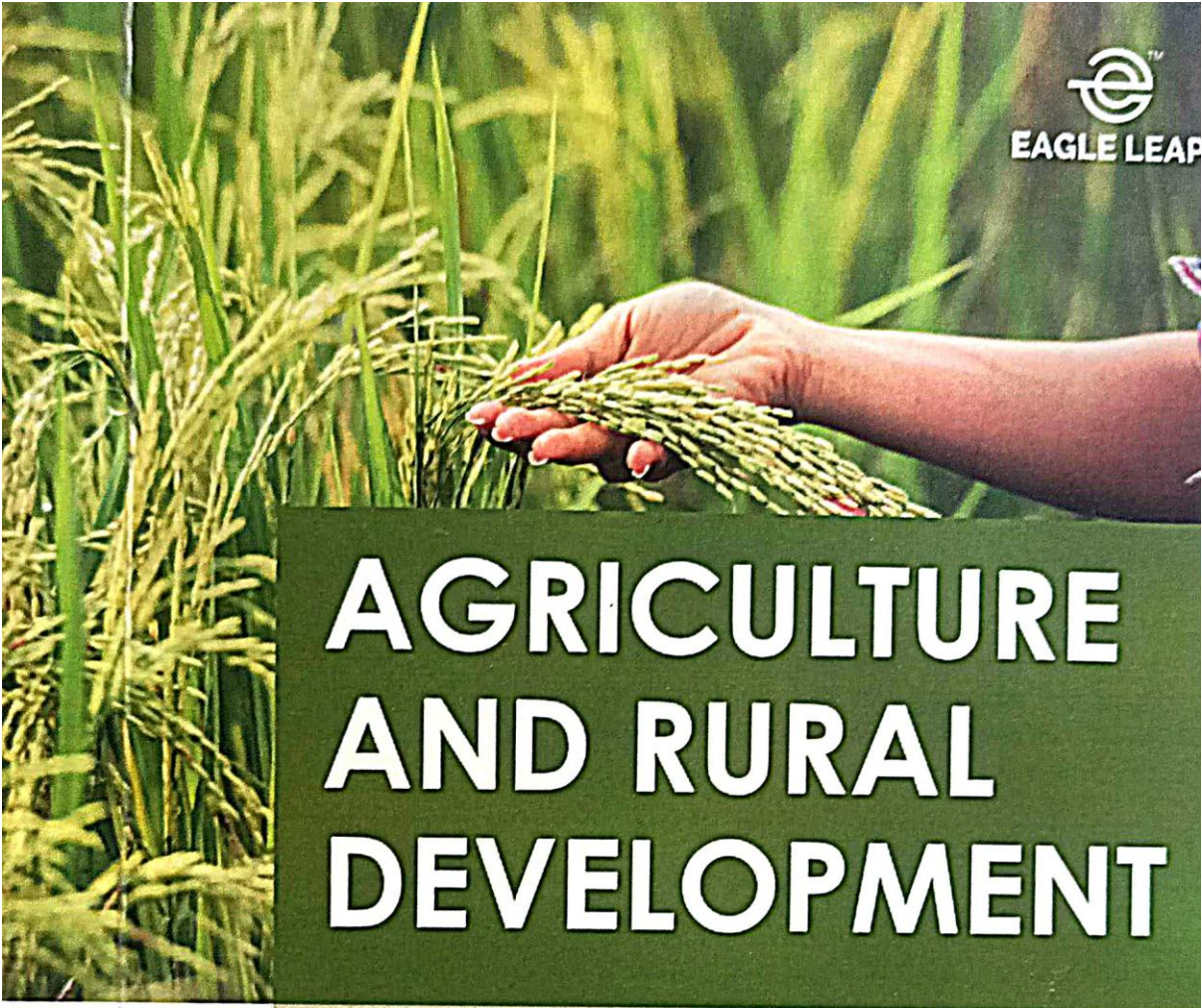
Cropping pattern: A cereal is first ranking crop which is occupied 45365 hectare area. Jowar, Bajara and wheat are major crops in cereals crops. Second ranking crop is onion which occupied 20508 hectare area, taking as cash crop. Pulses is third ranking crops cultivated in the study area includes gram, *hulgautavali*, *chavali* and *math* occupied 18215 hectares area. Fourth ranking crop is fodder crop which includes maize, lucern, ginni grass etc. occupied 15897

hectares area. Dairy farming is joint business for agriculture in the villages of in this region. Other major crops are oil seeds, green pease, vegetables and sugarcane occupied 7474, 5329, and 4249 hectares area respectively. Flower and fruits are minor crops in this category. These minor horticultural crops are grown in plain and irrigated area. This discussion clearly indicates that impact of topography determines cropping pattern.

*** Findings and Conclusion:** Above discussion reveals that topography of Parner tehsil is dominated by plateau and pediment plain area. The topography of the region determines the maturity of the soil. In the mountainous regions, the soil is immature, while in the plateau region, the soil is found to be somewhat mature, while in the plains, the soil has fine properties and is composed of fine particles. As the agriculture of a region is cultivated in the regions, the altitude, slope, soil and climate of that region can be seen to have an effect on the agriculture of that region. So cropping pattern of Parner tehsil is dominated by cereal, pulses, and fodder and onion crops.

References:

- Panchayat Samiti office Parner Tehsil.
- Talukakrushivibhag, Parner.
- Socio economic abstract, Ahmednagar district. 2022
- www.agricensusnic.in
- MRSAC
- Wikipedia map.
- Dr.KishorChudhri Ph.D. Thesis



AGRICULTURE AND RURAL DEVELOPMENT

Academic year
2023-24

www.eagleleappublication.com

Titel : Environment, Agriculture and Rural
Development

Editor : Dr. Anil Ashok Landge,
Dr. Babasaheb Kacharu Wani,
Dr. Rajendra Sitaram Pawar.

Publisher
Address : Sandesh Dadarao Pahulkar
Chinchwad, Pune MH 411033

Printing &
Publish : Eagle Leap Printers And Publisher Pvt. Ltd.
SNO 57/4/5 Balaji Colony, Nr. Hanuman Mandir,
Bijali Nagar, Shivnagari, Chinchwad,
Pune MH 411033
Mo : 8600071634
Email : eagleleap.pp@gmail.com

ISBN : 978-81-968850-2-1

Publishing
Date : 12 January 2024



All rights reserved. No part of this publication may be reproduced or transmitted, in any form or by any means without permission.

30.	Levels of Rural Literacy Rates by Tahsil's of Ahmednagar District from 1971 to 2011 Dr. Pandurang Yadavrao Thombare	3
31.	The Role of Irrigation in Development of Fruits and Vegetables in Ahmednagar District (MH) Mr. Kiran Kundlik Sasane, Dr. Sanjay Sangale	3
32.	Impact of Topography on Agriculture Pattern of Parner Tehsil in Ahmednagar District (M.S.) Jyotsna D. Mhaske, Dr. Raghunath E. Najan, Dr. Ashok V. Thokal	3
33.	Study of Urban Fringe in Pimpri Chinchwad City Mrs. Sandhya Gore, Dr. Jyotiram More	3
34.	Role of Statistics in Agriculture: An Indian Perspective Dr. Mahesh Lavate, Dr. Sanjay Mishra	3
35.	Site Suitability Assessment for Percolation Tanks in Rahata Taluka, Maharashtra, India: A Geospatial Analysis C. M. Bansode, V. R. Sonawane	3
36.	Land-use Changes in Kahadia Island: A Remote Sensing Perspective on Mangrove Forest Dynamics Rupeshwari Sunil Dandgawhal, Dr. Hemlata Patel	35
37.	Agricultural Land use in 1990-91 to 2015-16 of Parner Tehsil of Ahmednagar District (MS) Dr. Aher Sanjay Sukhdev	36
38.	Impact of Yeldari Irrigation Project on Agricultural Development in Parbhani District Santosh Kundlik Jadhav, Dr. Vanmala R. Tadvi	37
39.	Status of Tribal Women in Ahmednagar District (Maharashtra) Dr. Vasudev Shivaji Salunke, Pramila Popatrav Zaware	38
40.	The Role and Impact of Tourism Industry in Development of India Archana Rajendra Doifode, Rajendra Kanhu Doifode	38

Impact of Topography on Agriculture Pattern of Parner Tehsil in Ahmednagar District (M.S.)

Jyotsna D, Mhaske., Dr. Rghunath E. Najan, Dr. Ashok
V. Thokal,

Assistant .Prof. Department of Geography, New Arts,
commerce & Science College, Parner Dist. – Ahmednagar
414302. Email:

jyotsnamhasket@gmail.com, mr.njan@gmil.com,
ashokthokal@gmail.com

Abstract: Topography is one of the physical factors. Physical factors of a region such as relief features, soil, climate, natural vegetation, availability of water and minerals are important to decide the land use of the region. The agricultural production and soil properties of any region are affected by the topography of that region. Studying the mountain plateau and plain landforms of the region, the agricultural production is largely in the plains. Below that is the production of the plateau region and there are some limitations for farming in the hilly regions. There are some limitations in the use of irrigation facilities in the plateau regions while new machinery can be used for farming in flat areas.

Present paper analyse the physical aspects and its impact on general land use and agricultural land use of parner tehsil of Ahmednagar District (M.S.). Central part of the tehsil is mostly occupied by plateau lies North West to south west in this region, also north part of the tehsil occupied by same lies west to east and some patches lies in south part of the tehsil including forty five villages. It is found that there is limitation for agriculture only pulses and rain fed crops are dominant feature of these villages except some villages like Pimpri Jalsen, Wadeghavhan, and Narayanghavhan because of canal

Year - 2024

irrigation. Surrounding to plateau area of the tehsil major village taking cash crops like onion, Greenpeace, and fruits and vegetables.

Key Words: Topography, Land use, Plateau cash crop Rain fed.

1. Introduction:

Topography is the measurement of elevation and slope it study of variation in elevation over a certain distance. Topography the field of geoscience that studies the shape and features of the earth surface. The term topography comes from Greek (topos, place, and graphia, writing), and it originated in ancient Greece as a comprehensive description of an area (Malpas, 2012). From this perspective, topographical studies are characterized by observation and recording of landscape features, such as terrain characteristics (rugged or smooth), hill and mountain relief, slope angles, and drainage patterns for specific areas (Christopherson & Birkeland, 2015). The altitude of the region determines the maturity of the soil. In the mountainous regions, the soil is immature, while in the plateau region, the soil is found to be somewhat mature, while in the plains, the soil has fine properties and is composed of fine particles. As the agriculture of a region is cultivated in the region, altitude, slope, soil and climate of that region can be seen to have an effect on the agriculture of that region.

The Indian subcontinent is a geographically vast nation in Asia. Due to this vast terrain, there is a great deal of diversity in its present natural structure. It consists of mountains, plateaus and plains. Considering the total area of India, approximately 29.3% is occupied by mountains and hills, 27.7% by plateaus and 43% by plains. Due to its diversity, development in the Indian subcontinent is also diverse. Geologically, Maharashtra is an important part of the Indian Peninsula. Most of the Indian Peninsula is covered by the Maharashtra state and it is part of the ancient Deccan Plateau. The Maharashtra Plateau is made up of layers of lava from volcanic eruptions. Parner Taluka in Ahmednagar District of Maharashtra is a part of this Deccan Trap.

There are 14 tehsils in Ahmednagar District. Parner is one of which belong to the Deccan Plateau. The plateau is 850 meter mean sea level. The Kanhur Plateau is the center part of study's plateau.

Study area-

For the present study, Parner tehsil of Ahmednagar district has been selected as the study area in the state of Maharashtra. The Parner tehsil lies in Ahmednagar district consists of 131 villages and one urban center. Parner tehsil lies in the rain fed zone of Maharashtra.

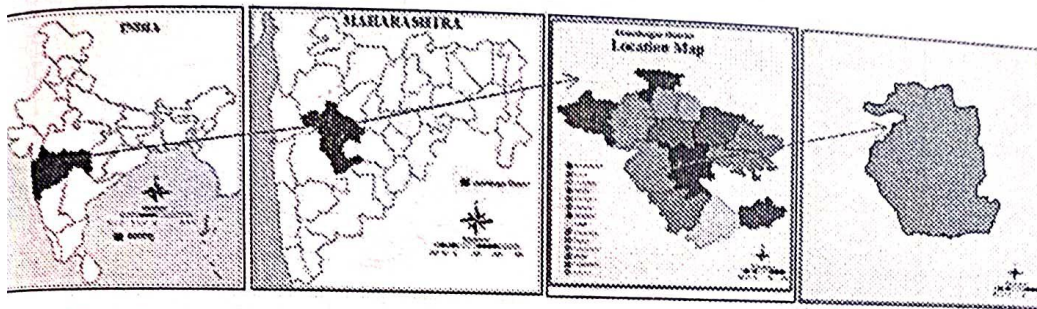


Figure 1 Location map of Parner Tehsil

Geographical location: Geographically Parner tehsil is located on the Deccan plateau. The extension of tehsil is $18^{\circ}49'40''N$ to $19^{\circ}21'13''N$ latitude and $74^{\circ}10'22''E$ to $74^{\circ}38'34''E$ Longitude. The region is bounded by river Kukadi, Ghod & Sina. Parner tehsil is surrounded by,

Ganesh tehsil in northwest, Rahuri tehsil in northeast, Nagar tehsil in east, Shrigonda tehsil in southern side & Pune districts boundary belongs to western side of Parner tehsil. Total geographical area of Tehsil is 1930.28 sq. km. For administrative purpose tehsil is divided into 8 circles.

Database and Methodology:-

Secondary data will be collected from the satellite image, maps, SOI toposheets, website, census, socio economic review, books and journals, Gazetteer and various government offices

Environment, Agriculture and Rural Development

Year - 2024

Objectives:-

1. To study the topography of Parner Taluka
2. Impact of Topography on Agriculture Pattern

Result and Discussion:

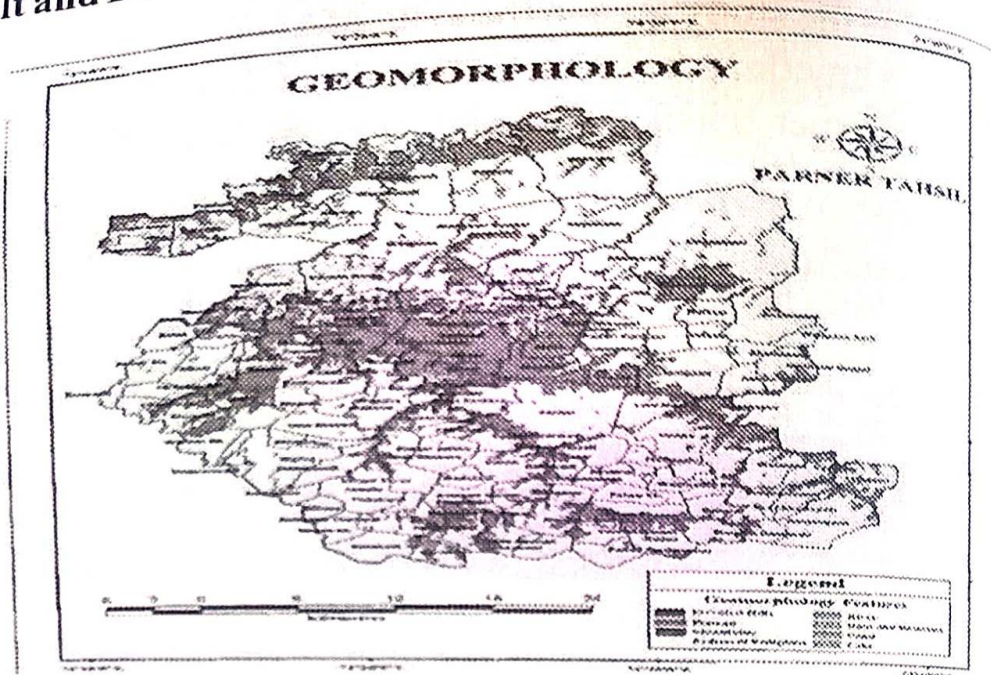


Figure 1 Topography map of Parner Tehsil

Table Number 1: Topography wise villages and Total Geographical Area.

Sr.No	Topography	Villages	TGA
1	Elevated hills		
2	Plateau	Dongrwdi, Palaspur Pokhar, Deswade, Mandvekh, Bhangadwadi, Nandur Pathar, Koregaon, Kasare, Takali Dhokeshwar, Kaknewadi, PimpalgaonTurk, Bhondre, Gargundi, PimpalgaonRotha, Akkaiwadi, Wadgaon Darya, PimpriPathar, Kanhyr, Wesdare, Tikhol, Bahirohawadi, Kimhi, Karandi, Wiroli, Hatalkhundi, Punevadi(NW), Siddheshwarwadi, Darodi, Padali Darya, Shirasola, Pabal, Randhe, Shirapur, PimpriJalsen, Shahjapur, Diskal, Supa, Ravatale, PimpriGayali, Bhevare, Narayangavhan, Kalamkarwadi, Wadegavhan, Mawalewadi, and Kurund.	58199.13
2	Mountains	Supa(E), PimpriGayali (E), Parner (W)	

Year - 2024

	85	155430	306	488	0	914	2628	197	2683	124	61
1		47	45	5		7		83		4	5
2			147	133	747	675	374	725	2646	300	31
3			20	30	4	0				5	2
4			453	182	747	158	3002	205	5329	424	72
Total	131		65	15	4	97		08		9	7

Table Number 2: Cropping pattern of Parner Tehsil

Topography and cropping pattern of the Study Area:

Table number 2 and figure number 1 shows the distribution of topography in the study area.

A. Elevated hills: topographical map shows the small patches in the central and north most part of the tehsil, Dashabai Dongar is the highest elevated peak in the tehsil. No cropping pattern found in this category.

B. Plateau: Table number 2 and figure number 1 shows the distribution of topography and cropping pattern in the study area. Total geographical area of the villages of the plateau area is 58199.13 hectares. The villages includes in this category of topography are Dongrwadi, PalaspurPokhari, Deswade, Mandvekh, Bhangadwadi, NandurPathar, Koregaon, Kasare, Takali Dhokeshwar, Kaknewadi, Pimpalgaon Turk, Bhondre, Gargundi, Pimpalgaon Rotha, Akkalwadi, Wadgaon Darya, PimpriPathar, Kanhur, Wesdare, Tikhol, Bahirobawadi, Kinhi, Karandi, Wiroli, Hataalkhindi, Punewadi (NW), Siddheshwarwadi, Darodi, padali Darya, Shirasola, Pabal, Randhe, Shirapur, Pimpri Jalsen, Shahjapur, Diskal, Supa, Rayatale, Pimpri Gawali, Bhoyare Narayangavhan, Kalamkarwadi, Wadegavhan, Mawalewadi and Kurund. Total forty six villages are includes in plateau topography.

Cropping pattern: A cereal is first ranking crop which is occupied 19208 hectare area. Jowar, Bajara and wheat are major crops in cereals crops. Pulses is second ranking crops cultivated in the study area includes gram, *hulgautavali*, *chavali* and *math* occupied 9423 hectares area. Third ranking crop is onion which occupied 9179 hectare area, taking as cash crop. Fourth ranking crop is fodder crop which includes maize, lucern, ginni grass etc. Dairy

farming is joint business for agriculture in the villages of plateau region. Other major crops are oil seeds, green pease, vegetables occupied 5043,4415 and 2630 hectares area respectively. Sugarcane, flower and fruits are minor crops in this category. These minor crops are grown in plain and irrigated area. This discussion clearly indicates that impact of topography determines cropping pattern.

C. Pediment Pedit plain: Table number 2 and figure number 1 shows the distribution of topography and cropping pattern in the study area. Total geographical area of the villages of the Pediment Pedit plain area is 155430.47 hectares. The villages includes in this category of topography are Mhasoba Zap, Katalvedhe, Waranwadi, Khadakwadi(S), Palashi, Tas, Venkute, Wadgaon, Dhavalpuri, Gajadipur, Dhotre BK, DhotreKh, Dhoki, Wdgaonsavatal, KarjuleHarya, Hivarekorada, Malkup, Bhalavani, WadgaonAmli, DaithaneGunjl, Bhndgon, SarolaAdvi, Jamgaon, Kalkup, PadaliKanhur, Goregon, Parner, Panoli, Gatewadi, Ralegansidhhi, Wadule, Pimpalner, Kalas, Savargaon, Garkhindi, Bbhulwade, Jadhavwadi, Sherikasari, Alkuti, Mhaskewadi, Padali Ale, Renwadi, Chombhut, Wadaner BK, Wadzire, Shirsule, Devibhoyare, WadgaonGund, GanjiBhoyare, Sangavisurya, Morwadi, Jawal, Patharwadi, Nighoj, Dhawanwadi, Gadilgaon, Gunore, MhaseKh., Hakigatpur, Majampur, Kohokadi, Loni Haveli, Hanga, Waghunde, BK, Mhasne, Mungashi, Wadner Haveli, Ghanegaon, Jategaon, PalweKh., Apadhup, Walwane, Ranjangaon, RuiChhatrapati, Baburdi, Kadus, PadaliRanjangaon, Palve BK, Yadavwadi, Sultanpur and RalegnTherpal. Total eighty five villages are includes in Pediment Pedit plain topography.

Cropping pattern: A cereal is first ranking crop which is occupied 45365 hectare area. Jowar, Bajara and wheat are major crops in cereals crops. Second ranking crop is onion which occupied 20508 hectare area, taking as cash crop. Pulses is third ranking crops cultivated in the study area includes gram, *hulgautavali*, *chavali* and *math* occupied 18215 hectares area. Fourth ranking crop is fodder crop which includes maize, lucern, ginni grass etc. occupied 15897

hectares area. Dairy farming is joint business for agriculture in the villages of in this region. Other major crops are oil seeds, green pease, vegetables and sugarcane occupied 7474, 5329, and 4249 hectares area respectively. Flower and fruits are minor crops in this category. These minor horticultural crops are grown in plain and irrigated area. This discussion clearly indicates that impact of topography determines cropping pattern.

*** Findings and Conclusion:** Above discussion reveals that topography of Parner tehsil is dominated by plateau and pediment plain area. The topography of the region determines the maturity of the soil. In the mountainous regions, the soil is immature, while in the plateau region, the soil is found to be somewhat mature, while in the plains, the soil has fine properties and is composed of fine particles. As the agriculture of a region is cultivated in the regions, the altitude, slope, soil and climate of that region can be seen to have an effect on the agriculture of that region. So cropping pattern of Parner tehsil is dominated by cereal, pulses, and fodder and onion crops.

References:

- Panchayat Samiti office Parner Tehsil.
- Talukakrushivibhag, Parner.
- Socio economic abstract, Ahmednagar district. 2022
- www.agricensusnic.in
- MRSAC
- Wikipedia map.
- Dr.KishorChudhri Ph.D. Thesis

The Role of Irrigation in Development of Fruits and Vegetables in Ahmednagar District (MH)

Mr. Kiran Kundlik Sasane,

Asst. Prof., Dept. of Geography, NACS College, Parner.

Dr. Sanjay Sangale,

Assist. Prof. Dept. of Geography, R.B.N.B. College, Shrirampur.

Abstract

Horticulture is the branch of agriculture that deals with the science and art of cultivating and producing fruits, flowers and vegetables. Horticulture also has a close relationship with the propagation, processing, and marketing of these products the term horticulture has been derived from the Latin words "hortus" which means garden and "culture" meaning cultivation, Indian horticulture sector contributes about 33% to the agriculture Gross Value Added (GVA) making very significant contribution to the Indian economy. Apart from ensuring nutritional security of the nation, it provides alternate rural employment opportunities, diversification in farm activities, and enhanced income to farmers. India is currently producing about 320.48 million tons of horticulture produce which has surpassed the food grain production, that too from much less area (25.66 million Ha. for horticulture against 127.6 M. ha. for food grains). India has emerged as world leader in the production of a variety of fruits like mango, banana, guava, papaya, sapota, pomegranate, Lime & aonla and is the second largest producer of fruits and vegetables. Besides, India has maintained its dominance in the production of spices, coconut and cashewnut. Among the new crops, kiwi, gherkins, kinnow, date palm and oil palm have been successfully introduced for commercial cultivation in the country. In

Year - 2024

ISBN : 978-81-968850-

Ahmednagar district Fruits and vegetables production increased due to improved irrigation facilities. The total area covered by Fruits and vegetables is 164038 hect. (2022).

Key words: Horticulture, Fruit and Vegetables.

Introduction:

Ahmednagar is the largest district of Maharashtra State with a geographical area of 17418 k.m. which is 5.66% of area of Maharashtra State. Out of total areas 391.5 sq. k. m. is urban area remaining 16,656.5 sq. k. m. is rural area. Ahmednagar is centrally located in western Maharashtra. In Ahmednagar district there were 10 blocks or tehsils, 1,581 villages and 1,308 gram sabhas. Ahmednagar district is laid between 18° 2' to 19° 9' North latitude and 73° 9' to 75° 5' East longitude, and is bounded on the north by Nasik district, on the north east by Aurangabad district, in the east by Beed and Osmanabad, on the south by Solapur and in the south west by Thane and Pune district. The region has irregular shape and covers 200 kilometers a length and width of 210 kilometers on 17,048 square kilometers area and having a population of 4,543,159 persons in 2011 accounting 5.5 percent area of Maharashtra state. In study region population density was 266 persons per sq. kilometer. The sex ratio was 943 females per thousand males; literacy was 79.05 percent accounting 87.57 percent urban literacy (87.57 percent) and rural literacy (76.89 percent). The growth of population from 2001 to 2011 was 12.44 percent. The study region has 46.48 percent cultivators, 22.28 percent agricultural labourers and remaining 31.24 percent workers engaged other than agriculture sector. According to physiographical set up, study region is divided into three regions, namely, Sahyadri hill ranges, namely, Kalsubai, Adula, Baleshwar and Harishchandragad, Plateau and plains drained by Godavari and Bhima rivers. Average rainfall receives 575.8 mm. The mean daily maximum temperature is 35° centigrade and mean daily minimum temperature is 11.7° centigrade. The deep black soil, medium black soil, gray soil and red soil appear in study region. 71.10 percent area is found under cultivation and irrigation accounts 32.40 percent. The major crops

namely, Jawar, wheat, Bajara, maize, sugarcane, cotton, pulses and oilseeds and recently horticultural crops are cultivated in study region.

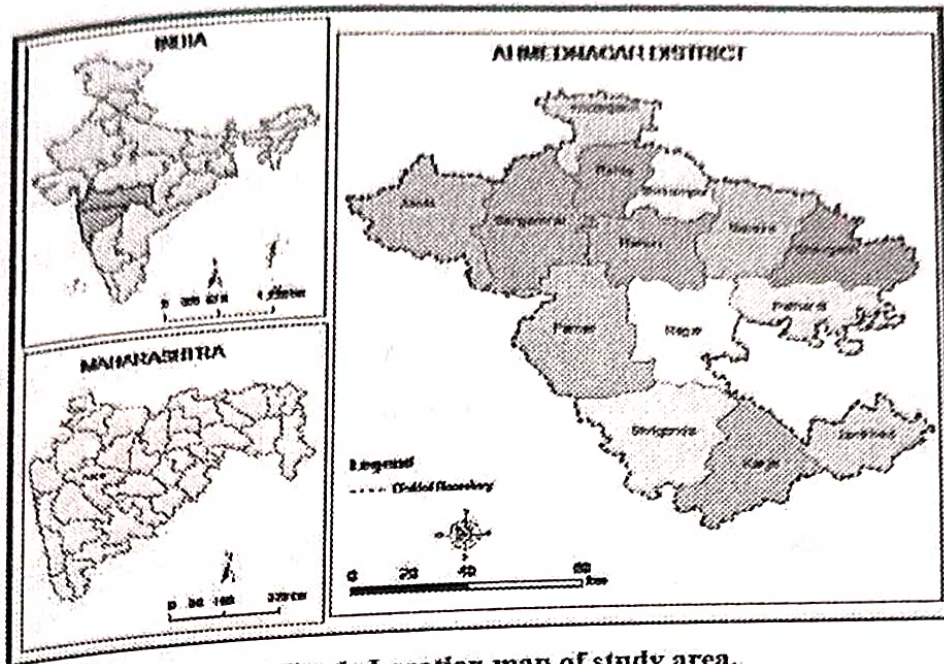


Fig- 1: Location map of study area.

II. Objectives:

- 1) To study the Irrigation and area under fruits and Vegetables of Ahmednagar.
- 2) To find out the relation of Irrigation Intensity and area under fruits and Vegetables.

III. Methodology:

The present study with the help of Secondary Sources.

1. **Data-** The data set for present study is covering 10 years at Ahmednagar district during 2012 to 2022. The secondary data for Fruit and Vegetables area, production, and Irrigation data are given District Gazetteers and Socio-Economic Review of Ahmednagar district 2012 to 2022.
2. **Data analysis techniques-** various techniques are used for data analysis. Mean, Correlation analysis used for analysis of

relationship between- Irrigation intensity and Fruit and Vegetable production. Used the Cartographic techniques such as QGIS, and Arc GIS applied. Figure and table are computed by Microsoft word and Microsoft Excel.

IV. RESULT AND DISCUSSION:

The agriculture industry is the backbone of the economy of Ahmednagar district. In various fruits & vegetable crops are grown in the district. It is taken in 10 years period and it has studied how it is related to area and Irrigation during the study period.

Table- 1: final estimates of area (hectars) under Fruit & Vegetables crop during 2012 to 2022 and Irrigation during 2012 to 2022 in Ahmednagar district (M.S).

Sr.no.	Tehsils	Area Under Fruit & Vegetables Cultivation (hectars)	Total Area Under Irrigation (hectars)	Area Under Fruit & Vegetables Cultivation (hectars)	Total Area Under Irrigation (hectars)
1	Akole	2179	95343	8034	57582
2	Sangamner	4271	111965	15565	114664
3	Kopergaon	4323	62193	13156	95974
4	Rahata	2440	57744	1198	70371
5	Shrirampur	2823	45886	9238	67942
6	Newasa	2719	129041	13623	155723
7	Shevgaon	716	88623	4688	71344
8	Pathardi	856	97319	5339	89762
9	Nagar	729	120233	16173	130143
10	Rahuri	2626	68761	12173	67760
11	Parner	5581	158759	28951	186969
12	Shrigonda	3018	113870	23607	92670
13	Kariat	5496	102452	9436	74516
14	Jamkhed	785	75534	2857	92494
	Total	37562	1327723	164038	1367814

(Year 2012) (Year 2012) (Year 2022) (Year 2022)

Source- Computed by Researcher (Socio-Economic Abstract)

Development of Fruits and Vegetables

The Ahmednagar district is basically drought prone area and Environment, Agriculture and Rural Development

the main source of water for agriculture is the monsoon rainfall. The water requirement for agriculture by storage of surface & ground water trough irrigation system. Studies of Comparison between 2012 and 2022 fruits & vegetables data. The figure1.is shows the continuously increasing area under cultivation of fruits and vegetables in all tehsils of ahmednagar district.

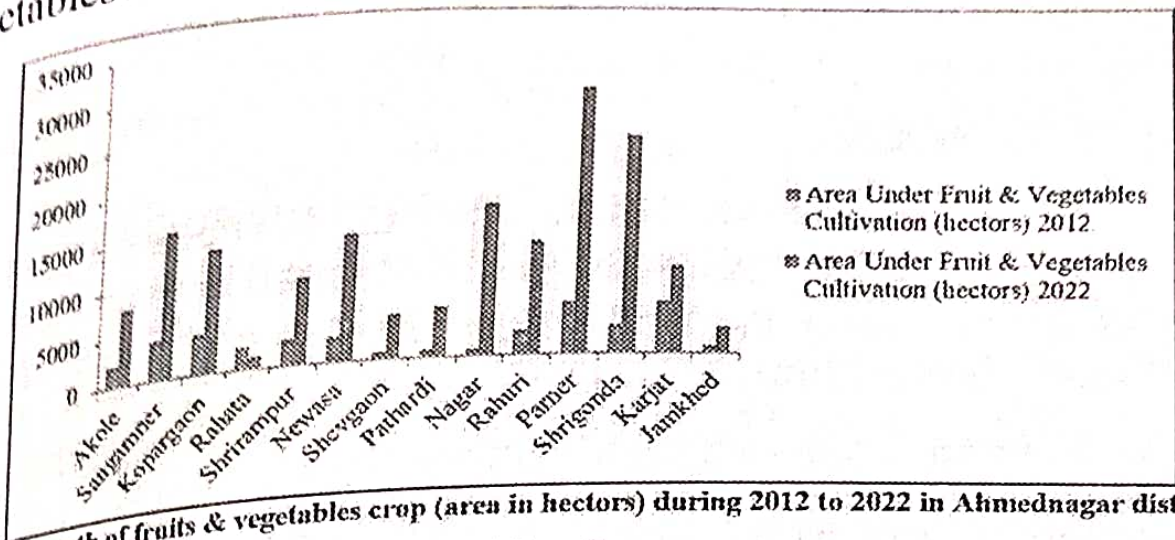


Fig.2. Growth of fruits & vegetables crop (area in hectors) during 2012 to 2022 in Ahmednagar district.

Fig.2 & 3. Represents the relationship between area under offruits & vegetables crops and irrigation during 2012 to 2022 in ahmednagar districts. It shows When Irrigation intensity is high, area under fruits & vegetables crop is high. When Irrigation intensity is low, areas under fruits & vegetables crop is found to decrease. That is, there seems to be correlation between Irrigation and area under fruits & vegetables

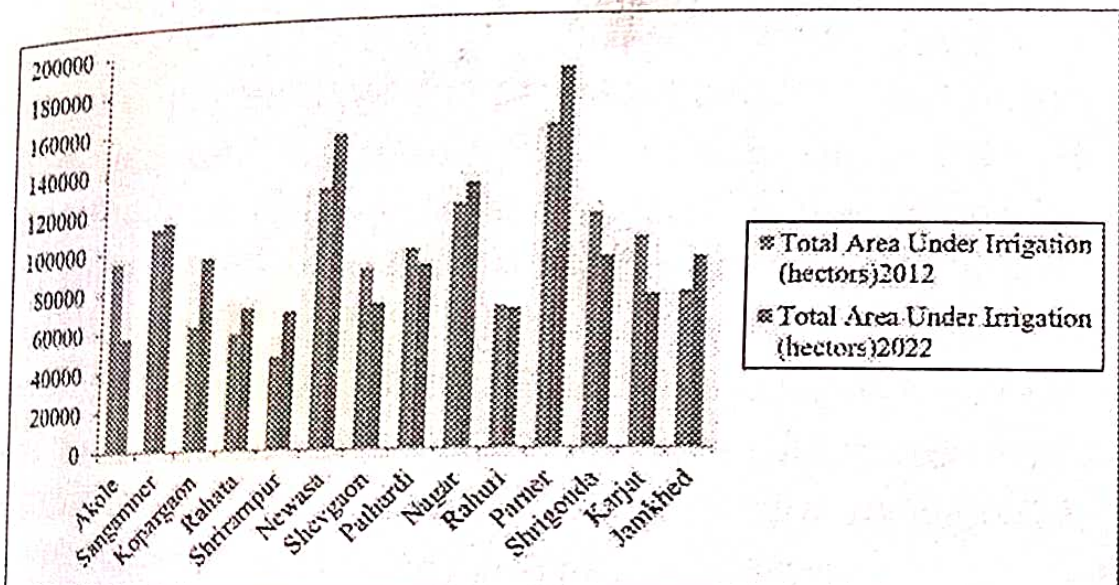


Fig.3. Growth of Total Irrigation area in hectors during 2012 to 2022 in Ahmednagar district.

V. CONCLUSIONS:

In this study an attempt has been made to assess Irrigation and its relationship with Fruits & Vegetables crops production in the district of Ahmednagar. This study provides basic information for understanding the growth of Irrigation and area under Fruits & Vegetables crops relationship in the Ahmednagar district. We find that Irrigation has a positive correlation on area under Fruits & Vegetables crops and continuously growth in the study period.

VI. REFERENCES:

1. Mr. Namdeo Subhash Ghule, Dr. U. B. Pathre, Dr. M. V. Suryawanshi 2021. "An Analysis of Rainfall Impacts On Area under Maize Crop in Ahmednagar District, © 2021 IJCRT | Volume 9, Issue 6 June 2021 | ISSN: 2320-28823.
2. Socio-Economic abstract in ahmednagar district.
3. Agricultural Geography (Majid Husain).
4. Department of Horticulture, Govt. of India
5. Handbook of Agricultural (2022): Indian Council of Agricultural Research (Sixth Edition Revised), Directorate of Knowledge Management in Agriculture ICAR, New Delhi.

Agricultural Land use in 1990-91 to 2015-16 of Parner Tehsil of Ahmednagar District (MS)

37

Dr. Aher Sanjay Sukhdev

Dept. of Geography, New Arts Commerce and Science
Collage Parner, Tal. Parner, Dist. Ahmednagar.

Email: sanjayaher86@gmail.com

Abstract

The present research paper studies and analyzes the agricultural land use at the macro level analysis in Parner tehsil. This study is based on secondary data collected from revenue records and district gazetteer offices. Agricultural Land use was depending on physical, climate, socio-cultural, economic, technological and organizational factors. Study land use pattern Parner tehsil of Ahmednagar district for the year 1990-91 to 2015-16, this is normal year for an agricultural phenomenon. total geographical area occupied 1933.99 sq km² and occupies 11.5 total areas in Ahmednagar district Parner tehsil total population 274,547 as per the census of 2011. 131 villages as per the 2011 census. Parner tehsil is located in the west in Ahmednagar district the height of tehsil on averagely 854 meters above sea level from the south to the North Slope of tehsil. Physiography, rainfall, soil, temperature, and drainage influence on agricultural land use pattern in this tehsil. rainfall 1507.7 mm. the present study represents a real situation of cropping pattern in Parner tehsil and helps planners and agricultural scientist for agricultural planning at the village level.

Key words: Agriculture land use, Net Sown Area, Land not Available for Cultivation, Cultivable Waste, Fallow Land.

Introduction

Agriculture is a primary activity in India and about 75% population is engaged in this occupation. Agricultural land use is dependent on natural resources. The History of Agriculture in the west part of Parner reveals that famine is of common occurrence for. Partial failure and completion of both Kharif & Rabi crops result in famine. And as such Parner tehsil was identified as one of the 14 tahsil's in the Ahmednagar District plain area. It forms the basis for all biological, human economical activities. The types of Land, soil and irrigation are an important input in the agricultural sector but they yield of crops mainly depend upon fertile land for raising different crops, cropping pattern is the central element of agricultural land use.

STUDY AREA

Parner Tehsil is situated partly in the upper Godavari Basin. It lies between 18° 49' 40" North to 19° 21' 13" North Latitudes and 74° 10' 22" East to 74° 38' 34" East forms to the south western part of Ahmednagar District. It is surrounded by Sangamner Tehsil in the North, Shrigonda and Ahmednagar Tahsil in the East, Pune district in the South, Rahuri Tehsil in the North. Parner Tehsil has an area of 1933.99 sq. km and a population is 274167 (2011 Census). Among the Tehsil of the district, The Baleshwar and Harishchandra range, which crosses the Tehsil, has two notable spurs that extend east from the main Sahyadri range. Between the Pravara and its tributaries that flow into the Godavari, it serves as a watershed. While some of the ranges have conical tops and uneven slopes, others have flat tops and regular slopes. Parner Tehsil is located in the rain fed or rain shadow region It has an impact on certain crops in Tehsil regions. The economic situation as a result is not good. The British constructed Tikhol Dam, Hanga Dam, Palashi Dam, Mandohal Dam, Ruichatrapati Dam, Lonimavala Dam, Dhoki Dam, Kalu Dam, and other dams between 1914 and 1927 in addition to Kukadi and Pimpalgaonjoga Canal.

Objective

To study the general land use pattern in Parner Tehsil Ahmednagar District of Maharashtra.

Database and Methodology

The study is based on secondary data and field observations. Circle wise crop data is obtained from village officers (Talathi) records and Panchayat Samities records parner tehsil. Topographical maps and survey of India sheets are used for the physiographical study. Land use data collected from socio-economical abstract and Ahmednagar gazetteer and district census handbook in Ahmednagar district referred to collect related information.

Temporal Variations In Land Use

Temporal Variations in Land Use Parner Tehsil

The Parner Tehsil land use pattern has been re throughout a twenty-five-year period (1990-91 to 2015-16), and various causes of shifting land use have been interpreted. Due to a lack of data for the years in question, the investigator was unable to find temporal differences in Land Use for consecutive years. However, to highlight Temporal fluctuations in Land Use patterns in the area under study, an alternate year was used.

The following five kinds of temporal variations in Land Use for Parner Tehsil investigated.

- A. Net Sown Area (NSA)
- B. Land not Available for Cultivation, (LNAC),
- C. Cultivable Waste (CW)
- D. Fallow Land (FL)
- E. Forest (F)

THE ROLE OF INFORMATION TECHNOLOGY IN RESEARCH

Prof. Dr. B. B. Shelke

Librarian

New Arts, Commerce & Science College, Parner. Dist-Ahmednagar

Abstract :-

Information and communication Technologies (ICT) have become commonplace entities in all aspects of life. Across the past twenty years the use of ICT have fundamentally changed the practices and procedures of nearly all forms of Endeavour tithing business and governance.

Problem solving is an age old activity. The development of electronic devices, specially the computers, has given added impetus to this activity Computer is certainly one of the most versatile and ingenious developments of the modern technological age. Today people use computers in almost every walk of life. To the researcher, the use of computer to analyses complex data has made complicated research designs practical. Electronic computers have by now become an indispensable part of research students in the physical and behavioral sciences as well as in the humanities in this age of computer technology, must be exposed to the methods and use of computers. A basic understanding of the manner in which a computer and ICT works helps a person to appreciate the utility of this powerful tool. Keeping all this in view, The present paper introduces the basics of ICT & computers, especially it. answers questions like: What is a ICT computer? How does it function? How does one communicate with it? How does it help in analysing data? How does it help in Research.

Key words- ICT Research Role Software Data

Introduction

Information Technology covers a broad spectrum of hardware and software solutions that enable organizations to gather, organize, and analyze data that helps them achieve their goals. Information technology can be used for information processing , communication and problem solving tasks.

Information Technology covers almost every aspect of our daily lives from business to leisure and even society. Today PCs, Cell phones, email and internet have all not become integral parts of our very culture but also play an essential role in our day to day activities.

Objective :-

The objective of this present study is to study the importance role of information technology in research.

Research Methodology :-

The information which is used in this study that is collected from different secondary sources. It is completely depend on the secondary data.

Data Analysis :-

Information Technology

The information technology (IT) refers to creation, gathering processing, storage and delivery of information.

Following device and systems are considered information technologies.

1. The postal system – IT exchanges information.
2. A filing cabinet – IT stores information.
3. A library – It stores information
4. A mathematical algorithm – It process information

Design and Development of Feedback Controller for Scanning Probe Microscopy Applications

Gaikwad S. B.¹, Dr. S. L. Kadam², Dr. S. B. Iyer³

Department of Physics, Shri Dhokeshwar College, Takali Dhokeshwar, Ahmednagar, Maharashtra¹

Department of Physics, New Arts, Commerce and Science College, Parner, Ahmednagar, Maharashtra²

Department of Physics, Ahmednagar College, Ahmednagar, Maharashtra³

Abstract: *The Scanning Probe Microscopy (SPM) techniques, mainly Scanning tunneling microscopy (STM) and atomic force microscopy (AFM) instruments have great important in surface science laboratories due to its high potential to achieve image at atomic scale resolution. SPM has revolutionized our ability to explore the nanoscale world enabling the imaging, manipulation and characterization of materials at the atomic and molecular level. The experimental designing and its analysis of feedback network system has proposed for scanning tunneling microscopy. Instability in feedback network could affect the measurements and accuracy in surface topology of material. Feedback network circuit controls the necessary arrangement for proper functioning of STM. It Controls the STM operation like a regulator circuit in sealing fan even if input voltage changes, the output has controlled by the regulator. The working of each element of feedback network is well discussed and analysed. The interconnection between the different elements of feedback control network is analysed with mathematical equations. STM has the outstanding advantage from the biological perspective of allowing measurements has made with a resolution of nanometers in aqueous media. Hence, living cells, working enzyme systems etc. can be examined. [4] SEM also investigates 'Trichomes' which is present on both surfaces of leaf. [5].*

Keywords: Scanning Probe Microscopy

I. INTRODUCTION

Scanning probe microscopy (SPM) includes STM, AFM, and chemical force microscopy that have extensively applied in nanostructure characterization. Scanning Probe Microscopy (SPM) is device based on a new technique to investigate the structures at the atomic or molecular level.

Scanning Tunnelling Microscopy was first developed by Gerd Binnig and Heinrich Rohrer in 1981 and earned its inventors the Nobel Prize in Physics in 1986. STM has considered the godfather of all the other tip-based microscopy methods, including atomic force microscopy (AFM). It creates powerful surface images and characterization method, which have developed of our understanding of material, condensed matter and device operation at nanoscale. A key future of SPM is the nano sized probe, which interacts with the surface and produce the information used to create an image of the surface topography. [9]

After high success in providing high-resolution imaging, some limitation are still at the centre of researchers interests like low speed of imaging, limit of processes in real time, interpretation of complex data, issues related to tip-surface interaction. The sensing principle has remained unchanged since the development of SPM. This influences careful piezoelectric actuation for a raster scan of the sample surface while a feedback system senses the tip - surface interaction in one of the many modes such as contact or contactless. It providing high-resolution imaging and information required for spectroscopy. Machine learning introduced some new technology to enhance performance data collection to improve traditional limitation and enhanced the quality of SPM. [9]

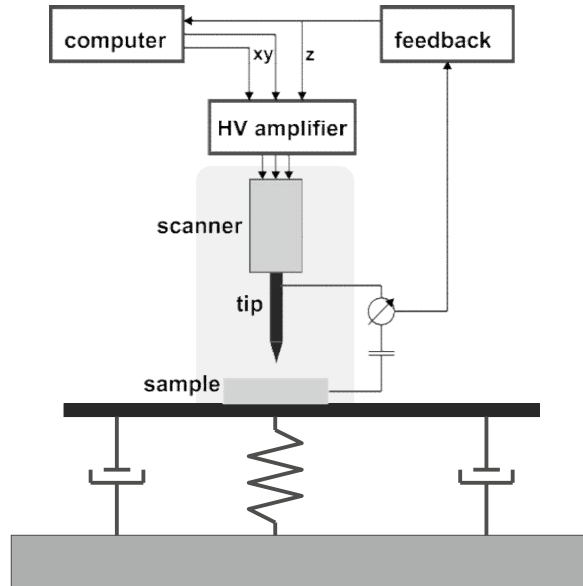


Figure 1.1: Schematic diagram of the scanning tunneling microscope

Scanning Tunnelling Microscopy (STM) is applicable to the conductive sample or the surface operating under different environment. STM operation has invented based on the mechanism of the quantum tunnelling effect. [3]

After building this microscope with increasing accuracy and complexity, we look towards to design a simple, cheap system that has to be useful for students and our research laboratory. An analogue control proportional feedback controller with sample and sharp conducting tip which has used to control the STM operation. The STM consists of a sharp metal tip, often made of Pt-Rh or tungsten and a conducting or semiconducting planer sample surface. When sample is clean and flat, even atoms can imaged. The distance between tip and sample control during data collection is change by synchronising the parameter of feedback loop. Instead of tip position, D- A convertor maintained velocity of tip to reduce generated noise. This will provide time delay for the collection of data. [2,18]

In scanning tunnelling microscopy (STM), where a small tunnelling current has measured between probing tip and sample. Various operation modes such as constant tunnelling and constant height modes as well as tunnelling spectroscopy had described and application are given. [10] By using combination of a coarse approach and piezoelectric transducers, a sharp, metallic probing tip has brought into close proximity with the sample. The surface contact between tip and sample is only a few angstrom units, which implies that the electron wave functions of tip and sample start to overlap. [16,17]

II. BACKGROUND AND DESIGNING OF PREAMPLIFIER

There are three major part of STM device. It contains head stainless steel with differential screw and piezo tube for scanning. [2] Scan area has limited by the choice of the piezoelectric scanner and the maximum output voltage V_{max} of the high voltage amplifier. In the driver amplifier of piezo, we can use op-amps. The scan tube sensitivity is 30nm/V for X and Y and 5 nm/V for Z. The tunnel current converted in to a voltage for feedback system by using pre amplifier with a $10^8 \Omega$ and OPA 128. The signal is amplified 10 times to get a 1 V/nA. Preamplifier has mounted at base of head to reduce mechanical noise. Since the current is exponential dependence tip-sample distance. The current has linearized with logarithmic amplifier. This voltage has apply to feedback controller, which is the difference amplifier. The output voltage of the log amplifier has compared with set reference, which decides the value of the tunnel current desired. Feedback circuit generated proportional voltage depending on error signal. [1,14]

To achieve constant tunnel current, this proportional signal has applied to the Z electrode of the piezo, which is in corresponding to reference voltage. For this rules and condition, we assume that tunnel current locked by applying voltage to the XY electrode of the piezo, the surface has scanned in a raster pattern. At the same time, output of the

feedback controller is gain by the data acquisition system. The software produced then a grey scale image, which is image of the sample topography.[16]

The preamplifier circuit converts small current through the high impedance tunnel junction into low impedance voltage signal. It has two stages, Op amp 1 has used as current to voltage converter. The tunnel current is of the order of 1 nA with an impedance of a few MΩ range. Here, the Op amp OPA 128 has used, which has high input impedance ($10^{12}\Omega$). The tunnel signal has amplified by the instrumentation amplifier AD 524 with variable gain. The proper selection of feedback resistor is necessary since the increase in R_f will increase signal to noise ratio but will decrease band-width the system. Infrequency response, gain picking has observed at a particular frequency. Here no drift has observed in the output.[14]

III. FEEDBACK CONTROLLER NETWORK

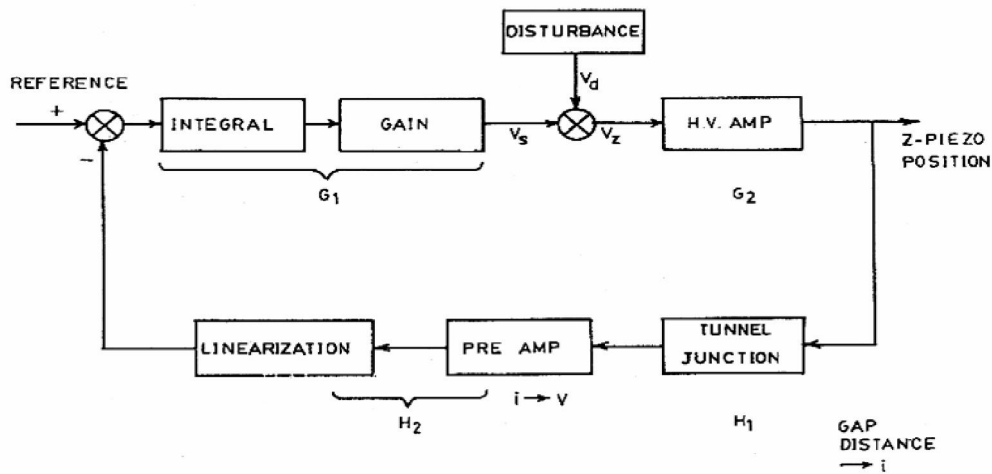


Figure 3.1: Block diagram of feedback controller network

The important and central part of a scanning tunneling microscope electronic system is the feedback controller network. For every system should be controlled system. In STM system, it is necessary that the Z piezo-electric element and tip-sample is in contact. The tunneling current is exponential function of tip-sample separation. The logarithmic amplifier is used to linearized the tunneling current. [1,5,13]

In figure 3.1, block diagram shows the control system in constant current scan the gap separation has set by comparing the tunneling current to the demanded current and has compensated by a negative feedback loop. Before designing feedback circuit, it is necessary to analyze it.[4,11,12].

The feedback circuit uses integrator. If V_i and V_o are the input and output of the integrator, R is the input variable resistance 500KΩ and C is the capacitance, 0.22 μf across the integrator, then the output of an integrator is given as

$$V_o = - \frac{1}{R C} \int V_i d t$$

The amplifier is adjusting the gain of the feedback circuit to match with piezo electric devices. The next circuit is summing amplifier, which allow the addition of external voltage to the control signal. The output of it has connected to high voltage amplifier, which is necessary in order to get larger movable range for the Z tip. The problem of perfect tuning of the controller to match to the system is common. Initially system has locked for required tunneling current. Therefore, error signal from differential amplifier is zero; which indicates Z control signal V_z is set. [15,19]

At time $t=0$ sec, the Z piezo is raised up or lowered by step input V_d , which simulates the disturbances created by scanning the STM tip laterally. The changing the tip-sample distance produces finite the error signal that makes the feedback operation to recover the initial V_z .

After the feedback loop stabilizes, all outputs from each stage have returned to the initial values before disturbances except V_s to the summing amplifier. [12] By simply monitoring the response of V_s to the disturbances V_d on an oscilloscope, we can easily adjust the loop gain.

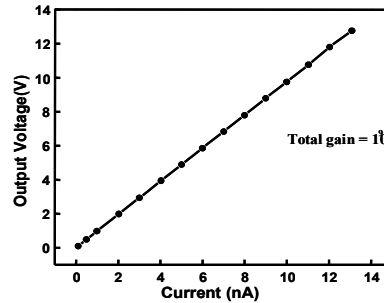


Figure-3.2 Graph of pre-amplifier

For Op-Amp, IC1, 3140, if $V_{in} < V_{ref}$, the negative feedback will move the tip in upward direction. It acts as buffer circuit. When V_{in} increases the output of IC1 is negative and if V_{in} decreases of IC1 is the output is positive. IC2 is integrator when $V_{in} < V_{ref}$, then output is positive. The output of integrator is negative. It is gain amplifier and no phase change in it. For IC3 output is negative. It has feed to IC4 and now its output is positive. IC5 is unity gain amplifier of gain 2. It is inverting amplifier and output is negative. [11]

IC6 removes the noise and output is negative. V_z is negative and tip moves in downward direction. Tunnel current increasing and now $V_{ref} = V_{in}$. Feedback controller is tested by changing V_{in} for fixed value of V_{ref} and Output is monitored.

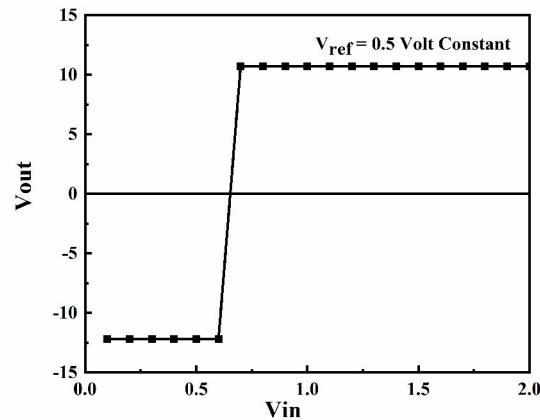


Figure- 3.2 Graph of V_{in} against $V_{o/p}$, for $V_{ref} = 0.5$ Volt Constant.

We have been able to obtain the stability region of an STM analytically using the all the possible element in feedback loop. We have use theoretical and mathematical model for each element of feedback loop and we have solve the problems by using logical and technical way. It is possible to achieve real condition of stability of loop. The parameter permits us a to achieve the highly accurate and stable condition for imaging.

ACKNOWLEDGMENTS

This work was possible by the support of institutes like research center of Department of physics, Ahmednagar College, Ahmednagar and research center, Department of physics, New Arts, Commerce and science college, Parner, Ahmednagar. The author wants to thank for helpful discussion for this project.

REFERENCES

- [1]. Guoliang Ping and Michael A. Player, Meas. Sci. Technol. 4, 677(1993).

- [2]. Design of simple high –resolution scanning tunneling microscope with analogue scan Generator.- J.W. Gerritsen, E.J.C. Boon, G. Janssens, H. van Kempen. Research institute for materials, University of Nijmegen, Toernooiveld, 6525 ED Nijmegen, The Netherlands Received 25 July 1997.
- [3]. Zhixiong Cai, Xiaoru Wang, in Novel Nanomaterials for Biomedical, Environmental and Energy Applications, 2019
- [4]. D. Jeon and R.F. Willis, Rev.Sci.Instrument,62(6), 1650(1991).
- [5]. SCANNING ELECTRON MICROSCOPY ANALYSIS OF THE *CYATHOCLINE MANILALIANA* Jayesh T. Salve*1, Ashok R. Tuwar2, Sarala C. Tadavi3
- [6]. An STM Study of Metal Nanoclusters and Molecular Fragments on Graphene/Cu(111) ByEsin Soy, Ph.D Thesis, University of Illinois at Chicago, 2018
- [7]. Data acquisition and control system for molecule and atom-resolved tunneling spectroscopy ByE.I. Altman, D.P. Dilella, J.Ibe, K.Lee and R.j. Colton
- [8]. Optimal condition for imaging in scanning tunneling microscopy: Theory E. Anguiano, A.I. olive and M. Anuilar, instituto de Ciencia de Materiales, Campus UniversidadAutonoma, Madrid, Spain
- [9]. Scanning probe microscopy inthe age of machine learning- Md Ashiqur Rahman Laskar and Umberto Celano, School of Electrical, Computer and Energy Engineering, Arizona State University, Tempe, Arizona 85287, USA
- [10]. Scanning probe microscopyErnst Meyer, Roland Bennewitz, Hans J. Hug. ISSN 1868-4513
- [11]. Y. Kuk, P. J. Silvermn, Rev. Sci. Instrum. 60, 165 (1989)
- [12]. D.P. Dilella, J.H.Wandass, R.J. Colton and C.R.K. Marrian, Rev.Sci.Instrum.,60,997(1989).
- [13]. Dieter W.Pohl, IBM. J.Res. Develop. 30, 417 (1986).
- [14]. Grame, Jerald G, Design with operational Amplifiers-Applications Alternatives, McGraw-Hill, Pg. 14(18\997)
- [15]. D.Jeon and R.F.Willis, Rev. Sci.Instrum.,62(6),1650 (1991)
- [16]. Analysis of Scanning tunneling microscopy feedback system- A.I. Oliva,^{a)} E Anguiano, N. Denisenko, and M.Agullar, Institute de Clencia de materiales del C.S.I.C., campus de Universidad de madrid, C-III, 28049 Madrid, Spain. J.L. Pena, Centro de Investigacion y de Evanzadas del IPN, Unidad, A.P. 73-Cardemex, 97310, Merida(Yucatan), Mexico.
- [17]. A Data Acquisition and image Processing for Scaning Tunneling Microscopy H. FUCHS, W EUSTACHI, R. SEIFERT,BASFAktiengesellschaft, Kunststofflaboratorium, D-6700 Ludwigshafen, Federal, Federal Republic of Germany.
- [18]. Scanning Tunneling Microscopy- JIN-FENGJIA, WEI-SHENG YANG, AND QI-KUN XUE
- [19]. Scanning Tunneling microscope Computer Automation- IBM T.J. Watson Research Center, P.O. Box 218, Yorktown heights, N Y 10598, USA.

Study of the structural, magnetic and adsorption properties of Pr (Praseodymium) doped in cobalt ferrite nanoparticles

Nilesh A Pawar^{1*}, Ramesh B Kharade²

^{1,2}. Post Graduate Department of Physics, New Arts, Commerce and Science College, Parner, Maharashtra-414302, India.

*Corresponding Author Email: napawar9@gmail.com

Rare – earth (RE) Pr³⁺ (**Praseodymium**) Substituted Cobalt ferrite CoFe_{1.9}Pr_{0.1}O₄ nano particles are synthesised by Sol-gel auto combustion method. The effects of Pr substitution on structural, magnetic and adsorption properties of cobalt ferrite nanoparticles are investigated. Structure, morphology, particle size, chemical composition and magnetic properties of t nanoparticles are studied by X-ray diffraction (XRD), transmission electron microscopy (TEM), high resolution transmission electron microscopy (HRTEM), energy-dispersive spectrometer (EDS), Fourier transform spectroscopy (FTIR), Raman spectra and vibrating sample magnetometry (VSM). The results indicate that the as-synthesized samples have the pure spinel phase, uniform crystallite size and narrow size distribution. Meanwhile, the Pr substitution leads to the decrease in the particle size, magnetization and coercivity of the CoFe₂O₄ ferrite. Notably, it demonstrates that the Pr doping can apparently enhance the adsorption capacity for Congo red (CR) onto ferrite nanoparticles

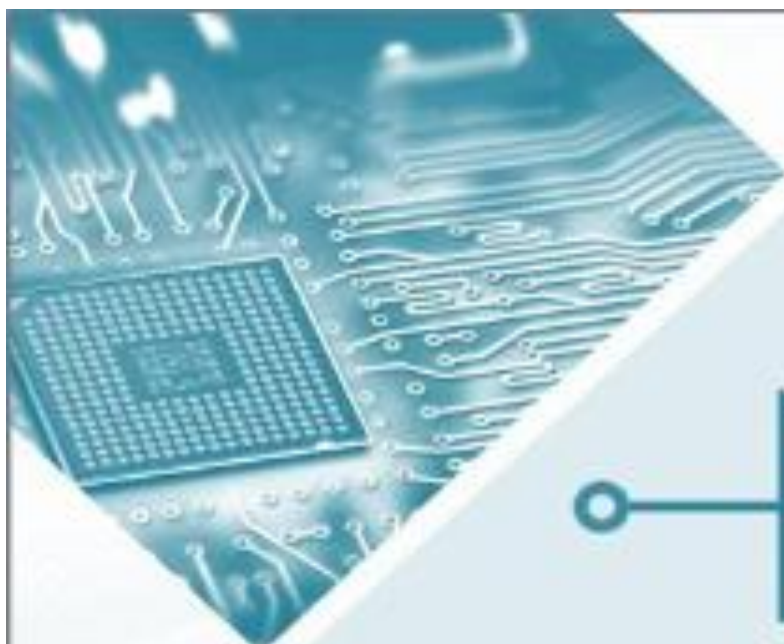
Keywords: Adsorption; Magnetic nanoparticle; Rare-earth substitution

— 8051 —

ARCHITECTURE
INTERFACING
&
PROGRAMMING



S . P . G A I K W A D



PRINCIPLE OF DIGITAL ELECTRONICS

2023



S.P.GAIKWAD

School of Architecture, Science and Technology,
Yashwantrao Chavan Maharashtra Open University

CHE134: V142
ADVANCED M.Sc.
SYNTHETIC [Chemistry]
METHODS

Sem III

CHE134

Email: director.ast@ycmou.ac.in

Website: www.ycmou.ac.in

Phone: +91-253-2231473

AST, YCMOU, Nashik - 422 222, MH, India



यशवंतराव चव्हाण महाराष्ट्र मुक्त विद्यापीठ

(महाराष्ट्र शासनाने वर्ष १९८९ मध्ये स्थापितले)

ज्ञानमंगोदी, गंगापूर धरमराजवाडा, नोबार्धन, नाशिक- ४२२२२२

दूरध्वनी कार्यालय (०२५३) २२३१४७३ फॅक्स : ९१-०२५३-२२३१४७८ मोबाईल : ९४०३७७४७४०

ई-मेल : director.ast@ycmou.ac.in

डॉ. सुनंदा मोरे

प्र. संचालक व सहयोगी प्राध्यापक

विज्ञान-व तंत्रज्ञान विद्याशाखा



Certificate

The School of Architecture, Science and Technology would like to express deep sense of gratitude for your esteemed cooperation and contribution as per following details:

- **Name:** Dr. TUKARAM THOPATE,
[Professor, Department of Chemistry
New Arts, Commerce & Science college Parner Dist: A.nagar]
- **Role:** SLM Book Editor
- **Programme:** V142 M.Sc. [CHEMISTRY]
- **Course:** CHE134: ADVANCED SYNTHETIC METHODS
- **ISBN Number:** 9788119791941
- **Book Published:** 26-OCT-2023
- **Publication No:** 2887



Sunanda
Dr. Sunanda More,
Director,

School of Architecture, Science
and Technology,
YCMOU, Nashik - 422 222

DIRECTOR

School of Science & Technology
Yashwantrao Chavan Maharashtra Open University
Nashik.



YASHWANTRAO CHAVAN MAHARASHTRA OPEN UNIVERSITY

(Established by Government of Maharashtra in 1989)

Dnyangangotri, Near Gangapur Dam, Goverdhan, Nashik - 422222

Phone : Office (0253) 2231473 Fax : 91-0253-2231478 Mobile : 9403774750

E-Mail : director.ast@ycmou.ac.in

Dr. Sunanda More

DIRECTOR

SCHOOL OF SCIENCE & TECHNOLOGY



Certificate

The School of Architecture, Science and Technology would like to express deep sense of gratitude for your esteemed cooperation and contribution as per following details:

- *Name: Dr. Tukaram. S. Thopate*
[Ex-Vice Principal & Professor, Department of Chemistry
Arts, Commerce Science College, Parner, Dist: Ahmednagar 414302]
- *Role: SLM Book EDITOR*
- *Programme: V142 M.Sc. [CHEMISTRY]*
- *Course: CHE132: Advance Organic Spectroscopy*
- *ISBN Number: 9789395855754*
- *Book Published: 01-MAR-2023*
- *Publication No: 2623*



Date: 10-4-2023

[Signature]

Dr. Sunanda More,

Director,

School of Architecture, Science
and Technology,

YCMOU, Nashik - 422 222

School of Architecture, Science and Technology,
Yashwantrao Chavan Maharashtra Open University

Advance V142
Organic M.Sc.
Spectroscopy [Chemistry]

Sem 03

CHE132

Email: director.ast@ycmou.ac.in

Website: www.ycmou.ac.in

Phone: +91-253-2231473

AST, YCMOU, Nashik - 422 222, MH, India