

Peer reviewed Journal

Impact Factor: 7.265

ISSN-2230-9578

# *Journal of Research and Development*

*A Multidisciplinary International Level Referred Journal*

*April-2021 Volume-11 Issue-11*

*Recent Trends in Social Sciences*

**Chief Editor**

*Dr. R. V. Bhole*

*'Ravichandram' Survey No-101/1, Plot  
No-23, Mundada Nagar, Jalgaon (M.S.)*



**Address**

'Ravichandram' Survey No-101/1, Plot, No-23,  
Mundada Nagar, Jalgaon (M.S.) 425102

# **Journal of Research and Development**

*A Multidisciplinary International Level Referred and Peer Reviewed Journal*

*April-2021 Volume-11 Issue-11*

## **Chief Editor**

**Dr. R. V. Bhole**

'Ravichandram' Survey No-101/1, Plot, No-23,  
Mundada Nagar, Jalgaon (M.S.) 425102

<b>EDITORIAL BOARD</b>		
<i>Nguyen Kim Anh</i> [Hanoi] Vietnam	<i>Prof. Andrew Cherepanow</i> Detroit, Michigan [USA]	<i>Prof. S. N. Bharambe</i> Jalgaon[M.S]
<i>Dr. R. K. Narkhede</i> Nanded [M.S]	<i>Prof. B. P. Mishra,</i> Aizawal [Mizoram]	<i>Prin. L. N. Varma</i> Raipur [C. G.]
<i>Dr. C. V. Rajeshwari</i> Pottikona [ AP]	<i>Prof. R. J. Varma</i> Bhavnagar [Guj]	<i>Dr. D. D. Sharma</i> Shimla [H.P.]
<i>Dr. Abhinandan Nagraj</i> Benglore[Karanataka]	<i>Dr. Venu Trivedi</i> Indore[M.P.]	<i>Dr. Chitra Ramanan</i> Navi ,Mumbai[M.S]
<i>Dr. S. T. Bhukan</i> Khiroda[M.S]	<i>Prin. A. S. Kolhe Bhalod</i> [M.S]	<i>Prof.Kaveri Dabholkar</i> Bilaspur [C.G]

Published by- Chief Editor, Dr. R. V. Bhole, (Maharashtra)

The Editors shall not be responsible for originality and thought expressed in the papers. The author shall be solely held responsible for the originality and thoughts expressed in their papers.

© All rights reserved with the Editors

## CONTENTS

Sr. No.	Paper Title	Page No.
1	Study of Biodiversity of Phytoplankton and Zooplankton of A Fish Culture Pond and Wild Village Pond of Bhilawadi in Sangli District MS <b>Rakshanda. L. Shinde, Swpnali. B. Lad</b>	1-5
2	Physico-Chemical Characterization of Farmland Soil in Some Villages of Palus Taluka, Dist. Sangli (Maharashtra) <b>Dhanashri V. Bandgar, Urmila V. Bandgar</b>	6-7
3	Studies of Physicochemical Parameters to Assces the Water Quality of River Yerrala for Drinking Purposes in Palus and Khanapur Tehsil (Sangli Distra) <b>Kamble P. D, Lad S. B., Suryawanshi P.T.</b>	8-11
4	Physico-Chemical Analysis of Borewell Water Samples of Palus Taluka Dist-Sangli, MS, India <b>Urmila V.Bandgar, Dhanashri V. Bandgar</b>	12-14
5	Investigation of Antioxident Activity and Total Phenolic Content in Red Raspberry <b>Rakshanda. L. Shinde</b>	15-16
6	Impact of Saltwater Intrusion on the Agricultural Land of Coastal Tract: An Investigation Along Malvan Coast, Maharashtra <b>Nilesh.K. Susware, Jagdish B. Sapkale, Balu L.Rathod, Vinaya N. Susware</b>	17-20
7	The study of natural Symmetry of dihedral group ( $D_n$ ) <b>Namrata. N.Patil, Rakshanda. L. Shinde</b>	21-28
8	Management and Performance of States in Sustainable Development Goals (SDG): An Analysis <b>Mr. Aditya Rajendra Ankush</b>	29-31
9	An Analysis of Data Visualization Methods and Techniques in MS Excel <b>Rituja Ravindra Vyapari</b>	32-35
10	Exploring Dalit Consciousness in Baby Kamble's The Prisons We Broke <b>Dr. Shivaji D. Sargar, Navale Dattatray Prabhakar</b>	36-37
11	History of Indian Cinema and Women's portrayal <b>Farheen Tai</b>	38-41
12	Challenges and Opportunities in the Sustainable Agriculture Development in India <b>Dr. Ashok Shamrao Patil</b>	42-45
13	Comparative Thermal Analysis Studies on Gel Grown Crystals of Li, Cu and Mixed Li-Cu tartrate <b>Dadaji V. Sonawane</b>	46-48
14	Recent Trends, Methods and Problems in Geographical Education <b>Dr. Jadhav Hanumant Lahu</b>	49-50
15	Education is the Key of Sustainable Development for Future <b>Mr. Suresh Ragho Pagar</b>	51-53
16	Service Industry - Opportunities Challenges and Recent Initiatives in India <b>Dr. G. M. Hugar</b>	54-56
17	"Jhansi Rani of Travancore": Assessing the Pioneering Contributions of Accamma Cherian to the Nationalist Movement in Travancore <b>Abhishek Abraham Mathews</b>	57-59
18	Ecommerce Testing <b>Mr. Dnyaneshwar Fairrao Pathrikar, Mr. Dattatraya Bhikaji Raymal, Mr Hushikesh Rajendra Lahane</b>	60-62
19	Technological Revolution: The Future of Agriculture <b>Mr. Shivaling B. Rajmane</b>	63-64
20	Economic Empowerment of Women in India <b>Mr. Manish Annasaheb Maske</b>	65-67
21	The Role Employee Participation in Human Resource Development <b>Prof. Deepali R. Chandramore</b>	68-70
22	Geographical Study of Tribal Main Workers in Nashik District, Maharashtra <b>Rajendra S. Pawar</b>	71-74
23	An Overview of Digital Revolution for Implementing the New Trends of Online Marketing <b>Dr. Arti C. Lokhande</b>	75-76
24	Over The Top (OTT) Platforms In India: Issues And Challenges - An Empirical Study <b>Sujith.T.S, Dr.M.Sumathy</b>	77-78
25	The Geographical Study of Rural Settlements Size in Daund Tahsil, Pune District(MS) <b>Mr. Parkhe Sakharam Baban, Dr. Chimangunde Vishavraj S</b>	79-82
26	Importance of E-Resources: Issues and Challenges <b>Mrs. Rakte Jyoti Bhausaheb</b>	83-86
27	Importance Enterprise Resource Planning (ERP) in Business: A Study <b>Gourab Das, Subrata Das</b>	87-90
28	Feature Based distance Measurement Approach for Detection, Verification and Authentication of Individual <b>Ghuge Vijaymala Tanaji</b>	91-95

29	A Study of Benifit and Challenges of Goods and Service Tax (GST) In Retail Industry in India <b>Mr. Sanjay J. Kasabe, Dr. Bharat Patil</b>	96-99
30	Artificial SuperIntelligence : Present View and Future Prospects <b>Prof Yaseera Tausif Nevrekar, Dr Saima Shaikh</b>	100-106
31	Recent trends in Psychological Research <b>Rakhonde M.K.</b>	107-108
32	Dr. B. R. Ambedkar: As A Real Humanist <b>Dr. Jagadish Asode</b>	109-111
33	Dr. B. R. Ambedkar's Idea of Socio-Political Philosophy <b>Dr. Madhuri Chougule</b>	112-114
34	The Importance of Health Facilities in Badalpur Block District Jaunpur: A Geographical Study <b>Babita Shukla, Dr. Sanjay Kumar Singh</b>	115-122
35	मानवी कल्याणासाठी शाश्वत विकासाची आवश्यकता <b>सहा. प्रा. कैलास सत्यवान शेलार</b>	123-127
36	उत्तर महाराष्ट्रातील कृषी प्रक्रिया योग्य शेतमालाचे उत्पादन व विपणनाचा विश्लेषणात्मक अभ्यास <b>सहा. प्रा. शशिकांत सूर्यभान खेमनर, प्रा. डॉ. जे. आर. भोर</b>	128-131
37	महिला सक्षमीकरण आणि उद्योजकता <b>प्रा. डॉ. अलका दहिकर</b>	132-134
38	आदेशात्मकता निरपेक्ष, आदेशवाद आणि सार्वत्रिकता: एक तौलनिक अध्ययन (आर. एम. हेअर व ईम्यन्युअल कांटच्या संदर्भात) <b>डॉ. नरेंद्र वसंत रघटाटे</b>	135-139
39	उत्तर प्रदेश लोकसभा चुनाव 2014 मे मतदान करने वाले का स्थानिक विश्लेषण: एक भौगोलिक अध्ययन <b>डॉ. संजय कुमार सिंह, जयप्रकाश</b>	140-146
40	पशू संसाधन का स्थानिक वितरण प्रतिरूप: जनपद हरदोई का भौगोलिक विवरण <b>डॉ. संजय कुमार सिंह, निशात फतीमा</b>	147-154
41	जनपद गोण्डा मे न्यूनतम समर्थन मूल्य का गेहूं और जौ फसल के उत्पादन श्र क्षेत्र पर प्रभाव का एक भौगोलिक अध्ययन <b>अखण्ड प्रताप पाल, डॉ. (श्रीमती) पुष्पा सिंह</b>	155-161
42	सिंचाई सुविधाओं का कृषी विकास पर प्रभाव शिवपुरी जिले मे विशेष संदर्भ में <b>बीरेन्द्र कुमार अहिरवार</b>	162-166
43	बुद्धी प्रामाण्यवादी विचारवंत मानवेंद्रनाथ राँय यांच्या कार्याचा विश्लेषणात्मक अभ्यास <b>डॉ.संभाजी संतोष पाटील</b>	167-171
44	अनुसूचित जातीच्या संकल्पनेचा विश्लेषणात्मक अभ्यास <b>प्रा. डॉ. वसंत तुकाराम नाईक, नारायण हनमंतराव पांचाळ</b>	172-175

## Study of Biodiversity of Phytoplankton and Zooplankton of A Fish Culture Pond and Wild Village Pond of Bhilawadi in Sangli District MS

Rakshanda. L. Shinde<sup>1</sup> Swpnali. B. Lad<sup>2</sup>

<sup>1,2</sup>Krantiagrni G. D. Bapu Lad Mahavidhaylaya, Kundal.

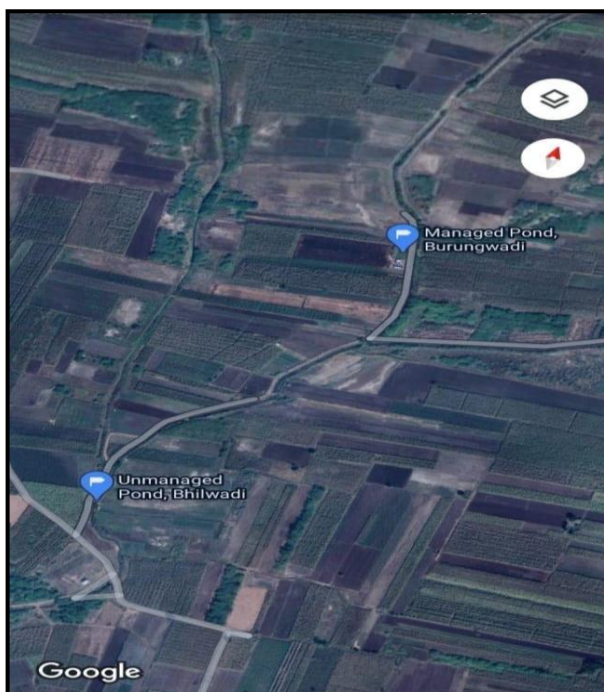
Email id- Swapnali5lad@gmail.com

### Abstract:

Study of biodiversity of phytoplankton and zooplankton of a fish culture pond and wild village pond of Bhilawadi in Sangli District Maharashtra from (January to April 2021).were total of three classes of phytoplankton and three classes of zooplanktons were recorded which contain 06 phytoplankton and 11 zooplankton species from both P1 and P2 .P1 richer in zooplankton and P2 was richer in phytoplankton .An inverse relationship was observed between Phytoplankton and zooplankton abundance.

**Key words:** diversity, phytoplankton, zooplankton, fish culture pond and wild village pond.

**Introduction:** The plankton community is composed of phytoplankton (primary producers) and zooplankton (secondary producers). The phytoplankton presents biological wealth of the water body and form the base of food chain in ponds (Pokorny et al 2005). Zooplankton is a principal component of food for omnivorous fish that are usually farmed in extensive aquaculture (Brummett and Noble, 1995). Ekelemu (2010) emphasized on the fact that zooplankton is very important in the food web of open water eco system. Damle and Chari (2011) observed that lack of zooplankton caused poor survival of spawn in



nursery ponds. The zooplankton is commonly divided to following groups Rotifers (Rotatoria), Cladocerans (Cladocera) and Copepods (Copepoda). Composition of zooplankton is in close relation to farmed fish and the presence of suitable zooplankton species is essential for successful farming (Kalous et al 2009). Abundance of planktons supported large population of fish species, Jhingran (1991) reported that organic manuring results higher zooplankton densities in the ponds. Hence, it can be concluded that zooplankton population improved with the application of the manure maintaining the water quality favourable for fish production. Poultry manures was found to release soluble salts continuously, resulting in high production of zooplankton (Gaur and Chari, 2007). Sasmal et al (2008) suggested that duck excreta was good source of nutrients, easily soluble in water and available for plankton production. In the present study provide information on study diversity of zooplankton and phytoplankton a fish culture pond and wild village pond of Bhilawadi in Sangli District Maharashtra.

### Study Area Map

### Material Method

The study was conducted during January 2021 to April 2021 on two ponds.

1.managed fish pond (P1)

2.Unmanged fish pond (P2) In Bhilawadi Dist .Sangli .

Pond P1 = 3000 square foot was Rectangular in shape with an area was stocked with composite fish culture practice, Pond P2 = 4000 square foot Was near circular in outline with an area and was being used by village for multiple purposes. Plankton samples were collected once in every month between 8-10 cm. from 10 randomly selected points of the pond at depth of 20 cm. below the surface (Hossian et.al.,2007).Plankton samples for this study were collected with plankton net made of bolting silk cloth no.2S with mesh size 0.03 - 0.04 mm.(Apha 1995) phytoplankton samples were preserved in 0.3% lughole ,iodine .While ,zooplanktons samples were preserved in 4% buffered formalin solution and then transported to laboratory for planktons analysis ( Lackey 1938 )The identification of planktons species was done with aid of planktons identification key and monographs by Needhum (1962) Tonapic (1980 ) Battish (1992). And Bellinger (1992).

### Result

Three Classes of phytoplankton ( *Diatoms* ,*Myxophyceae* , *Chlorophyceae* ) were recorded form P1 and

Two classes of zooplanktons (*Crustacea*, *Rotifers*) were recorded from P2.

Total phytoplankton 6 species and 11 species zooplankton in both the ponds. Among all species were found to be common at both the ponds phytoplankton's 3 species and zooplanktons 6 species in P1. Phytoplankton 4 species and zooplankton 7 species recorded from P2.

**Table:1 Phytoplankton diversity and distribution of managed fish culture pond ( P1 ) and Unmanaged village pond (P2) at Bhilawadi dist of Sangli during Jan to april 2021.**

Sr.No.	Class	Species	Distribution
1.	Diatoms	<i>a.Nitzschia b.Navicula.</i>	P1,P2
2.	Myxophyceae.	<i>a.Arthospira</i>	P2
3.	Chlorophyceae	<i>a.Nitella. b.Chara. c.Spirogyra.</i>	P1 P1,P2 P2

**Table:2 Zooplankton diversity and distribution of managed fish culture pond ( P1 ) and Unmanaged village pond (P2) at Bhilawadi dist of Sangli during Jan to april 2021.**

Sr.no.	Class	Species	Distribution
1.	Crustacea	<i>a.Cladocera b.Nauplius c.Cyclostrenus d. Copepods e.Sida crystalina</i>	P1,P2 P1 P2 P1,P2 P2
2.	Rotifers	<i>a.Brachionus falcatus b.Brachionus Vulgaris c.Planaria d.Testudinella elliptica e.Miona mrococopa f.Diaptomus copepod.</i>	P1 P1P2 P1 P2 P1 P2

**Discussion:**

for any scientific utilization of water resources plankton study is of primary interest (Jhingran,1985). Phytoplankton forms the vital source of energy as primary producer and serves as direct source of food to the other aquatic plants and animal (Battish, 1992). Total phytoplankton 6 species and 11 species zooplankton in both the ponds. Among all species were found to be common at both the ponds phytoplankton's 3 species and zooplanktons 6 species in P1. Phytoplankton 4 species and zooplankton 7 species recorded from P2.

Zooplankton are one of the most important biotic components influencing all the functional aspects of an aquatic ecosystem, such as food chains, food webs, energy flow and cycling of matter (Battish, 1992). Total 11 zooplanktons had been found from P1 and P2. 5 species were common at both the ponds.

**Conclusion:**

An inverse relationship was observed between phytoplankton and zooplankton abundance. The managed fish culture pond which was periodically limed, manured and fertilised showed greater planktonic diversity, with zooplankton being the dominant group. Whereas the unmanaged village pond showed a less diverse and eutrophic condition, with phytoplankton being the dominant group. It implies that a large amount of ecological niches are remaining void and unutilised in village ponds. Whereas all the available ecological niches are being effectively utilised by the stocked fishes and periodically replenished by fertilisation in the managed fish culture pond. Therefore selective stocking with appropriate species at low densities and extensive fish culture practices in the village ponds has ample scope. Adoption and transformation of such village ponds by scientific management practices into semi-intensive fish culture ponds may prove to be an ecologically efficient, financially feasible and socially viable venture.

**Acknowledgement**

I express my heartiest gratitude to Prin. Dr. P. B. Lad sir, Krantiagrani G. D. Bapu Lad Mahavidyalaya Kundal. Department of Zoology for providing lab facilities of this complete study work.

**References:**

1. Jhingran V G (1991). *Fish and fisheries of India, Hindustan Publishing corpertion (India) Delhi. Pp. 502-16.*
2. Kalous L, Kurfürst J, Petryl M, Holiková P and Trefil P (2009). *zooplankton of small ponds in integrated fish and duck production in bié province, angola. Agricultura Tropica Et Subtropica.42(4):197-99.*
3. Brummett R E and Noble R (1995). *Aquaculture for African Small Holders. ICLARM – The World Fish Center, Penang, Malaysia pp. 1–69.*

4. Ekelemu J K (2010). A Survey of the zooplankton community On a Lake, Southern Nigeria. *International Journal of Agricultural and Rural Research, IJARD* 1(2):185-90.
  5. Ekelemu J K and Nwabueze A A (2011). Comparative studies on zooplankton production using different types of organic manure. *International Journal of Science and Nature* 2(1):140- 43.
  6. Aarti, D., Sharma, K.K., Sharma, A. & Antal, N. 2013. Zooplankton Diversity and Physico-Chemical Conditions of a Temple Pond in Birpur (J&K, India). *International Research Journal of Environment Sciences* 2(5): 25-30.
  7. Anand, N. 1998. *Indian Freshwater Microalgae*. Bishen Singh Mahendra Pal Singh publ., Dehradun, India, pp. 94. |
  8. APHA. 1995. *Standard Methods for the Examination of Water and waste water*. 18th edition. American Public Health Association, Washington, DC.
  9. Banerjee, S.M. 1967. Water quality and soil condition of fish ponds in some states of India in relation to fish production. *Indian journal of Fisheries* 14: 115-144.
  10. Battish, S.K. 1992. *Freshwater zooplankton of India*. Published by oxford & IBH publishing Co.PVT.LTD. New Delhi.
  11. Bellinger, E.G. 1992. *A key to common Algae*. The institute of water and environmental management, London.
  12. Benarjee, G. & Narasimha, R. K. 2013. Physico-chemical factors influenced plankton biodiversity and fish abundance- a case study of Nagaram tank of Warangal, Andhra Pradesh. *International Journal of Life Sciences Biotechnology and Pharma Research* 2(2): 248-260.
  13. Gupta, T. & Dey, M. 2012. Hydro biological Characteristics of Some Semi-intensive fish culture ponds of Lunding town of Nagaon district, Assam. *Current World Environment* 8:(1).
  14. Hossain, Md. Y., Jasmine, S. & Ibrahim, A.H. 2007. A preliminary observation on water quality and plankton of an earthen fish pond in Bangladesh: Recommendations for future studies. *Pak. J. Biol. Sci.*, 10(6), 868-873.
  15. Jhingran, V.G. 1985 *Fish and Fisheries of India*. Hindustan Publishing Corporation (India), Delhi.
  16. Kumar, N.K., Solanki, R. & Kumar, J.I. 2012. Spatial variation in phytoplankton diversity in the Sabarmati river at Ahmedabad, Gujarat, India. *Annals of Environmental Science* 6, 13-28.
  17. Lackey, J.B. 1938. The Manipulation of counting of river plankton and changes in some organisms due to formalin preservation. *US Public Health Report* 53, 2080-2093pp.
  18. Michael, R.G. & Sharma, B.K. 1988. *Indian Cladocera (Crustacea, Branchipoda, Cladocera)*. Zoological Survey of India, Kolkata, pp. 260.
  19. Needham, J.G. & Needham, P.R. 1962. *To guide to the study of freshwater biology*. Holden-Day inc. Sanfrancisco costable & Co. Ltd. London.
  20. Palmer, C. M. 1969. A composite rating of algae tolerating organic pollution. *Phyco.* 15, 78-82.
- Tonapi, G.T. 1980. *Freshwater animals of India. An ecological approach*. Oxford IBH Publishing



**Study Of Biodiversity Zooplanktons And Phytoplankton's Of Farm Pond And Lakes In Bhilawadi, Sangli District, Maharashtra.**

1.Crustacea: Cladocera

2.Crustacea: Nauplius



**3. Crustacea: Cyclops strenuus**



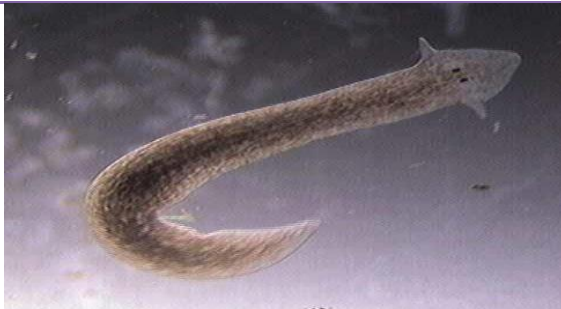
**4. Crustacea: Copepods**



**5. Rotifers: Brachionus Falcatus**



**6. Rotifers: Brachionus Vulgaris**



**7. Planaria**



**8. Rotifers: Testudinella elliptica**

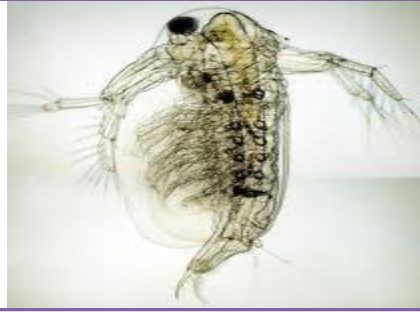


**9. Miona Macrocopa**



**10. Diaptomus Copepod**





**11. Crustacea: Sida crystalina**

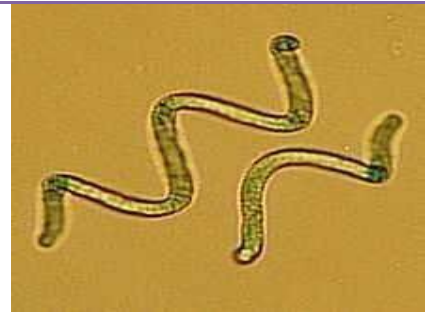
**Study Of Biodiversity Phytoplanktons of Farm Tanks (Lakes) In Bhilawadi, Sangli District, Maharashtra.**



**1. Diatoms: Nitzschia**



**2. Diatoms: Navicula**



**3. Myxophyceae: Arthrospira**



**4. Chlorophyceae: Nitella**



**5. Chlorophyceae: Chara**



**6. Chlorophyceae: Spirogyra**

## Physico-Chemical Characterization of Farmland Soil in Some Villages of Palus Taluka, Dist. Sangli (Maharashtra)

Dhanashri V. Bandgar<sup>1</sup> Urmila V. Bandgar<sup>2</sup>

<sup>1,2</sup>Krantiagrani G.D.Bapu Lad Mahavidyalaya, Kundal

E-mail: dhanashribandgar02@gmail.com

### Abstract

The Physico-chemical study of soil is based on various parameters like, pH, Electrical conductivity (EC), Total Organic Compound (OC), Nitrogen (N), Phosphorus ( $P_{205}$ ) Potash ( $k_2O_5$ ), calcium carbonate ( $CaCO_3$ ), Sodium (Na), Iron (Fe) lead us to the conclusion of the nutrients Maharashtra state. Result shows that all the six selected places sample of Palus taluka have medium or high minerals content. This information will help farmers to solve the problems related to soil nutrients amount of which fertilizers to be used to increase the yield of crop.

**Keywords:** Chemical properties of soil, Physico-Chemical parameters

### Introduction-

Soil sample is vital components step for any soil analysis the soil test based nutrients management has emerged as a key issue in efforts to increase agriculture productivity. Soil is important to everyone either directly or indirectly. It is basic life support component of biosphere. The Physico-Chemical parameter study is important agricultural chemist for plants growth and soil management. Soil samples are collected from six villages of Palus taluka which are S<sub>1</sub>. Bambavade, S<sub>2</sub>, Pundi, S<sub>3</sub>. Dhayari, S<sub>4</sub>. Palus, and S<sub>5</sub>. Dudhandi. The Physico-Chemical properties such as moisture content, specific gravity, pH measurement and estimation of N, Ca, phosphorous, potassium of soil were well studied. The fertility of soil depends on the concentration of N, K, P, organic and inorganic materials and water. Nitrogen is the most critical element obtained by plant from the soil and is bottleneck in plant growth. About 80 per cent of the atmosphere is nitrogen gas. Nitrogen is required for plant growth. Phosphorous is a most important element present in every living cell it is important micronutrient essential for plant growth. Potassium plays important role in different physiological process of plants. Analysis of soil is carried out for the studies of various parameters like Organic Compound (OC) Nitrogen (N), Phosphorus ( $p_{205}$ ) and Potassium ( $k_2O$ ). The pH conductivity and estimation of Ca, K of soil was studied. Present study is an attempt to find out the nutrients quantity in soil of Palus taluka. This information is useful to farmers to decide the amount of fertilizer to be used to soil to increase production and economic. The objective of this paper was to analyze in pH, OC, N, P, K state of soil of six village sample of Palus taluka of Maharashtra state.

### Experimental:

The quality test survey of the soil was conducted in six villages from Palus taluka. A representative soil sample collected from six villages. Representative soil samples were collected following standard quadric procedure and taken in polythene bags. In laboratory these samples were analyzed for different chemical parameters following standard method AR grade reagent and double distilled water were used for soil analysis. Result compared with standard values to find out available Nitrogen, Phosphorus, Sodium, Potassium, pH and electrical Conductivity was measured to find low, medium or high nutrients content.

### Physico-Chemical Analysis:

The physical and chemical soil quality parameters like pH, Electrical Conductivity, Organic Compound (OC), Nitrogen(N) organic carbon was determined by W and black method pH was measured using pH meter, EC was measured using a conductivity meter. Na and K was measured using flame photometer.

**Result and Discussions:** Physical chemical properties of soil samples were studied all the samples are black colour and have unpleasant smell.

**Table: 1 Physico-chemical parameter of soil sample from villages of Palus**

Sr.No	Sample No	Name of villages	pH	EC	OC	N	P	K	Ca
1	S <sub>1</sub>	Bambavade	8.30	0.120	0.39	200	55	376	6
2	S <sub>2</sub>	Pundi	8.10	0.250	0.87	213	61	336	5.5
3	S <sub>3</sub>	Dhayari	8.22	0.096	0.96	197	19	242	0.9
4	S <sub>4</sub>	Palus	8.46	0.110	0.50	185	51	376	12.5
5	S <sub>5</sub>	Ghogaon	8.90	0.130	0.98	174	62	242	8
6	S <sub>6</sub>	Dudhandi	8.01	0.090	0.91	155	48	309	14.1

(Source: Field Samples)

The pH of soil is one of the most important Physico-Chemical parameters. The limit of pH value is for soil acidic <6.5, normal 6.5-7.8, alkaline 7.8-8.5, alkali > 8.5. The pH range of soil sample shows Maximum variation 8.90. The above 7.5 value of pH shows basic nature. The standard value of electrical conductivity is in soil normal 0.8 dsm-1. The EC study of sample shows variation in conductivity values between 0.09 mhos to 0.250 mhos. The percentage of carbon varies from 0.39 to 0.98 shows normal and higher percentage Phosphorus (P) is normal and Potash (K) is high range. Percentage of Calcium from 5.5 to 12.5 shows normal soil range.

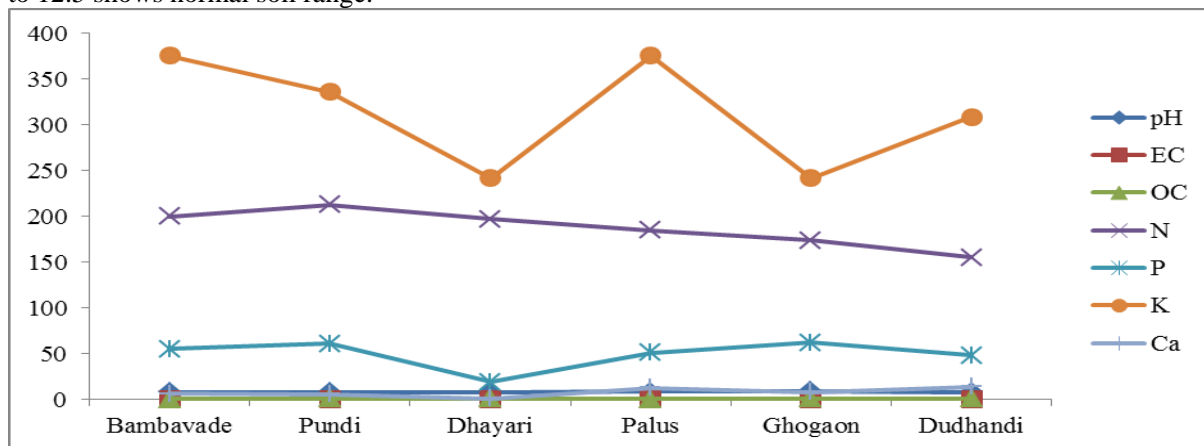


Fig.1 Physico-chemical parameter of soil sample from villages of Palus

### Conclusion:

This can be concluded from Physico-Chemical studies of soil samples from six places of Palus shows that the parameters EC, pH, O.C % N,% P are normal rang and potash are high range. This study information about nature of soil present in soil, according to this information farmer arranges the amount of which fertilizer and nutrients needed to soil for increases the yield of crop.

### Reference:

1. Oishimaya, S.N. What Are the Harmful Effects of Littering? World Atlas- Environment. Available online: [www.worldatlas.com](http://www.worldatlas.com) (accessed on 8 September 2020).
2. Bartkowiak, A.; Lemanowicz, J.; Siwik-Ziomek, A. Assessment of selected heavy metals and enzymes in soil within the range of impact of illegal dumping sites. *Int. J. Environ. Res.* 2016, 10, 245–254.
3. Utobo, E.B.; Tewari, L. Soil enzymes as bioindicators of soil ecosystem status. *Appl. Ecol. Environ. Res.* 2015, 13, 147–169.
4. Błońska, E.; Lasota, J.; Zwydak, M. The relationship between soil properties, enzyme activity and land use. *For. Res. Pap.* 2017, 78, 39–44. [CrossRef]
5. Tan, X.; Xie, B.; Wang, J.; He, W.; Wang, X.; Wei, G. County-Scale Spatial Distribution of Soil Enzyme Activities and Enzyme Activity Indices in Agricultural Land: Implications for Soil Quality Assessment. *Sci. World J.* 2014, 2014, 1–11. [CrossRef] [PubMed]
6. Makoi, J.H.; Ndakidemi, P.A. Selected soil enzymes: Examples of their potential roles in the ecosystem. *Afr. J. Biotechnol.* 2008, 7, 181–191.
7. Anita Joshi Raj, V Umayoru Bhagan. Comparative analysis of some important physicochemical parameters of surface soil and underground water samples of fluorotic areas of Agastheeswaram Union, South India. *American Journal of Engineering Research.* 2013; 02(06):55-59.
8. Saroj Mahajan, Dilip Billore. Assessment of PhysicoChemical characteristics of the Soil of Nagchoon Pond Khandwa, MP, India. *Res. J Chem Sci* January. 2014; 4(1):26-30.
9. Anu Upadhyaya SK, Bajpai Avinash. Seasonal Analysis of Soil Sediment of Shahpura Lake of Bhopal (M.P.). *International Journal of Environmental Science and Development*, October. 2010; 1:4.
10. Osakwe SA. Evaluation of Physicochemical Characteristics of Soils in the Flood Disaster Affected Areas of Isoko Region of Delta State, Nigeria. *IOSR Journal of Applied Chemistry (IOSR-JAC).* Ver I. 2014; 7(5):24-31.
11. Kiran G. Chaudhari Studies of the physicochemical parameters of soil samples *Advances in Applied Science Research* 2013; 4(6):246-248.
12. Rajesh P Ganorkar, PGChinchmalatpure. Physicochemical Assessment of Soil in Rajura Bazar in Amravati District of Maharashtra (India) *International Journal of Chemical, Environmental and Pharmaceutical Research* MayDecember. 2013; 4(2&3):46-49.

## Studies of Physicochemical Parameters to Assces the Water Quality of River Yerrala for Drinking Purposes in Palus and Khanapur Tehsil (Sangli Distra)

Kamble P. D<sup>1</sup>., Lad S. B.<sup>2</sup>., Suryawanshi P.T<sup>3</sup>.

<sup>1,2,3</sup>Krantiagrani G.D. Bapu Lad Mahavidyalaya Kundal.

Email: [swapnali5lad@gmail.com](mailto:swapnali5lad@gmail.com)

### Abstract:

A systematic study has been carried out to access the water quality of river Yerala in Sangli district. 11 water samples from three sampling stations were collected and analyzed for physicochemical parameters (pH, EC, TDS, Calcium, Magnesium, Sodium, Potassium, Carbonate, Bicarbonate, Chloride, Sulphate). Comparatively study three village interpoint distance is 5 to 8 km. Comparatively maximum value in Andhali . It was observed that the water in Balwadi and Wazar better quality than the Andhali. Suitable suggestions were made to improve the water quality of Yerala River water.

**Keywords-** Drinking water, Yerala River, Sangli District, physico-chemical parameter.

### Introduction

water is one of the most important of all natural resources known as earth it is important to all living organisms, human, health, food, production and economic development the safety of drinking water is important. for the safety of drinking water is affected by various contaminant which included chemical and microbiological such contaminants cause serious health problems.

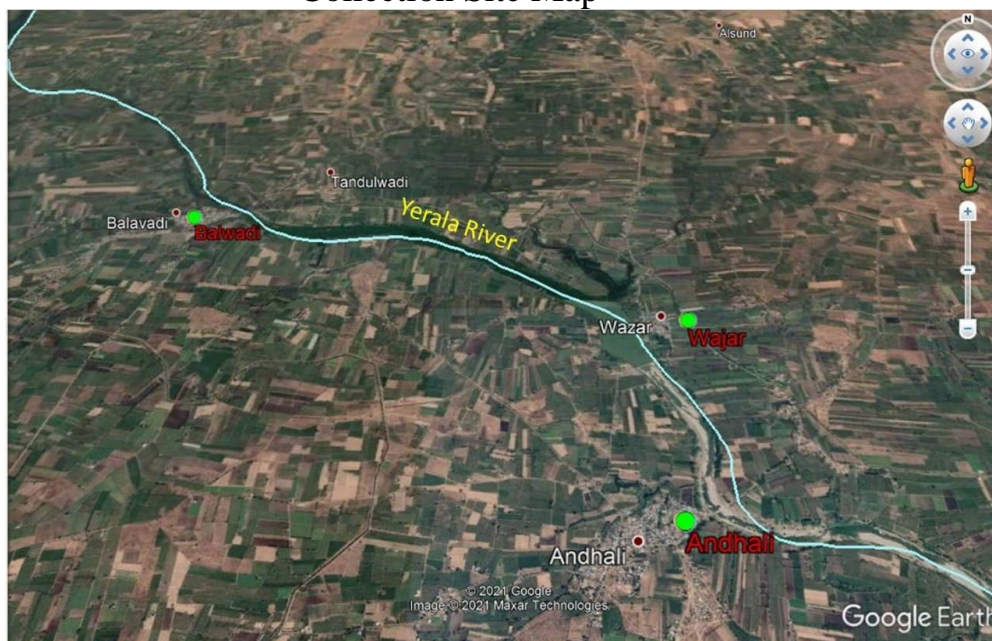
Due to this contaminates quality of the drinking water become poor. sometimes such poor quality water causes many diseases in the humans so that quality of the water must be tested for both the chemical as well the water must be tested for both the chemical as well as for the maximum no of physical and chemical parameter were within the desirable limit as suggested by (WHO 1971) and BIS(1991)

The objective of the present is to provide information on the physicochemical characteristics of potable water in order to discuss its suitability for human consumption. physicochemical aspects of the water have been investigated to assess the quality of water .The variations of the physicochemical properties of water samples directly influence the biotic communities and primary Productivity of the water bodies of different areas of sangli district of Maharashtra .

### Material And Methods-

The water samples from three village Wazar, Balawadi and Andhali from Yerala river were collected in polythene bottles. The water sample were immediately brought into laboratory for the estimation of various physico-chemical parameter like Ph, EC, TDS, Calcium, Magnesium, Sodium, Potassium, Carbonate, Bicarbonate, Chloride, Sulphate. while other parameters like were estimated in the laboratory by using std methods is prescribed by ( APHA 1998 ) & ( trivenedy R.K.and Goel ( 1986).

### Collection Site Map



### Collection Site



Wazar

Balawadi

Andhali

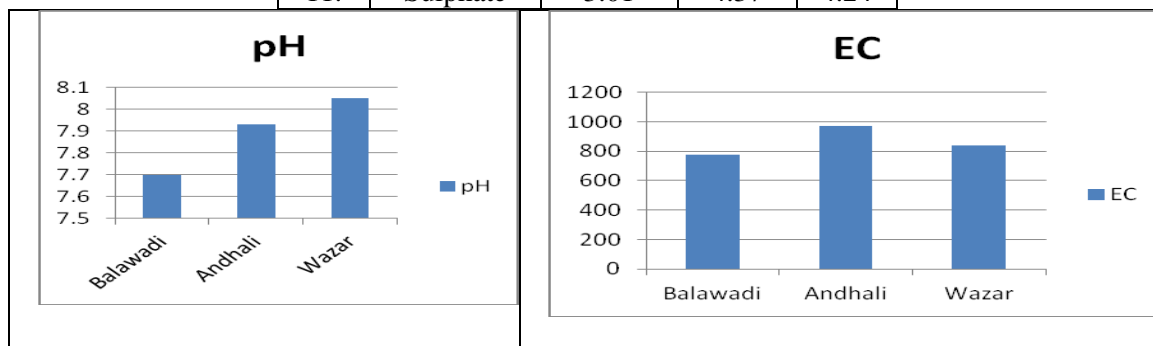
### Results & Discussion

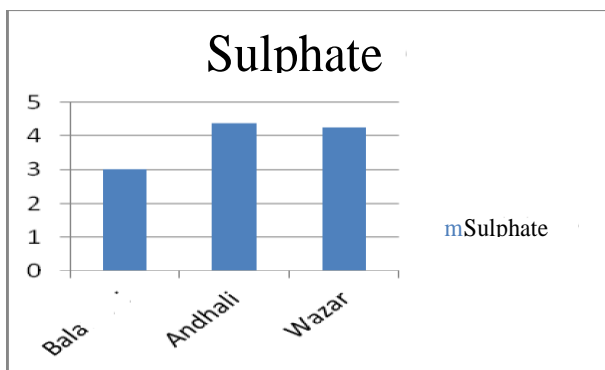
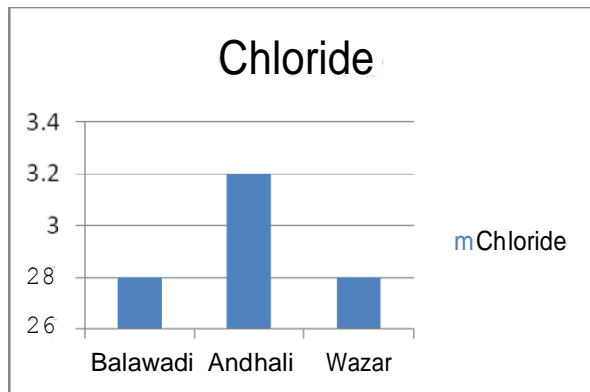
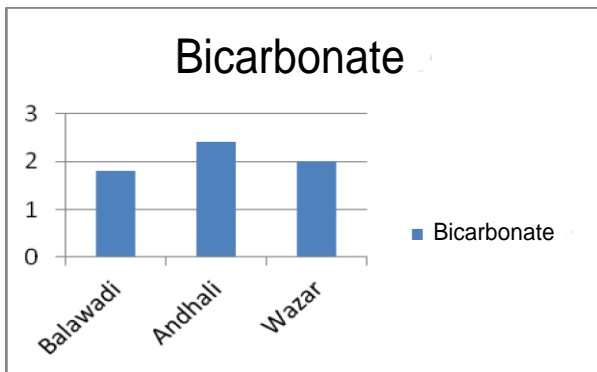
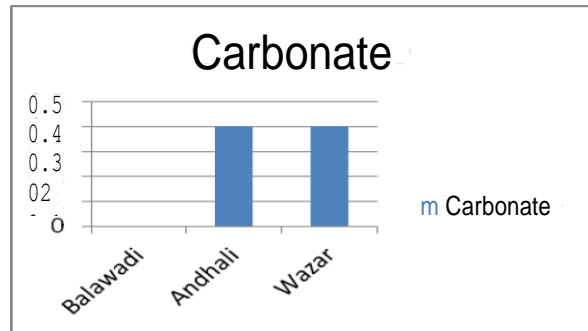
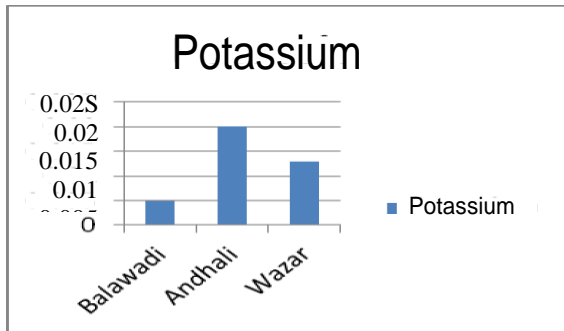
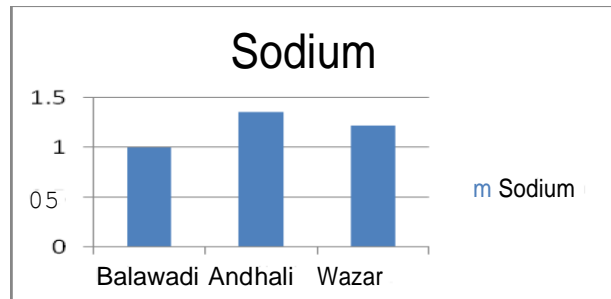
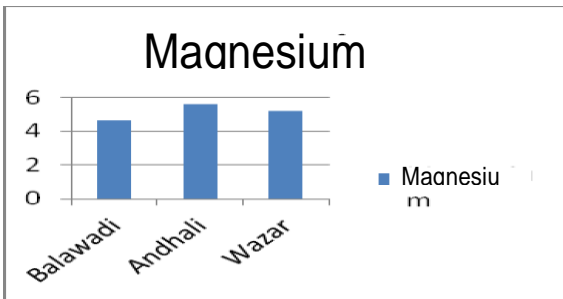
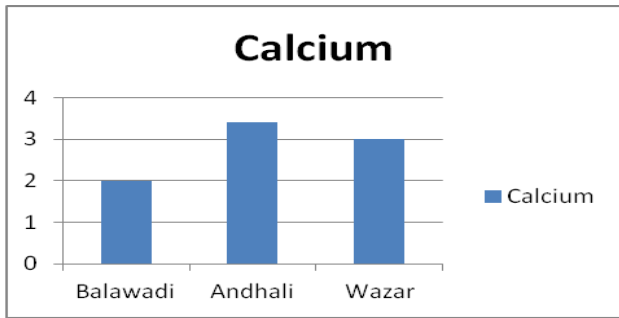
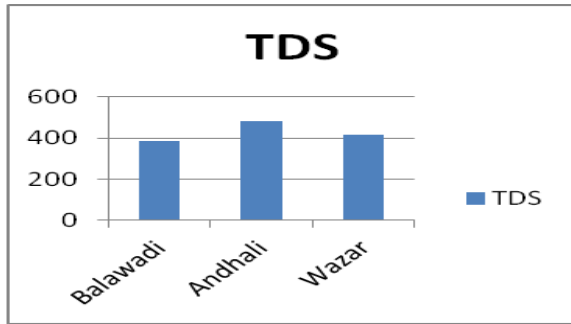
The results obtained from analysis of Yerala river are shown in table. The results indicate that the quality of water was differences occur location. In andhali maximum value of physicochemical parameter.

PH values of all the waters from three places are found to be near about same i.e. Average value of ph 7-8.50 is observed according to guidance maharashtra shasan. ph was alkaline in nature. Electrical conductivity values are found to be higher. The conductivity of water is affected by the suspended impurities & also depends upto the amount of ions in the water. The highest conductivity 970 of the Andhali river water is observed TDS values are found to the little higher than average value. So there values are not affected on human health. The hardness was higher in all three phase. here magnesium ions moles major contribution to the hardness of yerala river water. Na , K & carbonate ions are found to the same to not average value. Bicarbonate chloride & sulphate ions are same what larger values than average values.

**Table no.1: Physicochemical analysis of water from collection sites.**

Sr. no	Parameter	Balawadi	Andhali	Wazar
1.	pH	7.70	7.93	8.05
2.	EC	775	970	840
3.	TDS	384	484	417
4.	Calcium	2.0	3.4	3.0
5.	Magnesium	4.6	5.6	5.2
6.	Sodium	1.00	1.35	1.22
7.	Potassium	0.005	0.020	0.013
8.	Carbonate	0	0.4	0.4
9.	Bicarbonate	1.8	2.4	2.0
10.	Chloride	2.8	3.2	2.8
11.	Sulphate	3.01	4.37	4.24





### **Conclusion & Suggestion**

The ph values are nearly alkaline in nature therefore suitable for drinking water. The electrical conductivity of water is affected by the suspended impurities & dissolved solids also depends upon the amount of ions in the water. Thus to reduce the electrical conductivity the ions must be separated by reverse osmosis process electrolysis process etc. Also by reducing the dissolved solids the can be decreased.

**Acknowledgement:** I express my heartiest gratitude to Prin. Dr. P. B. Lad sir, Krantiagrani G. D. Babu Lad Mahavidyalaya Kundal for providing lab facilities of this complete study work.

### **References**

1. Abbasi T, Abbasi SA (2012) *Water quality indices*.
2. Elsevier, Amsterdam Abbasi SA, Arya DS, Ahmed AS, Abbasi N (1996) *Water quality of a typical river Punnappuzha of Kerala*.
3. *Pollut Res 15(2):163–166* Aenab AM, Singh SK (2013) *Evaluating water quality of Ganga river within Uttar Pradesh State by water quality index analysis using C ?? Program*. *Civil Environ Res 3(1):57–65*
4. Ahmad IK, Salih NM, Nzar YH (2012) *Determination of water quality index (WQI) for Qalyasan stream in Sulaimani city/ Kurdistan region of Iraq*. *Int J Plant Anim Environ Sci 2(4):148–157* Alam M, Pathak JK (2010) *Rapid assessment of water quality index of Ramganga river, Western Uttar Pradesh (India) using a computer programme*. *Nat Sci 8(11):1–8*
5. APHA (1998) *Standard methods for the examination of water and waste water, 20th edn*. American Public Health Association, Washington
6. Badola SP, Singh HR (1981) *Hydrobiology of the river Alaknanda of Garhwal Himalaya*. *Ind J Eco 8(2):269–276*
7. Balan IN, Shivakumar M, Kumar PDM (2012) *An assessment of ground water quality using water quality index in Chennai, Tamil Nadu, India*.
8. Chron Young Sci 3(2):146–150 Bhardwaj V, Singh DS, Singh AK (2010) *Water quality of the Chhoti Gandak River using principal component analysis, Ganga Plain, India*.
9. *J Earth Syst Sci 119:117–127* Bhargava DS (1982) *Purification power of the Ganges unmatched*. *LST Bull 34, 52*.

## Physico-Chemical Analysis of Borewell Water Samples of Palus Taluka Dist-Sangli, MS, India

**Urmila V. Bandgar<sup>1</sup> Dhanashri V. Bandgar<sup>2</sup>**  
<sup>1,2</sup>Krantiagrani G.D. Bapu Lad Mahavidyalay, Kundal  
 E-mail id - bandgarurmila77@gmail.com

### Abstract-

Groundwater is a natural resources of drinking water. The present study is focused on the determination of physico-chemical parameters. Such as pH, EC, TDS cation like Ca, Mg, Na. Anion like , Bicarbonate, Chloride and Sulphate of water samples from six Villages point of Palus taluka, Dist- sangli. Ground water is most necessary source of water. So, the present work deals with valuation of borewell water of different six places in palus taluka.

**Keywords-** Borewell water, physico-chemical parameters.

### Introduction-

Water is one of the most valuable natural resources. Water is a natural chemical substance which consist of the elements hydrogen and oxygen in the ratio 2:1 chemical formula is H<sub>2</sub>O. The quality of water depends on its physical, chemical and biological characteristics. Which determines its utility for different purposes? It is fundamentally important to all plants, animals and man. All over the world borewell water represents the largest source of fresh portable water. The humans can abstract borewell water through a borehole, which is distilled in to the aquifer for industrial, agricultural and domestic. However borewell water resources are commonly not secure to pollution, which may degrade their quality. Generally borewell water quality changes from place to place according to the nature of soil, rocks and surface through which it moves. The present study was analyzing some Physico-Chemical parameters such as pH, EC, TDS, Calcium, Magnesium, Sodium, , Bicarbonate, Chloride and Sulphate ,etc. Were carried out.

### Materials and Methods -

#### Collection of water samples-

A collection of borewell water sample from six villages of palus taluka, Dist- sangli ( village like sample S1- Kundal, S2- Dudhandi, S3-palus, S4- Ghogaon, S5- Burli , S6- morale) Were collected using sterile plastic bottles. For each sample to study the variations in Physico-Chemical properties.

#### Analysis of water sample-

The water quality Physico-Chemical parameters were pH, EC, TDS, Calcium, Magnesium, Sodium carbonate, Bicarbonate, Chloride and Sulphate, etc. All the reagents used were of analytical grade and solution were made of distilled water. Parameters determined using standard analytical method. The instruments used were calibrated before we for observing reading .

**Table - 1. Laboratory analytical methods.**

Sr.NO	Physico-Chemical parameters	Methods
1	pH	Potentiometry
2	Conductivity	Conductometry
3	Total Dissolved solution	TDS probe
4	Calcium	Argentometry(titration)
5	Magnesium	Argentometry(titration)
6	Chloride	Argentometry(titration)
7	Sulphate	Spectrophotometer

**Table -2. Physico-Chemical parameters of six sampling site.**

Sr.No.	Sample no.	Name Of Villages	Parameters								
			pH	EC	TDS	Cation			Anioan		
						Ca	Mg	Na	Bicarbonate	Chloride	Sulphate
1	S1	Kundal	7.52	200	100	4.0	1.6	0.44	0.1	0.4	1.94
2	S2	Dudhandi	7.35	1550	780	4.0	11.8	3.83	3.3	6	10.34
3	S3	Plaus	7.45	1220	618	4.0	9	2.70	3.3	4.8	7.36
4	S4	Ghogaon	7.75	1000	501	3.4	6.8	2.22	3.3	4	5.14
5	S5	Burli	7.65	1620	818	4.0	11.4	3.34	3.4	6.4	8.97
6	S6	Morale	8.50	1050	550	4.0	6.2	2.22	3.3	4	5.15

### Result and discussion -

The collected water sample for selected area of palus taluka villages for the Physico-Chemical parameters are analysed namely pH, EC, TDS, Cation and Anions are present in table (2).



### **1.pH-**

It Is an important ecological parameter in organic habitat. pH value of samples in the study area Varies from 7.35 to 8.50 indicating slightly basic in nature.

### **2.EC-**

Electrical Conductivity usually used for indicting the total concentration of ionized constituents of water. The ability of an aqueous solution to conduct the electric current is known as electrical conductivity(EC). Generally borewell water tends to have high electrical conductivity due to the presence of high amount of dissolved salt. The electrical conductivity of the water samples ranged between 200 mho/cm to 1620 mho/cm at all the sampling sites. S1 is the least value of 200 mho/cm and highest value is of S5 .

### **3.TDS-**

Total dissolved solid describes the amount of inorganic salts of Cation like Calcium, Magnesium, Sodium etc. and small proportion of organic matter present in the water. The total dissolved solids of water sample range from 100 ppm-818 ppm. All total dissolved solids of water samples are in safe level.

### **4.Chlorides-**

It occurs naturally in all types of water . The Chloride content showed narrow changes in sample.Chloride water sample range from 0.4 to 6.4.

### **5. Sulphate-**

Sulphate is a naturally occurs in drinking water. The sulphate content of natural water is an important consideration in determining their stability for public and industrial supplies. Sulphate value of sample in the study area varied from 1.94 to 10.34 shown in table (2) high concentration of Sulphate could cause respiratory problems in human beings.

### **Conclusion-**

The important physico-chemical parameters of bore well water samples collected from six locations in palus Taluka. It was observed that pH values of All samples are normal as per ISI and BIS. Electrical Conductivity values are normal as per WHO standard Values of Total Dissolved Solids are sample S4 and S6 normal. S1, is low S2,S3, S5 are high as per WHO. Only very few samples showed the desirable limits. So it states that all drinking water quality parameters were found well within suitable limit for all studied water samples prescribed by ISI, BIS and WHO. Therefore the water from all Borewells is suitable for drinking as per specifications.Total dissolved solids, pH, Conductivity are in the standard limits. Therefore the water should be subjected to softening method and also Boling used for drinking.overall observation reveals that the bore weel water quality of palus taluka is currently very good as there is no any percolation of industrial influents.

### **Reference-**

1. Shivaprasad H1 , Nagarajappa D P2, Sham Sundar K M31Post Graduate Student, Department of Studies in Civil Engineering, University BDT College of Engineering, Davangere-5770 04, India2 Professor, Department of Studies in Civil Engineering, University BDT College of Engineering, Davangere-5770 04, India3Professor, Department of Studies in Civil Engineering, University BDT College of Engineering, Davangere-5770 04, India A Study on Physico-Chemical Characteristics of Borewell Water In Sugar Town, Mandya City, Karnataka State, India
2. Mangukiya R., Bhattacharya T., and Chakraborty S (2012), "Quality Characterization of Groundwater using Water Quality Index in Surat city, Gujarat, India", *International Research Journal of Environment Sciences*, 1(4): 14-23
3. Nagarajappa D P., Rajappa B., Manjappa s., and Puttaiah E T., (2011), "Physico chemical analysis of underground water of Harihara taluk of Davanagere district, Karnataka, India", *Advances in applied science research*, 2(5): 143-150
4. Shivasharanappa., Srinivas P., and Mallikarjun Huggi S (2011), "Assessment of ground water quality characteristics and Water Quality Index (WQI) of Bidar city and its industrial area, Karnataka State, India", *International journal of environmental sciences*, 2(2): 965-976
5. APHA, American Public Health Association (2003), *standard method for examination of water & wastewater specifications*, Washington DC, 6, 19th Edition.
6. Bureau of Indian Standards, 1993, (IS 10500:1991), Edition 2.1
7. *Physico-Chemical Analysis of Bore well water Samples of Jath City, MS, India* Mali Vidya C1, Rangar Krishna K1, Kumbhar Deepak A1 and Lavate Rajendra A2
- 8 . Acharya GD, Hathi MV, Patel AD, Parmar KC (2008) *Chemical properties of borewell water in Bhiloda Taluka Region, North Gujarat. India. E-Journal of Chemistry*, 5(4): 792-796.
9. Ajewole, G. (2005). *Water. An overview. Nigeria Institute of food science and Technology, Nigeria.*, 2: 4

-15.

10. APHA (2005) *Standard methods for examination of water and waste water*, AmericanPublicHealth Association, New York.
11. Govindarajan M, Senthilnathan T (2014) *Borewell water quality and its health impact analysis in an industrial area*. *Int. J. Curr. Microbiol. App. Sci.*, 3, 1028–1034.
12. Okoro N, Omeje EO, Osadebe PO (2017) *Comparative Analysis of Three Borehole Water Sources in Nsukka Urban Area, Enugu State, Nigeria*. *Resources and Environment*, 7(4): 110-114.
13. Onifade Ak and Ilori RM (2008). *Microbiological analysis of sachet water vended in Ondo state, Nigeria*. *Environ. Res J. 2*: 107-110.
14. Sawyer, Clair N, Perry L. McCarty and Gene F. Parkin (2000) *Chemistry for environmental engineering*. IVth Ed., Tata McGraw-Hill. New Delhi.
15. *Comparative Analysis of Three Borehole Water Sources in Nsukka Urban Area, Enugu State, Nigeria* Okoro N., Omeje E. O.\*, Osadebe P. O. Department of Pharmaceutical and Medicinal Chemistry, Faculty of Pharmaceutical Sciences, University of Nigeria, Nsukka, Nigeria
16. Okonkwo T. J. N, Okorie O., Okonkwo C. J. O, 2011, *Public Health Risk Status of the Water Supply Frame Work at Kwame Nkrumah( Postgraduate) Hall, University of Nigeria, Nsukka and Environ. African Journal of Environmental Science and Technology*, Vol. 5(7), pp. 522-529.
17. Mbaenyi-Nwaoha I. E, N. I Egbuche, 2012, *Microbiological Evaluation of Sachet Water and Street Vendored Yoghurt and "Zobo" Drinks Sold in Nsukka Metropolis*, *Int. J. Biol. Chem. Sci.* 6 (4): 1703-1717.
18. Jidauna G. G, Dabi D. D, Saidu B. J, Ndabula C. and Abaje I. B., 2014, *Chemical Water Quality Assessment in Selected Location in Jos, Plateau State, Nigeria*, *Research Journal of Environmental and Earth Sciences* 6(5): 284-291.
18. Ogunnowo C. O, 2004, *Coping with Domestic Water Supply Problems in Nigeria Urban Centres: The Ijebu-Ode City Experience*, *International Journal of Environmental Issues* (1): 200-208.
19. Adhikary P. P, Chadrasekharan H., Chadkrabarty D, Kanibe K., 2010, *Assessment of groundwater pollution in west Delhi, India Using Geostatistical Approach*, *Environmental Monitoring Assessment*, 167, pp. 599-613

## Investigation of Antioxidant Activity and Total Phenolic Content in Red Raspberry

Rakshanda L. Shinde

Krantiagrani G.D.Bapu Mahavidyalaya, Kundal.

Email id – [rakshandashinde9960@gmail.com](mailto:rakshandashinde9960@gmail.com)

### Abstract:

**Rubus idaeus** L. belong to family Rosaceae commonly known as red raspberry. It is widely consumed and globally cultivated fruit crop next to the strawberries. It has gained the attention in horticulture at great commercial levels. Fruits of red raspberry are rich source of bioactive compounds viz. flavonoids, phenolic, antioxidants as well as nutritive compounds minerals and vitamins. The present investigation is done to evaluate total phenolic content and total antioxidant activity in fruits of red raspberry. The aqueous and ethanolic extracts are prepared which are subjected for estimation of different parameters. Total phenolic content in aqueous (6.8 equivalent to GAE g/100g) and ethanol (6.25 equivalent to GAE g/100g). While antioxidant activity in ethanol (21 equivalent to ascorbic acid g/100g) and aqueous (10 equivalent to ascorbic acid g/100g) is observed. Total phenolic content does not show any noticeable difference in both the samples. However, the plant sample prepared in ethanol shows more antioxidant activity than aqueous extracts.

**Key words:** *Rubus idaeus* L., phytochemical analysis, total phenolic content, total antioxidant activity.

### Introduction:

*Rubus idaeus* L. (Red raspberry) is important fruit crop having antioxidant potential (and they are used in many commercial uses like herbal products, pharmaceutical companies. *R. idaeus* belongs to family Rosaceae. It is native to Europe and Northern Asia (The plant list) and commonly cultivated in other temperate regions including India (Flora Europea). *R. idaeus* is a cultivar obtained from hybrids between *R. idaeus* and *R. strigosus* (Huxley ed 1992). Fruit of Red raspberry are rich in phenolic compounds (Wang et al 1997) those compounds are used in many disease like diabetes, cancer, heart diseases (Pimpao et al. 2013).



### Materials and Methods:

#### A) Preparation of sample extract:

The fruits of Red raspberry were chopped into small pieces and then dried at 50 °C in the incubator. The dried fruits were ground into fine powder using a spice mill. Further, all the powdered samples were subjected to sequential extraction with absolute methanol followed by water. About 10 g of fruits powder was added in 50 ml of respective solvent and allowed for shaking (12 h, 100 rpm, 30 °C) on an orbital shaker incubator (Allied Scientific Products, India). All the extracts were then centrifuged at 5000 rpm for 15 min to remove debris. The supernatant was used for phytochemical analysis (TPC, TFC) and antioxidant (Phosphomolybdenum) activities.

#### B) Total phenolic content (TPC)

TPC of the extracts was determined by using Folin–Ciocalteu method (Singleton and Rossi, 1965). Accordingly, 200 µl of extract (mg ml<sup>-1</sup>) was added to 1 ml of Folin–Ciocalteu reagent and mixed thoroughly. After 5 min incubation, 0.8 ml of sodium carbonate (7.5% w/v) was added and allowed to stand for 60 min at room temperature. The absorbance was measured at 765 nm using UV–vis spectrophotometer (Jasco V-730, Japan). Tannic acid was used as a standard for plotting calibration curve (20–200 µg ml<sup>-1</sup>). TPC was expressed as mg tannic acid equivalent per gram (TAE g<sup>-1</sup>) of the extract.

#### C) Total flavonoid content (TFC)

TFC was estimated by aluminum chloride colorimetric method (Sakanaka et al., 2005). Plant extract 200 µl (mg ml<sup>-1</sup>) or catechin standard solution (50–250 µgml<sup>-1</sup>) was taken into test tube and volume was made

up to 1.25 ml with distilled water followed by addition of 75 µl of 5% (w/v) sodium nitrite solution. After 6 min incubation, 150 µl of 10% (w/v) aluminum trichloride solution was added and the mixture was incubated at room temperature for 5 min. The absorbance was measured at 510 nm immediately after addition of 0.5 ml of 1M sodium hydroxide solution. The amount of TFC was expressed as mg catechin equivalent per gram (CE g<sup>-1</sup>) extract.

**D) Antioxidant Activity:**

**Phosphomolybdenum assay**

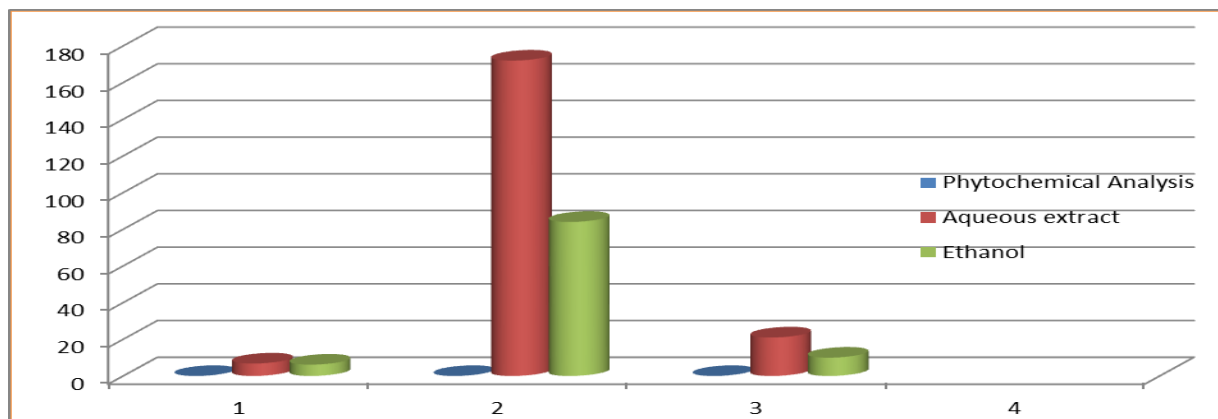
Total antioxidant activity of all solvent extracts was estimated by phosphomolybdenum method described by Prieto et al. (1999). Aliquot of plant extract was mixed with 1 ml reagent (0.6M sulphuric acid, 28mM sodium phosphate and 4mM ammonium molybdate). The vials were capped and incubated in water bath at 95 °C for 90 min. After cooling the samples, absorbance was taken at 695 nm against a blank. A calibration curve was plotted using standard solution of ascorbic acid (20–120 µg ml<sup>-1</sup>). Total antioxidant activity was expressed as mg ascorbic acid equivalent per gram (AAE g<sup>-1</sup>) extract.

**Results**

1. The observed values of TPC, TFC and antioxidant activity of aqueous and ethanolic extracts are shown in table no. 01 2. The TPC and TFC value are maximum in aqueous extract which are (6.8 equivalents to GAE g/100g and 172g/100g respectively.) 3. Antioxidant activity is also observed maximum in aqueous extract 4. (21 equivalent to ascorbic acid g/100g)

**Table no. 01**

Sr. No.	Test	Plant material- Fruit	
		Aqueous extract	Ethanol
1.	TPC	6.8 equivalent to GAE g/100 g	6.2 equivalent to GAE g/100 g
2.	TFC	172 g/100g	84g/100g
3.	Phosphomolybdenum	21 equivalent to ascorbic acid g/100g	10 equivalent to ascorbic acid g/100g



**Conclusion:**

1. Polyphenol & flavonoid content are maximum in aqueous extracts.
2. Antioxidant activity is more in aqueous extracts as compare to ethanolic extracts.
3. As the fruits are rich in antioxidant & useful bioactive compounds it can use in food & pharms industries.

**Acknowledgement:**

I express my heartiest gratitude to Prin. Dr. P. B. Lad .sir. Kranti agarni G.D. bapu Lad Mahavidhyalaya, Kundal .Department of botany for providing lab facilities of this complete study work.

**References:**

- 1) ^" *Rubus idaeus L.* " [Richard Pankhurst et al. Royal botanic gardens Edinburgh – via The plant list.
- 2) ^" *Rubus idaeus L.* " [Flora Europea].
- 3) ^ac Huxley, A., ed, (1992). *New RHS Dictionary of Gardening* .Macmillan.JSBN 0-333-47494-5.
- 4) Wang. , et al .1997.
- 5) Pimpao, et al .2013.

## **Impact of Saltwater Intrusion on the Agricultural Land of Coastal Tract: An Investigation Along Malvan Coast, Maharashtra**

**Nilesh.K. Susware<sup>1</sup> Jagdish B. Sapkale<sup>2\*</sup> Balu L.Rathod<sup>3</sup> Vinaya N. Susware<sup>4</sup>**

<sup>1</sup>Assistant Professor, Department of B.Voc., Gopal Krishna Gokhale College, Kolhapur Maharashtra India.; e-mail- Nileshsusware@gmail.com

<sup>2</sup> Professor, Department of Geography, Shivaji University, Kolhapur, Maharashtra, India.

\* Corresponding Author - e-mail- sapkalejagdish@gmail.com

<sup>3</sup>Assistant Professor, Department of Geography, Kankavli College, Kankavli, District- Sindhudurg, Maharashtra India.; e-mail- balurathod267@gmail.com

<sup>4</sup> Research Scholar, Department of Geography, The New College, Kolhapur, Maharashtra, India. e-mail- manasisusware18@gmail.com

### **Abstract:**

*It has observed that, Saltwater intrusion becomes a serious problem in the coastal areas of Maharashtra. Lateral movements of salt water from ocean by means of tidal inlets and estuarine channels are most prominent in these areas. At many sites the agricultural area is contaminated by saltwater and spread according to the ground slope. It also observed that excessive concentrations of salts in the soil are toxic for some crops. This salinity affects on the productivity and growth of agricultural crops. Local people in the study area needs a permanent solution to manage their agricultural lands and preventive methods to overcome the problem of salinity. An attempt has made to identify the salinity affected agricultural areas near the mangrove swamps of coastal Malvan of Maharashtra.*

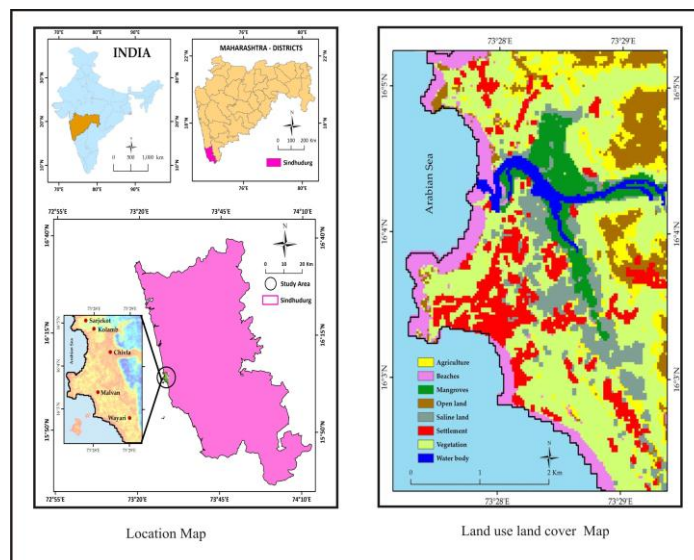
**Keywords:** Salinity, LULC, Estuary, Tidal inlet, Agricultural contamination.

### **Introduction:**

In the attempted research study importance has been given to study the impact of salinity on the agricultural lands of the coastal villages/areas. When agricultural activity is concerned then, it needs good quality of soil i.e. fertile soil, good climatic conditions and availability of sufficient water. Lack of water for agricultural purpose, water with salinity resulting for the worst conditions in terms of crop productivity in the river basin area or region. Now-days increasing population and the utilization of basic needs exerts pressure on agriculture and natural resources. According to Foley et al. near about a billion people are constantly "malnourished" while the existing 'agricultural systems' are simultaneously with degrading land and water gets deteriorated (Foley et al. 2011). The study has attempted using GIS and Remote Sensing techniques. In the study area it has seen that saline water is entering towards the inland agricultural lands from the seaward side. The sea water is coming through the estuaries and tidal inlets and spread in the agricultural lands. The coastal resource comprises disparity ecosystems like mud flats, estuaries, mangroves, etc. Agricultural land is important natural resource in the area; that make available food products to the native population. In the coastal zone of Sindhudurg district, most of the agricultural lands by the side of the banks of the estuaries or near the sea are converted to saline land also called as kharlands (Sapkale & Rathod, 2014). Central Soil Salinity Research Institute (CSSRI) is a research institute that carries interdisciplinary research on basic, strategic and applied researches on the reclamation and management of salt affected soils and poor quality water in agriculture. For coastal areas where water blockage is a frequent problem, shallow, medium deep and deep water depth tolerant rice varieties have been introduced (CSSRI, 2019).

### **Methodology :**

The present research work aims to identify and estimate the saline land and land use land cover area in the study area. The study attempted to correlate such analysis to saline land and its impact on the area. The study area forms a part of agricultural sites of Chivla tidal inlet and kolamb estuary (fig. 1) of sindhudurg districts. **(i) Field work & field surveys:** It was decided to conduct detailed field survey to identify the salinity affected area in the study area. Therefore detailed field survey was carried out in the study area. **(ii) Land Use / Land Cover:** During the field surveys, saline area-characteristics in terms of vegetation, soil, rock structure, forest covered area, have been identified. **(iii) Remote Sensing and GIS Techniques :** Land use/land cover analysis were carried out using remote sensing and GIS Techniques. GIS Software Arc view, ERDAS IMAGINE 9.1 have used for the analysis of various characteristics of the affected sites. SRTM data was also used for the preparation of various maps. Land use and land cover classification through supervised classification methods by using LANDSAT, TM, Satellite image of study area were used.



**Figure 1 :** Location map of the study area (Source : Survey of India) and Land use land cover area

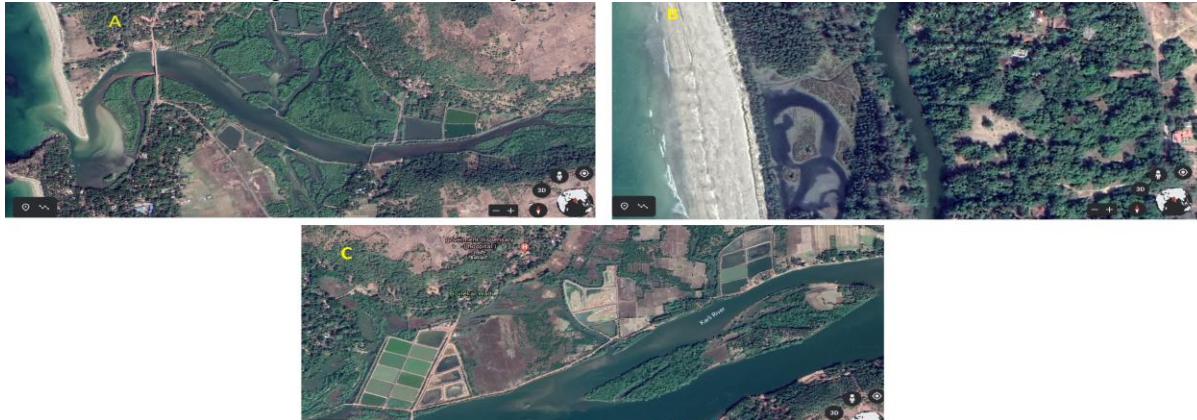
**(iv) Database Preparation:** Satellite dataset were downloaded from public domains at USGS Global Visualization Viewer (<http://glovis.usgs.gov>), USGS Earth Explorer (<http://earthexplorer.usgs.gov>) and Google Earth (<http://earth.google.com>). Topographic maps (47 H 8, 47 H 12, 48 E 5 and 48 E 9) at a scale of 1:50000 were used to provide additional information. **(v) Landuse/landcover analysis:** The FCC image was generated to identify individual patches in landscape. The land use classes (fig. 1) used in present analysis were saline land, beaches, vegetation, open land, settlement, and water body. Supervised classification method was used in which the sample / signature areas of each land use type were taken separately from the regions clearly attributable to any of the category. These samples are called training areas. This was made possible by using available Google Earth and digitized topographic map layers in which the exact sample /signature of each category could be taken. Gaussian Maximum Likelihood decision rule was used to assign an unknown pixel to its respective land use class. The maximum likelihood classifier quantitatively evaluated both covariance and variance of the category spectral response patterns while classifying an unknown pixel. **(vi) Accuracy Assessment :** Accuracy assessment evaluates the performance of classifiers. Accuracy assessment and Kappa coefficient are common measurements used to demonstrate the effectiveness of classifications (Kuchay S. B. and Ramachandra T. V., 2016). Inaccuracies in spectral classification were measured by a set of referenced pixels. From the error matrices kappa (k) statistics, overall accuracy and producer's and user's accuracies are computed, which determined how far our classification was accurate. In present analysis, the overall accuracy of land use maps for 2019, was determined to be 87.01%, and The Kappa indices for map were 0.85.

#### **Discussions :**

Soil salinization is a severe problem for a crop like rice, as among cereals rice is mainly salt sensitive crop (Parmar, et al., 2020). According to Reddy et al., " Soil salinity is one of the major constraints affecting rice production worldwide, especially in the coastal areas ". Using updated techniques their research attempts are towards the improvement of high-yielding of rice and salt tolerant rice varieties (Reddy, et al., 2017). In the coastal tract, along the estuaries and tidal inlets the cultivated agricultural lands (fig 2 and 3) are aligned with mangroves. A variety of mangrove types and their species are growing in the inter-tidal zones of coastal areas and wetlands of coastlines. These valuable resources along the estuaries and in mangrove swamps provide wide range of ecological and economical products in terms of medicinal plants, wood, fuel etc. Tangled roots of the mangrove and their shrubs trap estuarine sediment and spread the transported silt and clay along the bank of estuaries, also sometimes used for salt tolerant crops. Jayatissa et al.(2008) reported that there are significant differences between mangrove species and salinity levels. Mangrove trees survive in intertidal zones, frequently inundated in salt water, mangroves can improve their salt tolerance capacity (Somssich M., 2020). In the study area, near to the mangrove swamps small amount of inland agricultural land is available for cultivation purpose. Local people used the saline land for crop cultivation, but halophytes, which are naturally salt-tolerant plants with improved physiological mechanisms (Zelm et.al., 2020) can easily survive in such mangrove associated patches of agricultural patches.

Assessment of such salt induced land or land cover may be easily studied using remote sensing and GIS techniques. Gao in 2008 used two types of medium-resolution satellite data i.e. Landsat TM and ASTER

for assessing rigorous degraded land in the forms of salinization, alkanization, waterlogging and desertification in his study area (Gao, 2008). According to Sapkale & Rathod in 2014 the Ansure-Janshi villages of Ratnagiri also having huge area of degraded- saline area with a size of 6,36,439 square metres. The saline water from sea enters through estuaries and small tidal inlets at the time of high tide and flooded most of the agricultural land. Mapping and monitoring affected soils are a not easy study because salinization is a vibrant process (Widad Ennaji et al. 2018).



**Figure 2 :** Some sites investigated in and around Malvan- (A) Along Kolamb estuary ; (B) - Tidal inlet at Tarkarli ; (C) - along Karli estuary Devbag. (Source :Google earth image).

**Land Use / Land Cover (LULC) and Saline Land:**

Salinity has caused major harmful effects on agricultural areas. Rural and urban population of India directly or indirectly depends on agriculture. This research is paying attention on the vulnerabilities of soil and water salinities on agricultural crops in the study area. The research work, thus, verified that the use of the remote sensing tools and image enhancement techniques are suitable for such type of soil salinity identification. The land use and land cover classes includes agricultural land, forest/vegetation, built up area, water bodies and fallow land. It is the broad classification of the land use and land cover of study area. GIS based analysis gives the improved results and efficient strategies for the mitigation of the affected coastal zones.

**Table No. 1: Land use land cover area.**

Sr. No.	Class Name	Area (Sq. Km.)	Area in Percentage
1	Agriculture	1.54	10.00
2	Beaches	1.41	9.16
3	Mangroves	1.01	6.56
4	Open land	1.48	9.61
5	Saline land	1.55	10.06
6	Settlement	2.00	12.99
7	Vegetation	5.92	38.44
8	Water body	0.49	3.18
	Total area	15.40	100

Some sites were investigated in and around coastal area of Malvan - i.e. shown in figure 2- (A) Along Kolamb estuary ; (B) - Tidal inlet at Tarkarli ; (C) - along Karli estuary Devbag. Some cultivated area with a problem of salt intrusion have observed mostly with the association of mangroves. Some patches of the land cover were assessed for the identification of saline land using LULC map. Field work has also conducted to prepare LULC map for a patch of an area of 15.40 Sq. Km. which is a part of study area (Kamble, 2019). The analysis has shown in table no. 1. The total area covered by agriculture is 1.54 sq km and open land is 1.41 sq km. The total area covered by water bodies is 0.49 sq km. Mangroves in the study area also covers an area of 1.01 sq km. The saline land accounts for 1.55 sq km. which destroyed the agricultural lands. This has affected due to the intrusion of saline water from kolamb estuary and chivla tidal inlet during high tide of the sea water. The percolated saline water accumulated at the top surface of the crop land. Surplus salinity affects soils in various methods. It reduces water availability to plants.



**Figure 3 :** (A) Saline land, Malvan ; (B) - Chivla tidal inlet; (C) -. Saline Land used for the cultivation of vegetables

#### **Conclusion :**

The superiority of soils in study area is on the way of degradation. The primary cause to agricultural soil quality arises from salinization, water-logging and intrusion of saline water from adjacent sea and tidal inlets. There is an adverse effect of such processes on crop productivity of the study area. The major crop in this region is rice, but the yearly yield of rice is decreasing day by day. In view of the serious problem that occurs in the region, there may be an alternative option to change the cropping pattern in the salinity affected areas. GIS based analysis also gives improved results and effective strategies for the mitigation of such affected coastal zones.

#### **Acknowledgement :**

The corresponding author, Dr. Jagdish B. Sapkale thanks the Science and Engineering Research Board, Department of Science and Technology (DST-SERB), Government of India for providing the financial support for the research project sanction no. SERB /EEQ/2019/000643 dated 19/12/2019, as the present paper is an outcome of this project.

#### **References :**

1. Foley, J.A., Ramankutty, N., Brauman, K.A., Cassidy, E.S., Gerber, J.S., Johnston, M., Mueller, N.D., O'Connell, C., Ray, D.K., West, P.C. and Balzer, C., 2011. Solutions for a cultivated planet. *Nature*, 478(7369), pp.337-342.
2. Gao Jay; 2008. Detection Of Changes In Land Degradation In Northeast China From Landsat Tm And Aster Data, The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences. Vol. XXXVII. Part B7. Beijing, , 1533- 1538.
3. Jayatissa, L.P., Wickramasinghe, W.A.A.D.L., Dahdouh-Guebas, F., Huxham, M., 2008. Interspecific Variations in Responses of Mangrove Seedlings to Two Contrasting Salinities. *Internat. Rev. Hydrobiol.* 93, pp. 700-710.
4. Kamble, B.B., 2019. Effect of Salinity on The Agricultural Land of Coastal Villages of Sindhudurg District, Maharashtra, Unpublished M.A./M.Sc. Project Report.
5. Kuchay S. B. and Ramachandra T. V., 2016. Land Use Land Cover Change Analysis of Uttara Kannada. *Imperial Journal of Interdisciplinary Research (IJIR)*, 2 (4)
6. Parmar S, Gharat S,A, Tagirasa R, Chandra T, Behera L, and Dash S,K. Shaw B.P., 2020. Identification and expression analysis of miRNAs and elucidation of their role in salt tolerance in rice varieties susceptible and tolerant to salinity. *PLoS ONE*, 15(4) : e0230958. pp.1-26
7. Reddy I.N.B.L., Kim B.K., Yoon I.S., Kim K.H. and Kwon T.R., 2017. Salt tolerance in rice: Focus on Mechanism and Approaches, *Rice Science*, 24(3), pp.123-144
8. Report, Annual Report, 2019, ICAR-Central Soil Salinity Research (CSSRI), Karnal, Haryana, India.
9. Sapkale, J.B. and Rathod, B. L., 2014. Kharlands-An Agrarian Disaster in Coastal Areas of Southern Ratnagiri, Maharashtra: A Study Using Remote Sensing and GIS, *International Refereed Journal of Engineering and Science (IRJES)*, 3(6), pp.71-78.
10. Somssich M., 2020. How a mangrove tree can help to improve the salt tolerance of Arabidopsis and Rice. *Plant Physiology*, 184 (4), pp. 1630–1632.
11. Widad Ennaji, Ahmed Barakat, Ismail Karaoui, Mohamed El Baghdadi and Abdelkrim Arioua, 2018. Remote sensing approach to assess salt-affected soils in the north-east part of Tadla plain, Morocco, *Geology, Ecology, and Landscapes*, 2:1, pp.22-28.
12. Zelm E.V., Zhang Y., and Testerink C., 2020. Salt tolerance mechanisms of plants. *Annual Review of Plant Biology*, 71, pp. 403-33.
13. [https://www.usgs.gov/faqs/what-are-band-designations-landsat-satellites?qt-news\\_science\\_products=0#qt-news\\_science\\_products](https://www.usgs.gov/faqs/what-are-band-designations-landsat-satellites?qt-news_science_products=0#qt-news_science_products).



## The study of natural Symmetry of dihedral group ( $D_n$ )

Namrata. N.Patil<sup>1</sup>, Rakshanda. L. Shinde<sup>2</sup>  
<sup>1,2</sup>krantiagrani G.D.Bapu Mahavidyalaya, Kundal.

**Abstract:**

Dihedral group is the group of symmetries. Symmetry of mathematical concept that was derived from nature symmetry exit everywhere Look down at your body look at the buildings .Symmetry is variously defied as ‘proportion’. ‘Perfect or harmonious proportion’& A Structure that allow an object to be divided into parts of equal shape & size.

**Key words:** Symmetry , Dihedral group , Rotation , Reflection .

**Introduction:**

A dihedral group is the group of symmetries of a regular polygon which includes rotation and reflection .A regular polygaon with n sides has 2n different symmetries n rotational symmetries and n reflection symmetries usually we tak  $n \geq 3$  here .The associated rotation and reflection make a dihedral group  $D_n$  If n is odd each axis of symmetry connects the midpoint of one side to the opposite vertex .If n is even there are  $n/2$  axis of symmetry connecting the midpoints of opposite sides and  $n/2$  axis of symmetry connecting opposite vertices in either case there are n axes of symmetry and 2n elements in the symmetry and 2n elements in the symmetry group.We hav seen  $D_3, D_4, D_5, D_6$  in nature system. Symmetry means one shapes becomes exactly like another when you move it in some way turn, piip or slide. It is also verify symmetry in nature y applying same mathematical concepts like dihedral group. Dihedral group is the special case of symmetry contains all the rotations and reflections of regular polygon.

**Dihedral group ( $D_n$ )**

$$D_n = \{x, y | x^n = e, y^2 = e, yxy = x^{-1}\}$$

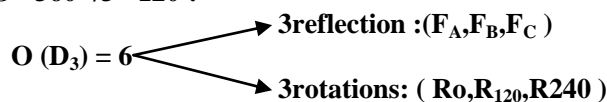
For rotational we use  $\Theta$ ,  $\Theta$  gives rotational figures

$$\Theta = 360^\circ / n$$

**Construction of  $D_3$  :**

By  $120^\circ$  rotation either left or right we can find three position the net  $120^\circ$  flipping or reflecting the triangle through its side's midpoint and through it' vertices the dihedral group  $D_3$  can be represented by the set  $D_3 = \{ R_0, R_{120}, R_{240}, F_A, F_B, F_C \}$  .

$$\Theta = 360^\circ / 3 = 120^\circ.$$



Rotational symmetry	Reflections symmetry

**Cayley table for  $D_3$  :**

	$R_0$	$R_{120}$	$R_{240}$	$F_A$	$F_B$	$F_C$
$R_0$	$R_0$	$R_{120}$	$R_{240}$	$F_A$	$F_B$	$F_C$

$R_{120}$	$R_{120}$	$R_{240}$	$R_0$	$F_C$	$F_A$	$F_B$
$R_{240}$	$R_{240}$	$R_0$	$R_{120}$	$F_B$	$F_C$	$F_A$
$F_A$	$F_A$	$F_B$	$F_C$	$R_0$	$R_{120}$	$R_{240}$
$F_B$	$F_B$	$F_C$	$F_A$	$R_{240}$	$R_0$	$R_{120}$
$F_C$	$F_C$	$F_A$	$F_B$	$R_{120}$	$R_{240}$	$R_0$

**D<sub>3</sub> In nature system :**

The trillium is an example of D<sub>3</sub> trillium shape within the triangle figure from being able to rotate by three turn . Additionally the figure has reflected and rotated by three times.



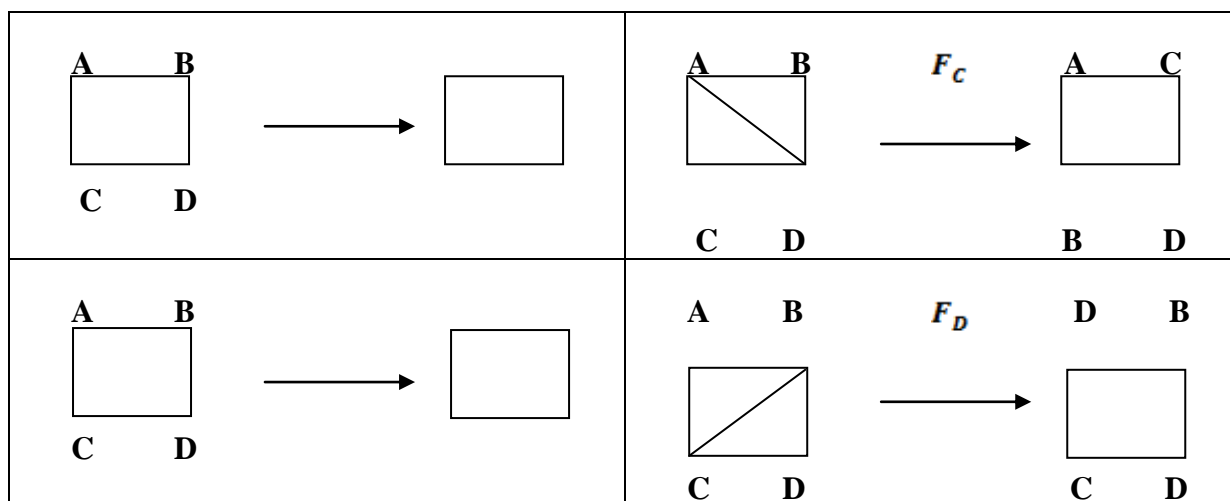
**Construction of D<sub>4</sub> :**

By 90° rotation either left or right we can find four position the net 90° flipping or reflecting the square through its side's midpoint and through it' vertices the dihedral group D<sub>4</sub> can be represented by the set D<sub>4</sub>= { R<sub>0</sub> , R<sub>90</sub>, R<sub>180</sub> , R<sub>270</sub>, F<sub>A</sub>, F<sub>B</sub>, F<sub>C</sub>, F<sub>D</sub> } .

$\Theta = 360^\circ / 4 = 90^\circ$ .

$O(D_4) = 8$  
 ↗ 4 reflection: (F<sub>A</sub>, F<sub>B</sub>, F<sub>C</sub>, F<sub>D</sub>)  
 ↘ 4 rotations: (R<sub>0</sub>, R<sub>90</sub>, R<sub>180</sub>, R<sub>270</sub>)

Rotational symmetry	Reflections symmetry



**Cayley table for  $D_4$  :**

	$R_0$	$R_{90}$	$R_{180}$	$R_{270}$	$F_A$	$F_B$	$F_C$	$F_D$
$R_0$	$R_0$	$R_{90}$	$R_{180}$	$R_{270}$	$F_A$	$F_B$	$F_C$	$F_D$
$R_{90}$	$R_{90}$	$R_{180}$	$R_{270}$	$R_0$	$F_D$	$F_A$	$F_B$	$F_C$
$R_{180}$	$R_{180}$	$R_{270}$	$R_0$	$R_{90}$	$F_C$	$F_D$	$F_A$	$F_B$
$R_{270}$	$R_{270}$	$R_0$	$R_{90}$	$R_{180}$	$F_B$	$F_C$	$F_D$	$F_A$
$F_A$	$F_A$	$F_B$	$F_C$	$F_D$	$R_0$	$R_{90}$	$R_{180}$	$R_{270}$
$F_B$	$F_B$	$F_C$	$F_D$	$F_A$	$R_{270}$	$R_0$	$R_{90}$	$R_{180}$
$F_C$	$F_C$	$F_D$	$F_A$	$F_B$	$R_{180}$	$R_{270}$	$R_0$	$R_{90}$
$F_D$	$F_D$	$F_A$	$F_B$	$F_C$	$R_{90}$	$R_{180}$	$R_{270}$	$R_0$

**$D_4$  In nature system :**

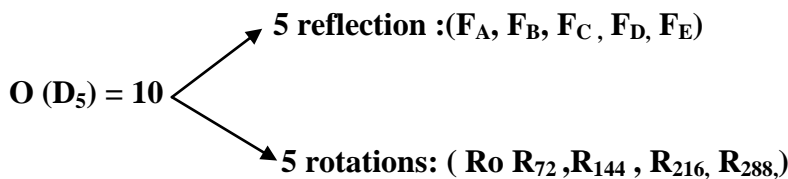
Lemon is a great example of a finite figure of the category  $D_4$ . It is easy to see that there are four mirror reflections of the figure one vertical, one horizontal, and two diagonal as well as four rotations. In other words, rotating the figure four times gives the original figure. Actinomorphic flowers also exhibit patterns with  $D_4$  symmetry.



**Construction of  $D_5$  :**

By  $72^\circ$  rotation either left or right we can find five position the net  $72^\circ$  flipping or reflecting the pentagon through its side's midpoint and through it' vertices the dihedral group  $D_5$  can be represented by the set  $D_5 = \{ R_0, R_{72}, R_{144}, R_{216}, R_{288}, F_A, F_B, F_C, F_D, F_E \}$  .

$\Theta = 360^\circ / 5 = 72^\circ$ .



Rotational symmetry		Reflections symmetry	
	$R_0$		$F_A$
	$R_{72}$		$F_B$
	$R_{144}$		$F_C$
	$R_{216}$		$F_D$
	$R_{288}$		$F_E$

**Cayley table for  $D_5$  :**

	$R_0$	$R_{72}$	$R_{144}$	$R_{216}$	$R_{288}$	$F_A$	$F_B$	$F_C$	$F_D$	$F_E$
$R_0$	$R_0$	$R_{72}$	$R_{144}$	$R_{216}$	$R_{288}$	$F_A$	$F_B$	$F_C$	$F_D$	$F_E$
$R_{72}$	$R_{72}$	$R_{144}$	$R_{216}$	$R_{288}$	$R_0$	$F_D$	$F_E$	$F_A$	$F_B$	$F_C$

$R_{144}$	$R_{144}$	$R_{216}$	$R_{288}$	$R_0$	$R_{72}$	$F_B$	$F_C$	$F_D$	$F_E$	$F_A$
$R_{216}$	$R_{216}$	$R_{288}$	$R_0$	$R_{72}$	$R_{144}$	$F_E$	$F_A$	$F_B$	$F_C$	$F_D$
$R_{288}$	$R_{288}$	$R_0$	$R_{72}$	$R_{144}$	$R_{216}$	$F_C$	$F_D$	$F_E$	$F_A$	$F_B$
$F_A$	$F_A$	$F_C$	$F_E$	$F_B$	$F_D$	$R_0$	$R_{216}$	$R_{72}$	$R_{288}$	$R_{144}$
$F_B$	$F_B$	$F_D$	$F_A$	$F_C$	$F_E$	$R_{144}$	$R_0$	$R_{216}$	$R_{72}$	$R_{288}$
$F_C$	$F_C$	$F_E$	$F_B$	$F_D$	$F_A$	$R_{288}$	$R_{144}$	$R_0$	$R_{216}$	$R_{72}$
$F_D$	$F_D$	$F_A$	$F_C$	$F_E$	$F_B$	$R_{72}$	$R_{288}$	$R_{144}$	$R_0$	$R_{216}$
$F_E$	$F_E$	$F_B$	$F_D$	$F_A$	$F_C$	$R_{216}$	$R_{72}$	$R_{288}$	$R_{144}$	$R_0$

**D<sub>5</sub> In nature system :**

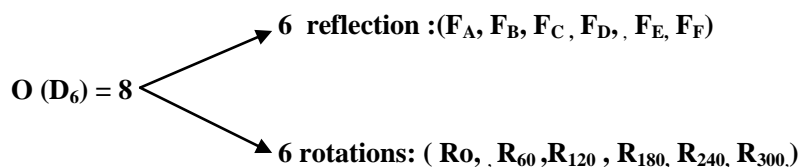
The perfect starfish has a 5 fold rotation symmetry about the axis through the center by  $72^{\circ}$ ,  $144^{\circ}$ ,  $216^{\circ}$ ,  $288^{\circ}$  &  $360^{\circ}$  the 5 fold reflection symmetry one for each arm. In other word the symbol has five rotation and five axes of reflection often arise in art and nature .A dihedral group is the group of symmetries of a regular polygaon including bith rotation and reflection .Starfish , sand dollars ,leady fingur and sea cucumbers exhibit patterners with  $D_5$  symmetry.

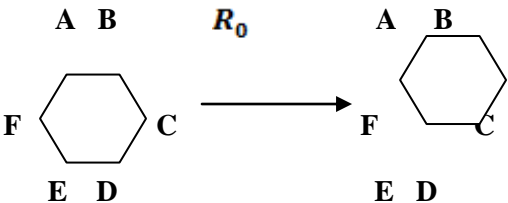
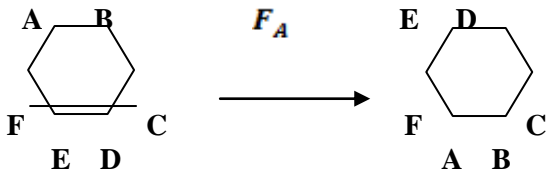
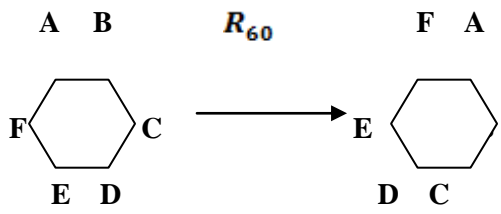
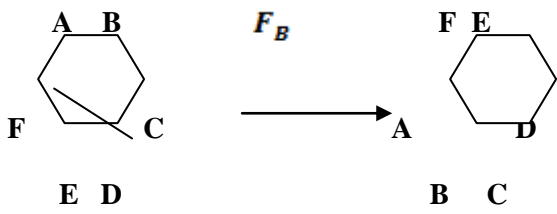
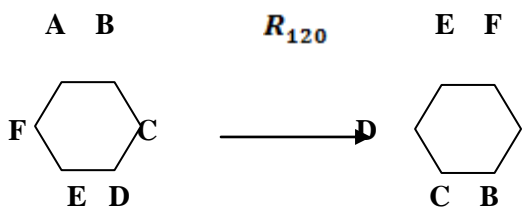
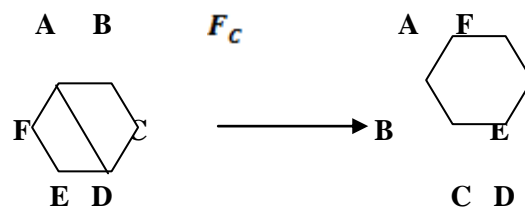
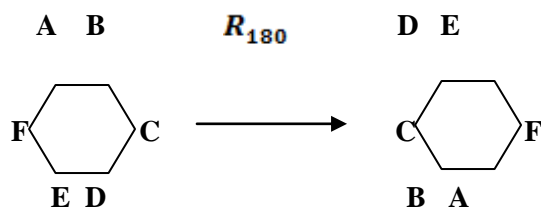
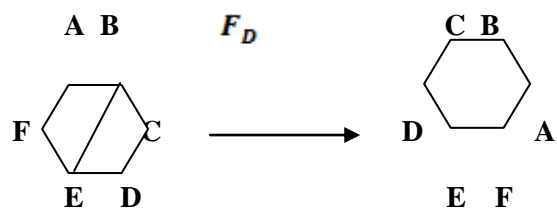
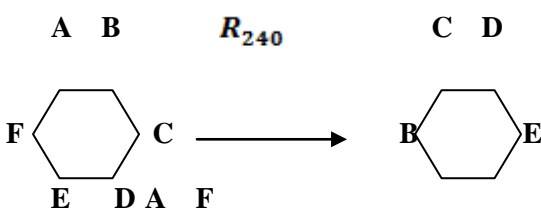
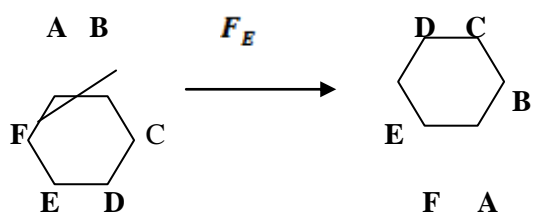
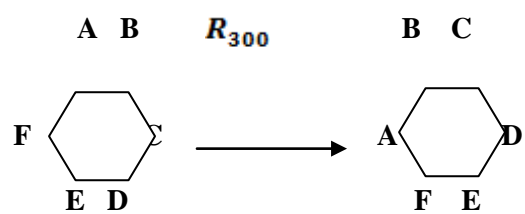
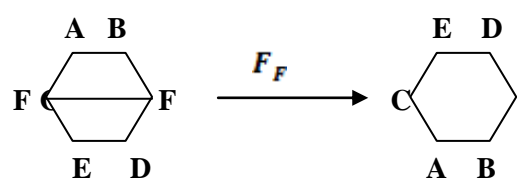


**Construction of D<sub>6</sub> :**

By  $60^{\circ}$  rotation either left or right we can find six position the net  $60^{\circ}$  flipping or reflecting the hexagonal through its side's midpoint and through it' vertices the dihedral group  $D_6$  can be represented by the set  $D_6 = \{ R_0, R_{60}, R_{120}, R_{240}, R_{300}, F_A, F_B, F_C, F_D, F_E, F_F \}$  .

$\Theta = 360^{\circ} / 6 = 60^{\circ}$ .



Rotational symmetry	Reflections symmetry
$R_0$ 	$F_A$ 
$R_{60}$ 	$F_B$ 
$R_{120}$ 	$F_C$ 
$R_{180}$ 	$F_D$ 
$R_{240}$ 	$F_E$ 
$R_{300}$ 	$F_F$ 

**Cayley table for  $D_6$  :**

	$R_0$	$R_{60}$	$R_{120}$	$R_{180}$	$R_{240}$	$R_{300}$	$F_A$	$F_B$	$F_C$	$F_D$	$F_E$	$F_F$
$R_0$	$R_0$	$R_{60}$	$R_{120}$	$R_{180}$	$R_{240}$	$R_{300}$	$F_A$	$F_B$	$F_C$	$F_D$	$F_E$	$F_F$
$R_{60}$	$R_{60}$	$R_{120}$	$R_{180}$	$R_{240}$	$R_{300}$	$R_0$	$F_D$	$F_E$	$F_F$	$F_B$	$F_C$	$F_A$
$R_{120}$	$R_{120}$	$R_{180}$	$R_{240}$	$R_{300}$	$R_0$	$R_{60}$	$F_B$	$F_C$	$F_A$	$F_E$	$F_F$	$F_D$
$R_{180}$	$R_{180}$	$R_{240}$	$R_{300}$	$R_0$	$R_{60}$	$R_{120}$	$F_E$	$F_F$	$F_D$	$F_C$	$F_A$	$F_B$
$R_{240}$	$R_{240}$	$R_{300}$	$R_0$	$R_{60}$	$R_{120}$	$R_{180}$	$F_C$	$F_A$	$F_B$	$F_F$	$F_D$	$F_E$
$R_{300}$	$R_{300}$	$R_0$	$R_{60}$	$R_{120}$	$R_{180}$	$R_{240}$	$F_F$	$F_D$	$F_E$	$F_A$	$F_B$	$F_C$
$F_A$	$F_A$	$F_D$	$F_B$	$F_E$	$F_C$	$F_F$	$R_{120}$	$R_{240}$	$R_0$	$R_{180}$	$R_{300}$	$R_{60}$
$F_B$	$F_B$	$F_E$	$F_C$	$F_F$	$F_A$	$F_D$	$R_{240}$	$R_0$	$R_{120}$	$R_{300}$	$R_{60}$	$R_{180}$
$F_C$	$F_C$	$F_F$	$F_A$	$F_D$	$F_B$	$F_E$	$R_0$	$R_{120}$	$R_{240}$	$R_{60}$	$R_{180}$	$R_{300}$
$F_D$	$F_D$	$F_B$	$F_E$	$F_C$	$F_F$	$F_A$	$R_{180}$	$R_{300}$	$R_{60}$	$R_{240}$	$R_0$	$R_{120}$
$F_E$	$F_E$	$F_C$	$F_F$	$F_A$	$F_D$	$F_B$	$R_{300}$	$R_{60}$	$R_{180}$	$R_0$	$R_{120}$	$R_{240}$
$F_F$	$F_F$	$F_A$	$F_D$	$F_B$	$F_E$	$F_C$	$R_{60}$	$R_{180}$	$R_{300}$	$R_{120}$	$R_{240}$	$R_0$

**$D_6$  In nature system :**

Honeycomb is one of the most beautiful example of dihedral group  $D_6$ . The cells of the honeycomb are almost symmetrical prisms with the hexagon cross section .In geometrically honeycomb has 6 cells rotational symmetry about the axis through the center by  $60^0, 120^0, 180^0, 240^0, 300^0$  the 6 cells reflection symmetry one for each other.



**Results:**

It is applicable in many symmetry like

1.  $D_1$  : Taj mahal.
2.  $D_2$  : Colombia broadcasting system.
3.  $D_3$  : Logo of Mercedes Benz.
4.  $D_4$  : Ashok Chakra.



**Conclusion:**

By applying same mathematical concepts like Dihedral groups we will observed symmetry In nature.

**Acknowledgement:** I express my heartiest gratitude to Prin. Dr. P. B. Lad .sir. Krantiagarni G.D. babu Lad Mahavidhyalaya, Kundal .Department of Mathematics for providing lab facilities of this complete study work.

**References:**

1. *Contemporary Abstract Algebra* ,Seventh edition –Joseph A.Gallian
2. *A first Course in Abstract Algebra*.Seventh edition – John B.Fraleigh.
3. *Wikipedia*.



## Management and Performance of States in Sustainable Development Goals (SDG): An Analysis

Mr. Aditya Rajendra Ankush

Department of Management Science, Dr. B. A. M. University, Aurangabad.

### Abstract

The Agenda 2030 with its 17 Sustainable Development Goals (SDGs) provides the framework that all United Nations (UN) member states have pledged to fulfill. The achievement of this agenda crucially depends on whether humankind will be able to maximize synergies and resolve existing trade-offs between the SDGs. The present paper discuss about performance of States in SDGs in respect to 17 SDGs and their ranking according to criteria decided by UNO. It further reveal that every State have own resources and its utilization as per rationality also discussed.

**Keywords:** - Quality education, Sustainable Development, Global health, implementation, technology etc.

### Introduction:-

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." It is all extremely vague but that can come to its advantage. The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. The Sustainable Development Goals (SDGs) and the Paris Agreement on Climate Change call for deep transformations in every country that will require complementary actions by governments, civil society, science and business. The *sustainable development goals (SDGs)* are a universal plan for all countries to end poverty, protect the planet and ensure prosperity for all. They are a set of 17 *goals* which include 169 *targets*.

### A Brief History-

**1980:** United Nations set up **Brundtland Commission on Environment and Development**, which came up with a report titled, "Our Common Future" that defined "Sustainable development as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs"

**2000:** UN General Assembly approved 8 Millennium Development Goals (MDGs) with 18 associated targets, to be achieved by 2015

**2012:** Earth Summit in Rio, Brazil in 2012, also called Rio+20 summit Leaders announced to prepare "Sustainable Development Goals" (SDGs) for the post-2015 era when MDGs would expire

**2015:** United Nations General Assembly approved 17 goals with 169 associated targets. They became effective from 1/1/2016 and were to be achieved by 2030

### What are Sustainable Development Goals (SDGs)?

The Sustainable Development Goals (SDGs) are a collection of 17 global goals designed to be a "blueprint to achieve a better and more sustainable future for all"

The SDGs, set in 2015 by the United Nations General Assembly and intended to be achieved by the year 2030, is a part of UN Resolution 70/1, the 2030 Agenda

They are officially referred to as "Transforming our world: the 2030 Agenda for Sustainable Development"

### List of SDGs-



### Need for SDGs

Even though MDGs were in place,

- Around 800 million people still live in extreme poverty and suffer from hunger, with fragile and conflict-torn states experiencing the highest poverty rates
- Between 2008 and 2012, 144 million people were displaced from their homes by natural disasters, a number predicted to rise as the planet warms, bringing more extreme weather and rising seas

- Water scarcity affects 40 percent of the global population and is projected to increase
- Some 946 million people still practice open defecation
- Gender inequality persists in spite of more representation for women in parliaments and more girls going to school
- Hence, a more comprehensive list of goals and targets was needed to foster sustainable development
- This led to the replacement of MDGs with SDGs post-2015.

**What is new and different about the SDGs?**

The United Nations says the SDGs go much further than the previous goals because they address the root causes of poverty and pledge to leave no one behind, including vulnerable groups

They also emphasize the need to tackle climate change urgently and protect the environment through a shift to sustainable consumption and production. The SDGs are intended to be universal, applying to all countries rather than just the developing world. They recognize the key role of the private sector in pursuing and financing sustainable development, in partnership with governments and civil society.

**SDG India Index:** NITI Aayog has released its latest SDG India Index 2019, which assesses each state and Union Territory’s achievement on 16 sustainable development goals (SDG).

**About the Index:**

The SDG India Index 2019 tracks the progress of all States and UTs on 100 indicators drawn from the MoSPI’s National Indicator Framework (NIF). Each of the 16 SDGs, ranging from good health to quality education, gender equality, and climate action: comprises several indicators, with the number of these varying from SDG to SDG. Scores are given for a state or UT on each SDG. The composite score for each state or UT is computed by aggregating their performance across these goals, and then by taking the arithmetic mean of individual goal scores. A score of 100 implies that the state/ UT have achieved targets set for 2030.

**Classification criteria based on SDG India Index score is as follows:**

Aspirant: 0–49 . Performer: 50–64, Front Runner: 65–99 , Achiever: 100

**Table 1.1 Ranking of States and UT’s in SDG India Index**

Sustainable Development Goal	Top Score	2 <sup>nd</sup> Place	Bottom Rank
SDG : 1 No Poverty	Tamilnadu ( 72 )	Tripura (70)	Jharkhand (28)
SDG : 2 Zero Hunger	Goa ( 76 )	Mizoram (75)	Jharkhand (22)
SDG : 3 Good Health	Kerala ( 82 )	Andhra (76)	Nagaland (29)
SDG : 4 Quality Education	Himachal ( 81 )	Kerala (74)	Bihar (19)
SDG : 5 Gender Equality	Himachal (52 )	Kerala (51)	Telangana (26)
SDG : 6 Clean water & Sanitation	Andhra (96 )	UP (94)	Tripura (69)
SDG : 7 Affordable & Clean Energy	Sikkim (97 )	Goa (95)	Odisha (50)
SDG : 8 Decent work & economic growth	Telangana (82 )	Andhra (78)	Manipur (27)
SDG : 9 Industry, Innovation, infrastructure	Gujarat (88 )	Kerala (88)	Mizoram (8)
SDG : 10 Reduced inequalities	Telangana (94 )	Manipur (81)	Goa (19)
SDG : 11 Sustainable cities and communities	Goa (79 )	Himachal (79)	Meghalaya (22)
SDG : 12 Sustainable consumption & production	Nagaland (100 )	Tripura (92)	Rajasthan (30)
SDG : 13 Climate action	Karnatka (71 )	Andhra (70)	Jharkhand (27)
SDG : 14 Marine ecosystems	Coastal state only, not counted in overall SDG		
SDG : 15 Life & land	Manipur (100)	Sikkim (100 )	Haryana (40)
SDG : 16 Peace, justice & strong institutions	Andhra (86)	Gujarat ( 86)	Assam (52)

**States performance:-**

Kerala is in the top slot with a score of 70, while Bihar is at the bottom with 50.

Following Kerala’s composite score of 70, Himachal Pradesh took the second spot with a score of 69 while Andhra Pradesh, Tamil Nadu, and Telangana shared the third spot with each scoring 67.

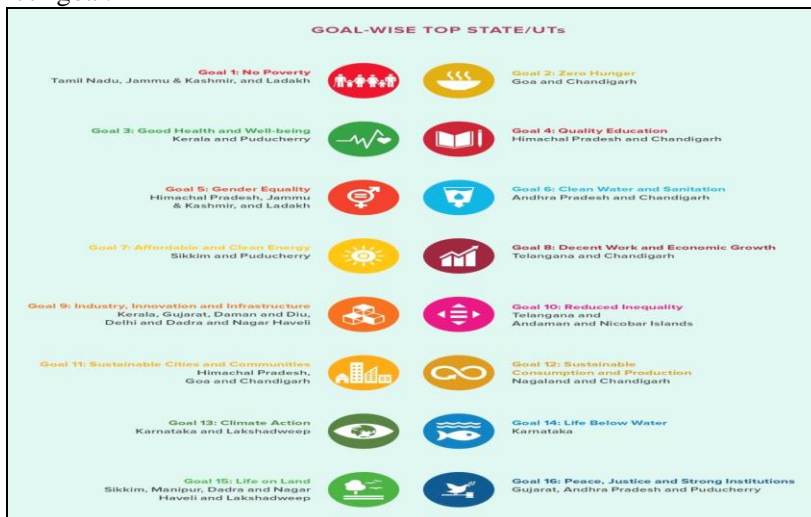
There are eight states in the highest bracket, called frontrunners, with scores in the range 65-99.

Behind Kerala, Himachal Pradesh, Andhra Pradesh, Tamil Nadu, and Telangana, the other states in this category are Karnataka (66), Sikkim (65) and Goa (65).

Two UTs, Chandigarh and Puducherry, scored in this range.

NITI Aayog’s Index 2019-20 covers 16 Sustainable Development Goals and provides a qualitative

assessment of the 17th goal.



**Conclusions:-**

SDG goals recognize that

1. Ending poverty requires economic growth
2. While ending socio-economic disparities requires economic development But neither the economic growth nor the economic development should come at the cost of harming future generations, Accordingly, the 17 goals have been framed to provide education, health, social protection, and job opportunities to all, while tackling climate change and environmental protection
- Achievement of SDG goals is therefore necessary for
3. Reaping India's demographic dividend
4. Reducing India's socio-economic disparities
5. And at the same time protecting India's vast biodiversity

As Gandhiji noted, "The earth, air, land, and water are not an inheritance from our forefathers but on loan from our children. So we have to handover to them at least as it been handed over to us. Earth provides enough to satisfy every man's needs, but not every man's greed"

Therefore, the timely achievement of SDG goals must become India's top priority.

**References-**

1. *TWI2050 Transformations to Achieve the Sustainable Development Goals (International Institute for Applied Systems Analysis, 2018).*
2. *Transforming Our World: The 2030 Agenda for Sustainable Development (United Nations, 2015).*
3. *Review of the Sustainable Development Goals: The Science Perspective (International Council for Science, International Social Science Council, 2015).*
4. *UN Millennium Project Investing in Development: A Practical Plan to Achieve the MDGs (Earthscan, 2005).*
5. *Bengtsson, S., Barakat, B. & Muttarak, R. "The Role of Education in Enabling the Sustainable Development Agenda" (Routledge, 2018).*
6. *Global Education Monitoring Report 2017/18: Accountability in Education: Meeting Our Commitments (UNESCO, 2017).*
7. *Towards a Global Action Plan for Healthy Lives and Well-Being for All (WHO, 2018).*
8. *World Energy Outlook Special Report 2017: Energy Access Outlook (International Energy Agency, 2017).*
9. *Progress on Drinking-Water and Sanitation (World Health Organization and United Nations Children's Emergency Fund, 2016).*
10. *Sustainable Development Goal 6: Synthesis Report on Water and Sanitation 2018 (United Nations, 2018).*
11. *Education Commission the Learning Generation: Investing in Education for a Changing World (The International Commission on Financing Global Education Opportunity, 2016).*
12. *Grin, J., Rotmans, J. & Schot, J. Transitions to Sustainable Development: New Directions in the Study of Long Term Transformative Change (Routledge, 2010).*
13. *Sustainability Transformations in the Digital Age (WBGU, 2019).*

## **An Analysis of Data Visualization Methods and Techniques in MS Excel**

**Rituja Ravindra Vyapari**

*Department of Computer Science, Dr. B. A. M. University, Aurangabad.*

### **Abstract:-**

*Large amounts of numerical data can often have little meaning by themselves and therefore visualisation techniques. This is a general way of talking about anything that converts data sources into a visual representation (like charts, graphs, maps, sometimes even just tables). These techniques are frequently used to convey information, particularly within the disciplines of maths and science.*

**Keywords:-** *Data Visualization, Methods, Techniques, Pictorial Representation,*

### **Introduction:-**

In simple words, data visualization is a graphical representation of any data or information. Visual elements such as charts, graphs, and maps are the few data visualization tools that provide the viewers with an easy and accessible way of understanding the represented information. When we think of data visualization, your first thought probably immediately goes to simple bar graphs or pie charts. While these may be an integral part of visualizing data and a common baseline for many data graphics, the right visualization must be paired with the right set of information. Simple graphs are only the tip of the iceberg. There's a whole selection of visualization methods to present data in effective and interesting ways. There are dozens of tools for data visualization and data analysis. These range from simple to complex, from intuitive to obtuse. Not every tool is right for every person looking to learn visualization techniques, and not every tool can scale to industry or enterprise purposes. If you'd like to learn more about the options, feel free to read up here or dive into detailed discussion in this research paper.

### **Types of Data Visualization:**

There are 3 types of data visualization presented in this research paper as shown in following manner.

1. **Scientific visualisation** is generally the visualisation of scientific data that have close ties to real-world objects with spatial properties. The goal is often to generate an image of something for which we have spatial information and combine that with data that is perhaps less directly accessible, like temperature or pressure data. The different scientific fields often have very specific conventions for doing their own types of visualisations.
2. **Information visualisation** is another broad term, covering most statistical charts and graphs but also other visual/spatial metaphors that can be used to represent data sets that don't have inherent spatial components.
3. **Visual analytics** is the practice of using visualisations to analyse data. In some research, visualisations can support more formal statistical tests by allowing researchers to interact with the data points directly without aggregating or summarising them. Even simple scatter plots, when the variables are chosen carefully, can show outliers, dense regions, bimodalities, etc.

### **The Problems With Visualization**

While we preparing data in MS Excel sheet then problems face with data visualization which is described under following areas.

**1.The oversimplification of data.** One of the biggest draws of visualization is its ability to take big swaths of data and simplify them to more basic, understandable terms. However, it's easy to go too far with this; trying to take millions of data points and confine their conclusions to a handful of pictorial representations could lead to unfounded conclusions, or completely neglect certain significant modifiers that could completely change the assumptions you walk away with. As an example not relegated to the world of data, consider basic real-world tests, such as alcohol intoxication tests, which try to reduce complex systems to simple "yes" or "no" results—as Monder Law Group points out, these tests can be unreliable and flat-out inaccurate.

**2.The human limitations of algorithms.** This is the biggest potential problem, and also the most complicated. Any algorithm used to reduce data to visual illustrations is based on human inputs, and human inputs can be fundamentally flawed. For example, a human developing an algorithm may highlight different pieces of data that are "most" important to consider, and throw out other pieces entirely; this doesn't account for all companies or all situations, especially if there are data outliers or unique situations that demand an alternative approach. The problem is compounded by the fact that most data visualization systems are rolled out on a national scale; they evolve to become one-size-fits-all algorithms, and fail to address the specific needs of individuals.

**3.Over reliance on visuals.** This is more of a problem with consumers than it is with developers, but it undermines the potential impact of visualization in general. When users start relying on visuals to interpret data, which they can use at-a-glance, they could easily start over-relying on this mode of input. For

example, they may take their conclusions as absolute truth, never digging deeper into the data sets responsible for producing those visuals. The general conclusions you draw from this may be generally applicable, but they won't tell you everything about your audiences or campaigns.

**The inevitability of visualization.** Already, there are dozens of tools available to help us understand complex data sets with visual diagrams, charts, and illustrations, and data visualization is too popular to ever go away. We're on a fast course to visualization taking over in multiple areas, and there's no real going back at this point. To some, this may not seem like a problem, but consider some of the effects—companies racing to develop visualization products, and consumers only seeking products that offer visualization. These effects may feed into user over reliance on visuals, and compound the limitations of human errors in algorithm development (since companies will want to go to market as soon as possible).

**Major Categories of Techniques:-**

In the present research paper following major methods and techniques was used for pictorial representation in the graph, map and figures.

Geometric Techniques: Scatter plots, Landscapes, Projection Pursuit, Pro section Views, Hyper slice, Parallel Coordinates,...

Icon-based Techniques: Chernoff Faces, Stick Figures, Shape-Coding, Colour Icons, Tile Bars, ...

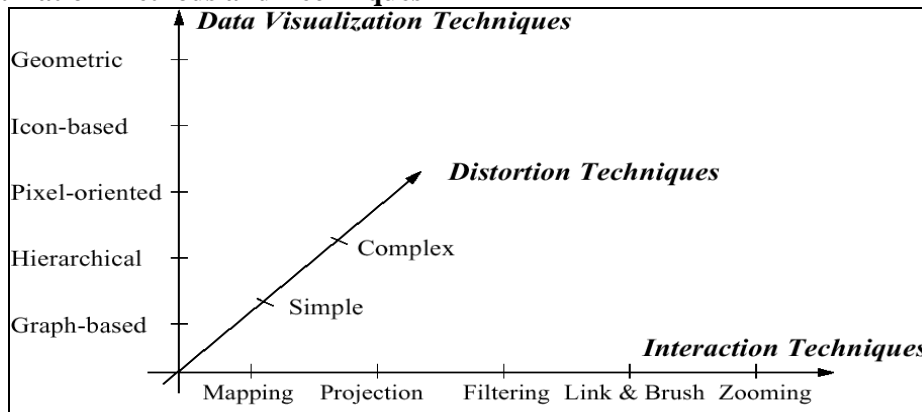
Pixel-oriented Techniques: Recursive Pattern Technique, Circle Segments Technique, Spiral- & Axes-Techniques, ...

Hierarchical Techniques: Dimensional Stacking, Worlds-within-Worlds, Tree map, Cone Trees, Info-Cube, ...

Graph-Based Techniques: Basic Graphs (Straight-Line, Poly-line, Curved-Line), Specific Graphs (e.g., DAG, Symmetric, Cluster) ...

Hybrid Techniques: arbitrary combinations from above

**Data Visualization Methods and Techniques**



**Geometric Techniques**

- Basic Idea: Visualization of geometric transformations and projections of the data.

- ◆ Examples:

- Scatterplot-Matrices [And72, Cle93]
- Landscapes [Wis95]
- Projection Pursuit Techniques [Hub85]  
(techniques for finding meaningful projections of --multidimensional data)
- Prosection Views [FB94, STDS95]
- Hyperslice [WL93]
- Parallel Coordinates [Ins85, ID90]

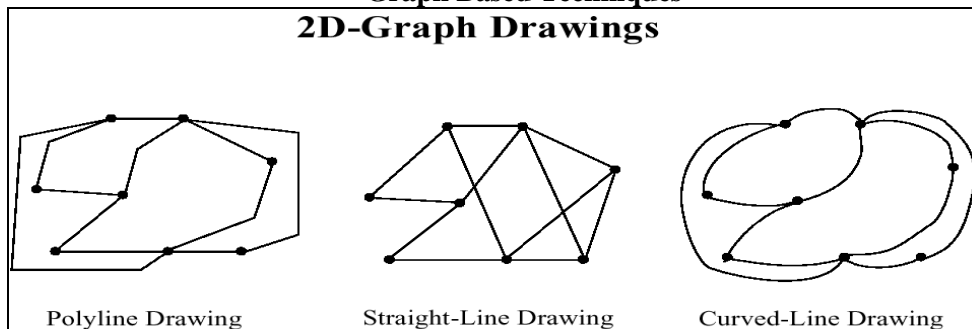
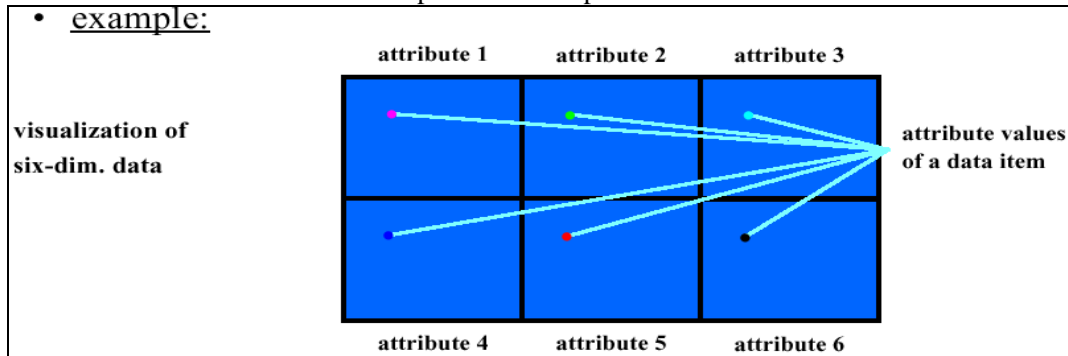
- ❖ **Icon-based Techniques**

- Basic Idea: Visualization of the data values as features of icons.
- Examples
- Chernoff-Faces [Che73, Tuf83]
- Stick Figures [Pic70, PG88]
- Shape Coding [Bed90]
- Colour Icons [Lev91, KK94]
- Tile Bars [Hea95]
- use of small icons representing the relevance feature vectors in document retrieval

- ❖ **Pixel-Oriented Techniques**

- Basic Idea

- each attribute value is represented by one coloured pixel
- the value ranges of the attributes are mapped to a fixed colour map
- the attribute values for each attribute are presented in separate sub-windows



### Hierarchical Techniques

Basic Idea: Visualization of the data using a hierarchical partitioning into subspaces.

Examples

- Dimensional Stacking [LWW90]
- Worlds-within-Worlds [FB90a/b]
- Tree map [Shn92, Joh93]
- Cone Trees [RMC91]
- Info-Cube [RG93]

### Conclusins:-

Good data visualization should communicate a data set clearly and effectively by using graphics. The best visualizations make it easy to comprehend data at a glance. They take complex information and break it down in a way that makes it simple for the target audience to understand and on which to base their decisions. Data visualization tools provide an accessible way to see and understand trends, outliers, and patterns in data. The Internet has transformed the way we visualize information through a better understanding of networks and an explosion in profile, behavioural and attitudinal data. Socio-grams, for example, have gone from relatively simple graphs to multifaceted relational maps, as illustrated in the following two charts, courtesy of the Journal of Social Structure and the Leadership Learning Community.

### References:-

1. Meloncon L., & Warner, E. (2017), "Data visualizations: A literature review and opportunities for technical and professional communication". Paper presented at the Professional Communication Conference (ProComm), 2017 IEEE International, Madison, WI, USA.
2. Friendly, M. & Denis, D. J. (2001). Milestones in the history of thematic cartography, statistical graphics, and data visualization. Retrieved from <http://www.datavis.ca/milestones/>
3. Anderson, Melissa. 2017. "Data Visualization and the 9 Fundamental Design Principles." <https://www.idashboards.com/blog/2017/07/26/data-visualization-and-the-9-fundamental-design-principles/>.
4. Bradshaw, Paul. 2015. "When to Use Maps in Data Visualisation: A Great Big Guide." <https://onlinejournalismblog.com/2015/08/24/when-to-use-maps-in-data-visualisation-a-great-big-guide/>.
5. Cole Nussbaumer Knaflic, (2015) "Storytelling with Data: A Data Visualization Guide for Business Professionals" Willey Publication.

6. *Abha Belorkar & Sharath Chandra Guntuku (2020), "Interactive Data Visualization with Python: Present your data as an effective and compelling story",*
7. *Stephanie Evergreen (2019), "Effective Data Visualization: The Right Chart for the Right Data " 2nd Edition, Sage Publication.*
8. *Andy Kirk (2019), "Data Visualisation: A Handbook for Data Driven Design" 2nd Edition, Sage Publication.*
9. *Kieran Healy,(2019), "Data Visualization (A Practical Introduction)"1st Edition, Princeton University Press.*

## Exploring Dalit Consciousness in Baby Kamble's *The Prisons We Broke*

Dr. Shivaji D. Sargar<sup>1</sup> Navale Dattatray Prabhakar<sup>2</sup>

<sup>1</sup>Professor, Department of English, University of Mumbai, (M.S.) India

<sup>2</sup>Ph.D. Research Scholar, Department of English, University of Mumbai, (M.S.) India

**Abstract:**

*The identity is a social construction which is acquired by individuals through the medium of performance. The sense, meaning and consciousness is produced by ideological apparatus to perpetuate the hegemonic dominance of minority over majority of subalterns. This unethical manipulation of essentialism, based on artificiality of binary opposition, produces revisionist, reductionist, and polymorphous discourse of caste which colonizes not only body but also minds of individuals. These selected autobiography of Baby Kamble is a collective amount of Dalit women and their commonness and it shows how is the mind of individual is colonized and decolonized in discourse of cast. The Prisons we Broke also stresses on the wretched and pathetic conditions of the Dalit women who are doubly persecuted and exploited.*

**Keywords:** Dalit, exploited, dominance, caste, identity, minority.

**Introduction:**

The autobiography selected for the study is Baby Kamble's *The Prisons We Broke* which is translated from Marathi to English in 2008 by Maya Pandit. Baby Kamble's *The Prisons We Broke* is deliberated to be the first autobiography by a dalit woman who is born into an untouchable caste, known as Mahar, one of the largest communities in Maharashtra. She was an acclaimed Indian Dalit activist and writer who was stimulated by Dr. B.R. Ambedkar. Kamble's *The Prisons We Broke* was originally written in Marathi named as *Jina Amucha*. The autobiography by Baby Kamble underscores how a Dalit woman is deprived, oppressed and marginalized. Besides discrimination based on the gender the Dalit women also face much discrimination because of their caste and culture in a hostile and caste-ridden society. Since time immortal, the inequitable treatment meted out to the low caste people and the untouchables in India is piteous. The Prisons we Broke deals with the great sufferings of Dalit women in the male oriented patriarchal society. They are suppressed all the time and so have become victims of caste and gender oppression. India is a nation with different religions and cultures and a significant constituent in the existence of caste structure and framework which is hierarchal. Treating oppressed and subjugated sections as untouchables is still pervasive and the downtrodden sections who face this are mostly the Dalits. Dalits are viewed as the most minimal in the progressive and hierarchal Indian caste and class system and there is a systematic attack on cultural practices of Dalits. They are exposed to foundational mistreatment, are seen as an inferior and subaltern community who undergo the injury and bruise of oppression and exploitation in manners that are one of a kind because of the perplexing social, cultural, political, and economic conditions predominating in India. Dalit writing in different local and native Indian dialects offers a window of knowledge into the lives of Dalits. They are narratives of outrage and powerlessness, savagery and grit, agony and distress, amusingness and sentiment, sadness and expectation. The term Dalit means scattered, broken, and crushed. It has its origin in the Sanskrit word 'dal' which means "to crack open, split, crush, grind and this term is usually used for the lower caste people or sections in India. The term Dalit is mostly used for those who have been inflicted to untouchability. Dalits were ostracized from the four-fold varna system of Hinduism and were seen as forming a fifth varna, portraying themselves as Panchama. Baby Kamble underlines how Dalit women endure an inconsistent treatment. She describes about an occurrence where a newly married young lady unconscious of the custom of greeting and hunching, disregards a high caste and class man. This unawareness of the fact by a Dalit women that a low caste people are supposed to welcome and acknowledge the high caste people turns out to be a big problem for her and that neglected, unnoticed, and slighted man goes to her locale and yells,

"Who, just tell me, who the hell is that new girl? Doesn't she know that that she has to bow down to the master? Shameless bitch! How dare she pass me without showing due respect?" (53).

From the above quotation we can see how a Dalit woman is treated very badly by a high caste man. She is called a shameless just for not bowing to the so-called high caste master. She is doubly oppressed first for being a woman and secondly for being a Dalit a low class, and a downtrodden woman who, according to high caste has no value and position in the society. Not just the high caste man but her in-laws and other old and aged men from the locale comes and falls at the master's feet and ask for benevolence for the newlywed young girl and also for themselves so that they should not come in danger and they ask for forgiveness by using abusive words for the young girl. The in-laws appeal "No, no kind master! That girl is a new animal in the herd! Quite foolish and ignorant. If she erred, I, her sasra, fall at your feet, but please forgive us for this crime." (53)

Kamble further portrays the distinctions they had among them and high caste and class women in regards to apparel and accessories. Dalit women were confined even to imitate and utilize the things in same way as the high caste women would do. Just the high caste and class women had the benefit of wearing their saris in such a way that the fringe could be seen and a Mahar lady should shroud the outskirts else it was viewed as an offense to the high class and caste women. High position ladies however become prey of their male people. The social



states of these Dalit women were worst. Women are subjugated by man centric dominating culture in each and every facet as being a woman, daughter, wife or a mother. Be that as it may, but they are subjugated by the patriarchal society mostly as a daughter in-law and as a wife. They are abused by their male centric society as well as additionally by the womenfolk. Kamble depicts the cruel mentality of people of her Mahar community towards their young women and mostly the newlywed girls. Little girls barely eight to ten years were married and brought home as daughter in-laws. These little young girls were offended and oppressed both by men and women. The helpless young ladies need to persevere through the viciousness and maltreatment of everybody in the house as well as out of the house. Many a time mother- in laws would become enthralled and they articulated the little young girls as an abhorrent in the house. For being a shrewd soul, the young girls were they were beaten very badly and were driven out of the house. The Mahar women drove the most hopeless reality. Neediness, mortification, subjugation, oppression, and abusive behaviour made their lives like damnation. Mother and father in law were so cruel that they used to tell their sons to beat their wives as though they were mammoths, and the husbands would do that they would beat their wives as such until the sticks broke with the exertion. The head of women would tear open, their spines would be squashed, and some would fall oblivious. Due to these torments many daughter in-laws would attempt to flee. In Baby Kamble's locale there were many instances of such torment where the young girls escaped from their house. On the off chance if they catch the young girl then they would take her back to her in laws house, and then they were abused more badly. The mother brainwashed their son's brain against the unfortunate and unhappy wife's. The mother would say:

“Son, what good is such a runaway wife to you? Some bastard must have made her leave you. I suspect that this somebody is from our own community. This bitch will bring nothing but disgrace to us”(99).

Not only this when they catch the girl and bring them back home their husband would beat her and tie her leg with a gadget so that she was unable to get away again. They didn't even see her as a human; they used to treat her like an animal. To make her condition most exceedingly awful they indeed, even slashed her nose. Father would urge his child to take care of business and act like one. On the off chance the father used to say that if the wife's cross the limit or go against their rules then you should beat her and even chop off your wife's nose and don't bother about the punishment after that. The father used to say to his son that:

“You are a man. You must behave like one! You must be proud and firm. You must walk tall. Twirl your moustache and show us that you are a man...Never mind if you have to go to prison for six months! You must chop off your wife's nose and present it to her brother and father. They mustn't have any respect left to sit with the members of the panch”. (100-01)

The loyal and so-called respectful son on his father's advocacy not only chopped her wife's nose but also, he would drive the little young girl out of the house, with blood cascading from the desecration. No one including her own family members used to give her shelter after driven out from her husband's house. At that point the relative and the mother in-law would cheerfully mastermind a second marriage for her son. Hence, the poor and guiltless young girl would in this way be relinquished.

The autobiography is written in very simple words and it portrays the ceremonies, customs, torment and battle of everyday life of the untouchable caste known as "Mahar" one of the largest communities in Maharashtra. Baby Kamble exposes the deep-rooted evils of caste segregations and caste stratifications and how it is pervasive even to this day. She has also highlighted the predicament of the backward classes in conservative and tradition-bound societies where they are treated as inferior and subjugated groups in hierarchical social structure. This caste-oriented rigidity plays havoc with the innumerable innocent lives.

#### **Conclusion:**

In this way the dalit women suffer from the worst sort of marginalization in the orthodox and highly stratified Indian society. Baby Kamble explores how these differences of caste, class, gender, and race affect the innocent lives and human relationships and tries to raise awareness about these social institutions that has haunted the Indian society for decades and which continues even in the present day with its inevitable consequences.

#### **References:**

##### **Primary Sources:**

1. Kamble, Baby, 1986, *Jina Amucha*, Pune: Sugawa Prakashan.
2. Pandit, Maya, 2008, *The Prisons We Broke*, New Delhi: Orient Longman.
3. Kumar, Raj, 2010, “Caste Culture and Politics: Towards a Definition of Dalit Autobiography,” in *Dalit Personal Narratives: Reading Caste, Nation and Identity*, Kolkata: Orient Blackswan Private Limited. Print.
4. Nubile, Clara, 2003, *The Danger of Gender: Caste, Class and Gender in Contemporary Indian Women's Writing*, New Delhi: Sarup and Sons Publication. Print.

## **History of Indian Cinema and Women's portrayal**

*Farheen Tai*

*Gokhale Education Society's College of Education and Research*

### **Development of Cinema**

The development of Cinema has been driven by a continuing technological evolution inspired and intervened by human creativity. This allowed the film-makers to practice a more complex craft to tell more complex stories.

The origin of cinema as a medium of expression lies in the old concept of storytelling, which, in the early days was done or performed by using created images that could relate to the theme concerned. The term 'cinematography' refers to the complex process of assimilating ideas, words, actions, emotions and similar form of non-verbal communication while rendering them in visual terms.

George Eastman, the celebrated American Innovator founded the Eastman Kodak Company and invented the roll film. Later inventors like Edward Muybridge, Thomas Elva Edison and Lumiere Brothers could develop motion picture film only on the basis of celluloid roll films.<sup>1</sup>

### **Research Methodology:**

Personal visit to National Museum of Indian Cinema, (Mumbai, India) and collected knowledge/facts from the Museum.

*"Cinema is essentially the product of technology and the human genius imbued in it with a sense of art and aesthetics. The symbiotic relationship between cinema and technology has produced fascinating results from analogue to digital".*

### **The Lumiere Brother's, Cinema comes to India**

The Lumiere Brother's, Auguste and Louis were among the earliest film-makers in history. The Lumiere's held their first private screening of projected motion pictures in 1895. Their first public screening of films was held on 28<sup>th</sup> December 1895, at Salon Indien du Grand Café in Paris. The birth of Cinema in India is attributed to them. The art of moving images was introduced to the Indian audiences in 1896 at the Watson's Hotel of Mumbai. It was hailed as the Marvel of the Century and the Wonder of the World. The wonder still persists.<sup>2</sup>

### **Pioneers of Early Cinema**

Hiralal Sen and Jamshedji Framji Madan in Kolkata, Edward and Major Warwick in Chennai and H. S. Bhatavdekar (Sawe Dada) and F. B. Thanawalla in Mumbai were the early trend-setters before the emergence of Dadasaheb Phalke. Sawe Dada who is believed to have been present at the Lumiere's show at the Watson's Hotel eventually became the first Indian to produce moving images in India.

### **From Tents to Theatres**

Initially when there was no cinema hall, J. F. Madan, Hiralal Sen, S. Vincent, F. B. Thanawalla, Abdulally Esoofally and others held cinema shows in tents and fair grounds. Exhibitors were hired by rich people for organizing private shows.

Later popular theatre halls such as Star Theatre of Kolkata and Novelty Theatre of Mumbai were also used for screening films.

### **Play house and Cinema Halls**

In India and elsewhere in the world, films were increasingly being shown as part of vaudeville (musical halls) shows and at fairgrounds or carnivals. Besides middle and upper classes preferring to see films in proper decent cinema houses, technology also played its part. As the length of the films increased with more substantial content, their projection necessitated permanent cinema houses. Along with the advanced countries of the West, India, too was impacted by this phenomena.<sup>3</sup>

### **Early Silent Cinema**

The era (1912-1934) of Indian Silent film consists of as many as 1300 films. First Silent Indian film 'Pundlik' was released in 1912 by R. G. Torney, but it was never considered as the first Indian film because

---

<sup>1</sup> "About George Eastman | George Eastman Museum". *Eastman.Org*, 2020, <https://www.eastman.org/about-george-eastman>.

<sup>2</sup> "The Lumière Brothers, Pioneers Of Cinema". *HISTORY*, 2020, [https://www.google.com/amp/s/www.history.com/\\_amp/news/the-lumiere-brothers-pioneers-of-cinema](https://www.google.com/amp/s/www.history.com/_amp/news/the-lumiere-brothers-pioneers-of-cinema).

<sup>3</sup> Cinema, 100. "From Play House To Movie Theatre – By Rafique Baghdadi". *100 Indian Cinema*, 2020, <https://indiancinema100.in/from-play-house-to-movie-theatre-by-rafique-baghdadi/>.

it was adapted from a Marathi play, it had a cameraman named – Johnson, who was a British national and the film was processed in London.

Dhundiraj Govind (D.G.) Phalke, popularly known as Dadasaheb Phalke, began shooting of India's first regular and indigenous full-length feature film 'Raja Harishchandra' towards the latter part of 1912 at a bungalow (which he converted into a functional studio) in Dadar, in central Mumbai, where the main station road is named after him.

The film was advertised as “an entirely Indian production by Indians, a drama from Indian mythology”. The entire work of production was single-handedly carried out by Phalke himself and his wife Saraswati. In those days, for the lack of actresses, Phalke had to induct male actors with soft look in female roles. Lokmanya Tilak's widely read Marathi daily 'Kesari' hailed 'Raja Harishchandra' as a “Swadeshi Moving Picture” since it was “an entirely Indian production by Indians”. Phalke remade this film, Kolkata-based Madan theatres made 'Satyawadi Raja Harishchandra' in 1917 and Bilwamangal in 1919.<sup>4</sup>

### **The Momentous change**

The Advent of sound changed the creative strategies of film-making. The immediate side-effect was that the sound recordist became more important than the cameraman. The stars who could sing well were more acceptable than the body-builders or wrestlers.<sup>5</sup>

### **Talkies spread across India**

Some of the Silent Studios were converted to make 'talkie' films. Such major studios included Sagar, Ranjit, Imperial, Minerva, Wadia ,Bombay Talkies and others. Of these, Bombay Talkies rose to a great height of reputation presenting stars like Devika Rani and Ashok Kumar. When the talkies hit the theatres, the crowds were so huge that the police was summoned to control them. The Silent films, nevertheless, continued to be made till 1934.

### **The story of Alam Ara and it's Impact**

Alam Ara (1931) India's first talkie film. The shooting was done with the Tamar single-system camera, which recorded sound directly onto the film.

The race for making talkies in India began as soon as the optical recording of sound was made technically possible. However the credit for producing the first sound film Alam Ala in India goes to Imperial film company. The film was released on 14<sup>th</sup> March 1931 at the Majestic Theatre in Mumbai. It established the use of music, song, and dance as the mainstay of Indian Cinema. Directed by Ardeshir Irani, Alam Ara narrowly beat Madan Theatres big Budget musical Shirin Farhad (1931).<sup>6</sup>

### **Chandralekha and it's impact**

S.S. Vasan made Chandralekha in 1948, first in Tamil, then in Hindi, at an expenditure of three million of rupees. Chandralekha was a runaway success to become the first national mega hit made outside Mumbai and Kolkata. Chandralekha's success made tremendous impact in Mumbai. In 1955, V Shantaram made a popular epic in Technicolor, Jhanak Jhanak Payal Baje. The most costly spectacular film to follow the same line was Mughal-e-Azam directed by K Asif, with a cost of ten millions of rupees.

### **Gandhi and Cinema**

Movies and the Mahatma have an enigmatic and yet uniquely enduring relationship. As historians recount, in his entire life, Mahatma Gandhi had seen only one film and that was Vijay Bhatt – directed 'Ram Rajya' as late as in 1943 when he was already 74 years old.

However, during his childhood, he had seen a stage play called 'Harishchandra' and that story eventually got adapted to India's first feature silent film 'Raja Harishchandra' in 1913. The upright and truthful character of Harishchandra had deeply impressed Gandhiji. In his autobiography, he writes, “I had secured my father's permission to see a play performed by a certain dramatic company. This play Harishchandra captured my heart. I could never be tired of seeing it. But how often should I be permitted to go? It haunted me and I must have acted Harishchandra to myself times without number. Why should not all be truthful like Harishchandra? was the question I asked myself day and night. To follow truth and go through all the

---

<sup>4</sup> "Silent Era: The Early Cinema Of India - Lehren English | Dailyhunt". *Dailyhunt*, 2020, <https://m.dailyhunt.in/news/india/english/lehren+english-epaper-lehren/silent+era+the+early+cinema+of+india-newsid-110552619>.

<sup>5</sup> "The Culture-Specific Use Of Sound In India Cinema". *Filmsound.Org*, 2020, <http://filmsound.org/india/#:~:text=The%20First%20Sound%20Films%3A&text=The%20earliest%20attempts%20at%20synchronised,Elphinstone%20Picture%20Palace%20in%20Calcutta>.

<sup>6</sup> Desk, Learning. "Alam Ara – The First Ever Indian Talkie | Learning And Creativity - Silhouette". *Learning And Creativity - Silhouette*, 2020, <https://learningandcreativity.com/alam-ara/>.

ordeals Harishchandra went through was the one ideal that inspired me. I literally believed in the story of Harishchandra. The thought of it at often made me weep”.

#### **K.A. Abbas writes an open letter to Babu**

Khwaja Ahmed Abbas (1914 – 1987) popularly known as K.A.Abbas was an eminent film director, novelist, screenwriter and a journalist, writing in Urdu, Hindi and English languages. Amitabh Bachchan had his debut film performance in Abbas's film *Saat Hindustani* in 1969.

Greeting Gandhi on his 71<sup>st</sup> Birthday and addressing him as Babu K.A.Abbas pleaded with him to change his opinion about Cinema. He wrote : 'Today I bring to your scrutiny – and approval – a new toy my generation has learnt to play with – The Cinema”

And then he requests Gandhiji to see some of the films that could help revise his opinion about Cinema.

#### **Gandhi and Cinema Houses**

Though Gandhi had no liking for Cinema, he had addressed several public meetings at some cinema houses in Bombay including Empire, Excelsior and Opera Houses in the 1930's. These meetings were held by local social organizations pertaining to different issues.

In a jam-packed meeting held at the Royal Opera House on 16<sup>th</sup> July 1934, Gandhiji had collected a hefty sum of Rs. 35,000 for the Harijan Fund. On the previous day at the same venue, he had also addressed a women's gathering.<sup>7</sup>

#### **The most filmed personality – Gandhi**

Ever since Gandhiji took the lead in the freedom struggle, cameras followed him everywhere. Whether he liked it or not, history was being recorded live as he proceeded to fight for freedom through non-cooperation, peaceful resistance and the swadeshi movement. His life was his message. He was someone who never rested. He kept moving all over the country in a ceaseless effort to knit India together. Mahatma Gandhi was perhaps the most filmed personality of his time.

#### **India Rising for Freedom with Films**

There are innumerable films that have been comprehending or spreading the message of freedom and of independent India in colonial and post-colonial times. India's struggle for freedom took different turn once Gandhi entered the national political theatre. Films such as *Thyaga Bhoomi* (Tamil, 1939), *Vande Mataram* (Telugu, 1939) and *Kismet* (Hindi, 1943) as also many others carried forward the Gandhian message and eventually inspired people at large through cinema, a medium of popular culture.

#### **Women's portrayal in Indian Silent Cinema**

In the early days due to lack of female actors, the female roles in the films were played by male actors. In 'Raja Harishchandra', Phalke enrolled soft looking Anna Salunkhe in female role. Nevertheless, Phalke enrolled the indomitable i.e. impossible to put down by force, mother-daughter duo Durgabai and Kamlabai in *Mohini Bhasmasur* (1913), making them the first women to act in Indian cinema. Phalke's daughter Mandakini, the first child star, played the role of young Krishna in *Shree Krishna Janma* in 1918.

One notable feature of the Indian Silent Era film was the presence of many actresses of Anglo-Indian and foreign origin. Celebrated among them were Sulochana (Ruby Myers), Sita Devi (Renee Smith), Madhuri (Beryl Claesen), Rampiyari (Rose), Patience Cooper, Dorothy Kingdom and others donning Indian names.<sup>8</sup>

#### **Early Heroines**

The star system was fully installed by the 30's, when the charm of Cinema was seen as embodied in the persona of the heroine and other women characters. They truly were luminous as they walked, talked and sang their own songs. If Shanta Apte, Hansa Wadkar, Shanta Hublikar, Binata Roy personified easy grace and spontaneity, Kannan Devi, Noorjahan, Suraiya, Jahanara Kajjan, who sang in *Shirin Farhad* (1931) and *Indrasabha* (1932), brought glamour and urban culture, acting well into the sound era. With the playback becoming popular, others like Nalini Jaywant, Kamini Kaushal and Leela Desai made their marks. In Kolkata, Bharati Debi, Radharani appeared in growing popular women centric films. Educated women like Durga Khote, Devika Rani, Nadira and Leela Chitnis lent a certain “weight” to the image of the woman. Acting in stung films Nadia and Lalita Pawar broke gender boundaries. If Pawar played the “bad” wife or

---

<sup>7</sup> "Gandhi Hated Cinema, But Continues To Influence It". *The Week*, 2020,

<https://www.google.com/amp/s/www.theweek.in/news/entertainment/2019/10/01/Gandhi-hated-cinema-but-continues-to-influence-it.amp.html>

<sup>8</sup> "The First Ladies Of Indian Cinema". *Google.Com*, 2020,

<https://www.google.com/amp/s/www.livehistoryindia.com/amp/story/herstory%252F2019%252F03%252F26%252Fthe-first-ladies-of-indian-cinema>

mother, Nirupa Roy was gentle and self-effacing.<sup>9</sup>

### **Superstars**

Stardom had already started during the silent and early talkie era. Nargis, Vaijayantimala, Madhubala, Meena Kumari, Suchitra Sen and many other actresses were Superstars in their own right.

### **New wave / Parallel Cinema**

From the late 1960s to the mid 1980s, a 'New Wave' or 'Parallel' cinema, thrived in India. The New Wave films were inspired by a new type of Indian film trend, which had been pioneered by the Bengali filmmaker, Satyajit Ray, in the 1950s. His 'Pather Panchali (1953)' won several International & national awards. He inspired his colleagues Mrinal Sen & Ritwik Ghatak as well.

The new wave/parallel cinema, were less concerned with glamour and more inclined towards a social realist approach to their subject. They focused on social and political issues, such as the position of women, caste and poverty, communalism, the young and dissent. Several films like Bimal Roy's 'Do Bigha Zamin', Mehboob Khan's 'Mother India', Raj Kapoor's 'Shree 420' and 'Awaara', Guru Dutt's 'Pyasa' and 'Kaagaz ke Phool' set new records at the box office. The films were usually produced on a low budget, and were less dependent on well-known stars. The filmmakers were often influenced by western art house films and were dependent on film festivals, film societies and art house cinemas to become well known.<sup>10</sup>

### **Conclusion**

Over the last century, Cinema has become the part of Indian life as expression and a major point of reference for Indian culture. Today, India is the largest film producing country in the world and produces over 1000 films annually in various languages and the film industry has a huge annual turnover. In its aesthetic and linguistic multiplicity, Indian Cinema has been capturing the nation's mood.

### **Reference:**

#### **Primary Sources:**

1. Raja Harishchandra, Directed by Dadasaheb Phalke, Phalke Films Company, 1913.
2. *Alam Ara*, Directed by Ardeshir Irani, Imperial Film Company, 1931.
3. *Shirin Farhad*, Directed by J.J.Madan, Madan Theatres, 1931.
4. *Chandralekha*, Directed by S. S. Vasan, Gemini Studio, 1948.
5. *Ram Rajya*, Directed by Vijay Bhatt, Shri Prakash Pictures, 1943.
6. *Thyaga Bhoomi*, Directed by K. Subramanyam, Madras United Artists Corporation, 1939.
7. *Vande Mataram*, Directed by B. N. Reddi, Vauhini Studios, 1939.
8. *Kismet*, Directed by Gyan Mukherjee, Bombay Talkies, 1943.
9. *Mohini Bhasmasur*, Directed by Dadasaheb Phalke, Phalke Films Company, 1913.
10. *Shree Krishna Janma*, Directed by Dadasaheb Phalke, Hindustan Cinema Films, 1918.
11. "India'S ParallelCinema.". *ThirdCinemaRevisited*, 2020, <https://www.google.com/amp/s/thirdcinema.wordpress.com/2015/10/27/indias-parallel-cinema/amp/>.
1. *Rajadhyaksha, Ashish, and Paul Willemen. Encyclopedia Of Indian Cinema. Taylor And Francis, 2014.*
2. *Gokulsing, K. Moti, and Wimal Dissanayake. Indian Popular Cinema. Trentham Books, 2004.*
3. *Articles:*
4. "LOUIS Luriiere, 83, A SCREEN PIONEER; Credited In France With The Invention Of Motion Picture ]". *Nytimes.Com*, 2020, <https://www.nytimes.com/1948/06/07/archives/louis-luriiere-83-a-screen-pioneer-credited-in-france-with-thet-in.html>. Accessed 10 June 2020.
5. "Shirin Farhad (1931)". *Indiaincine.Ma*, 2020, <https://indiaincine.ma/AWA/info>.
6. *Bhatia, Uday. "The Mahatma And The Movies". Livemint, 2018, https://www.google.com/amp/s/www.livemint.com/Leisure/7CHI29CXXZXXSs2FE2eimN/The-Mahatma-and-the-movies.html%3ffacet=amp. Accessed 27 Jan 2018.*

---

<sup>9</sup> Aouit, Juillet, and Cindy Evans. "Bollywood And Women – Postcolonial Studies". *Scholarblogs.Emory.Edu*, 2020, <https://scholarblogs.emory.edu/postcolonialstudies/2014/06/20/bollywood-and-women/>.

<sup>10</sup> "India'S Parallel Cinema.". *Third Cinema Revisited*, 2020, <https://www.google.com/amp/s/thirdcinema.wordpress.com/2015/10/27/indias-parallel-cinema/amp/>.

## **Challenges and Opportunities in the Sustainable Agriculture Development in India**

**Dr. Ashok Shamrao Patil**

*Assistant Professor, Rajarshi Shahu Arts and Commerce College, Rukadi Tal-Hatkanangale, Dist-Kolhapur*

### **Abstract**

*Sustainable agriculture is a way of farming which meets the food need of the society without hampering the ability of the land to produce food grains for future generation. It is an environmentally friendly way of farming which protects not only human health from chemical health hazards but also biodiversity and environment as a whole. It is a long run methodological structure that fuses benefit, ecological stewardship, decency, wellbeing, business and familial perspectives on a ranch setting. It is characterized by three essential perspectives which are: economic sustainability, ecological sustainability, and social sustainability. Sustainable agriculture development is also known as eco-friendly farming, organic farming, and zero budget farming. The scenario of the sustainable agriculture in India is limited in nature and the majority of the states as well as farmers are practicing the mixed type of farming. Because at the initial few years of the organic farming are less economical that farmers cannot be bears and as a result of that the extent of organic farming is significantly less in India. Due to inorganic farming practices, several environmental and health-related issues are emerged out in India. The quality of health and health status of the people is under threatening hence it is need of time to think about the sustainable way of farming. The organic food grains and agriculture goods are not only helpful in improving health quality and health status but also it protects future generation as well as biodiversity. The environmental balance can be achieved through sustainable farming practices. Thus, environmentally friendly production techniques, transportation, distribution mechanism, and marketing chain has to be properly developed by adopting a long term policy framework. The progress of sustainable agriculture or organic farming is very slow in India. We are able to convert only 41000 hectares of the area which is merely 0.03 percent of the total cultivated area of India. Under this background, the very first aim of the present research paper is to study the present status of sustainable agriculture in India and to study the issues and challenges of sustainable agriculture development in Indian perspective. The findings of the study reveal the fact that the government should provide strong financial assistance to the farmers for large scale organic farming practices and promotes marketing as well as innovative farming strategies in all the states. The study also found that the progress of sustainable agriculture farming is very slow in India compare to other countries. The role of government in widening the sustainable farming is very much significant. Hence, all level assistance in the context of guidance, promotion, and stimulants is needed to farmers in order to boost the organic food grains in the country.*

**Key Words:** *Organic Farming, Sustainable Farming, Challenges, Opportunities*

### **Introduction**

Sustainable development has gotten the creative mind and activity everywhere throughout the world for over 10 years. Sustainable development cannot be achieved without sustainable agriculture development. As indicated by the Food and Agriculture Organization (FAO), sustainable farming practices “is the effective administration of assets for agribusiness to fulfill changing human needs while keeping up or improving the nature of the condition and rationing common assets”. All definitions of sustainable agriculture lay incredible accentuation on keeping up an agribusiness development rate, which can satisfy the need for sustenance of every living thing without depleting the fundamental assets. Natural cultivating is one of the few methodologies found to meet the targets of feasible horticulture. Numerous procedures utilized in natural cultivating like between editing, mulching and mix of yields and domesticated animals are not an outsider to different farming frameworks including the customary horticulture rehearsed in old nations like India. In any case, natural cultivating depends on different laws and affirmation programs, which forbid the utilization of practically all engineered information sources, and strength of the dirt is perceived as the focal subject of the strategy. Unfriendly impacts of present-day agrarian practices on the homestead as well as on the wellbeing of every single living thing and along these lines on nature have been very much archived everywhere throughout the world. Utilization of innovation, especially as far as the utilization of compound manures and pesticides surrounding us has convinced individuals to verbally process. Their negative consequences for the earth are showed through soil disintegration, water deficiencies, salivation, soil tainting, hereditary disintegration, and so forth. Natural cultivating is one of the generally utilized techniques, which is thought of as the best choice to keep away from the evil impacts of compound cultivating. There are a few meanings of natural cultivating and the one given by the US Department of Agriculture (USDA) is considered the most cognizant and stringent. It is characterized as 'a framework that is structured and kept up to deliver agrarian items by the utilization of techniques and substances that keep up the uprightness of natural rural items until they arrive at the buyer. This is practiced by utilizing substances, to satisfy a particular change inside the framework in order to keep up long term. Soil organic movement, guarantee powerful pinnacle the executives, reuse squanders to return supplements to the land, give mindful consideration to cultivate creatures and handle the farming items without the utilization of superfluous engineered added substances or preparing as per the demonstration and the

guidelines in this part. The birthplace of natural cultivating returns, in its ongoing history, to 1940s. During this period, the way breaking writing regarding the matter distributed by J.I. Rodale in the United States, Lady Balfour in England and Sir Albert Howard in India added to the reason for natural cultivating. The cultivating being polished throughout the previous three decades in India has progressively been found non-sustainable. The framework is situated towards high generation absent much worry for nature and the very presence of the man himself.

**Objectives of the Study**

The major objectives of the study are as below.

1. To study the nature and extent of sustainable agriculture development in India.
2. To present the challenges of sustainable agriculture development in India.
3. To review the opportunities in sustainable agriculture development in India.

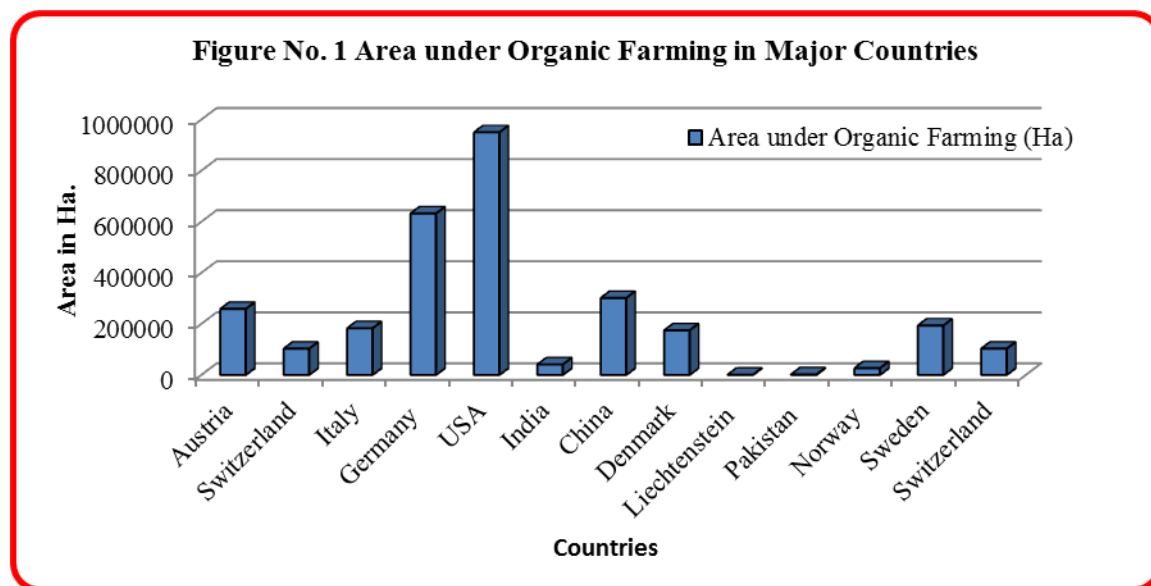
**Nature and Extent of Sustainable Agriculture in India**

The progress of organic agriculture in India is very slow. We are able to convert only 41,000 ha of area so far, which is a mere 0.03 per cent of the cultivated area. These figures ought to be contrasted with 2,58,500 ha (11.30 percent) of Austria, 1,02,999 ha (9.70 percent) of Switzerland, 1,83,000 ha (7.94 percent) of Italy, 6,32,165 ha (3.70 percent) of Germany and 9,50,000 ha (0.23 percent) of USA. The creation of natural ranches came to around 14,000 tons in India during 2002 and 85 percent of it was traded. It is also seen from the table no.1 and figure no.1 that the area under organic crops is around 301295 ha in China which has around total 0.06 percent of the total cultivated area of the China. It is around 6.51 percent observed in Denmark and 9.70 percent in Switzerland . India can possibly turn into a noteworthy natural delivering nation given the global interest for our ranch items, distinctive agro-climatic districts for the development of various yields, the size of the local market or more throughout the entire the convention of condition well disposed cultivating and living.

**Table No. 1 Organic Farming in Major Countries**

Country	Area under Organic Farming (Ha)	Percentage to Total Cultivated land
Austria	2,58,500	11.30
Switzerland	1,02,999	9.70
Italy	1,83,000	7.94
Germany	6,32,165	0.23
USA	9,50,000	3.70
India	41,000	0.03
China	30,1295	0.06
Denmark	17,46,00	6.51
Liechtenstein	690	17.00
Pakistan	2009	0.01
Norway	26,673	2.62
Sweden	19,3,611	6.30
Switzerland	10,2,999	9.70

Source: SOEL Survey 2017 and Alam and Shaha 2017



Specialists have distinguished the territories appropriate for the presentation of natural cultivating. Be that as it may, a suitable strategy system is yet to be set somewhere around the administration. The main advancement made toward this path seems, by all accounts, to be the execution of National Standards for Organic Production (NSOP) in 2000 and the establishing of a National Institute of Organic Farming. A couple of offices with the help e of worldwide bodies have entered the field of investigation and affirmation.

### **Challenges in Implementing Sustainable Agriculture Practice in India**

The challenges of the sustainable agriculture development can be studied under three basic heads namely ecological sustainability, economic sustainability and social sustainability.

**Ecological Sustainability:** The vast majority of customary and traditional farm practices are mostly ecological sustainable. However, the modern farm techniques misuse natural resources, decreasing soil fruitfulness causing soil disintegration and adding to worldwide climatic change. Be that as it may, sustainable farming has some real points of interest over conventional practices. The challenge is how to convert modern chemical, fertilized based farming practices in to compost, manure based farming practices at large extent which is more environmental friendly.

**Soil Fertility:** Persistent fall in soil fruitfulness is one of the serious issues in numerous pieces of India. Economical agribusiness improves ripeness and soil structure. Thus, how to improve and maintain soil fertility in long run is one of the major challenges to the policy makers in India.

**Irrigation:** No doubt that the modern irrigation systems are more ecological sustainable than the traditional irrigation system. But, it requires significant financial investment which cannot be bear by the small and marginal farmers in India who consists almost 80 percent of the total farmers. The individual irrigation system is not affordable to them. It is again one of the challenge that how to improve the accessibility of irrigation in India.

**Biodiversity:** Sustainable agriculture practices include mixed cropping pattern, in this way expanding the decent variety of yields delivered and raising the assorted variety of creepy crawlies and different creatures and plants in and around the fields. The chemical, pesticides and insecticides are hampers badly to the biodiversity. Then, the major challenge is how to reduces the uses of these chemical fertilizers for the protection and conservation of biodiversity.

**Health and Pollution:** Synthetic concoctions, pesticides, and manures seriously influence the nearby environment just as the populace. Aimless utilization of pesticides, ill-advised capacity and so forth may prompt medical issues. Sustainable agriculture decreases the utilization of perilous compound and control bugs. Land use Pattern: Over-misuse of land causes disintegration, avalanches, and flooding stops up water system channels and diminishes the arability of the land. Sustainable agriculture stays away from these issues by improving profitability, productivity and soil fertility etc.

**Climate:** Traditional farming as well as modern farm practices adds to the generation of ozone-depleting substances in different ways like diminishing the measure of carbon put away in the dirt and in vegetation, through the creation of Methane in inundated field and generation of fake manures and so forth. By receiving the maintainable farming framework, one can without much of a stretch beat this issue.

**Economic Sustainability:** For agriculture to be sustainable, it ought to be financially reasonable over the long run. Traditional farming includes more financial hazard than supportable agribusiness in the long haul. Some of the time governments are slanted to view send out situated creation frameworks as more significant than supply household requests. This isn't right. Concentrating on fares alone includes shrouded costs: in the vehicle, in guaranteeing nearby nourishment security, and so forth. Approaches should treat local interest and specifically sustenance security as similarly critical to the obvious exchange balance.

**Social Sustainability:** Social sustainability in farming practices is identified with the thoughts of social acceptability and equity. Improvement can't be feasible except if it diminishes destitution. The administration must discover approaches to empower the country poor to profit by farming improvement. Social bad form is the place some area of the general public is disregarded from improvement openings. Be that as it may, having the vigorous arrangement of social manageability can cross over any barrier among "haves" and "have-nots". Numerous new innovations neglect to wind up relevant in the horticulture area because of the absence of adequacy by the neighborhood society. Feasible farming practices are helpful in light of the fact that it depends on neighborhood social traditions, customs, and so on. On account of being well-known, the neighborhood individuals are bound to acknowledge and receive them. Moreover, sustainable agriculture practices depend on customary skill and nearby development. Nearby individuals have information about their condition yields and livestock.

### **Opportunities in the Progress of Sustainable Farming in India**

#### **High Demand :**

In future as well as at present there is significant demand for the organic food grains in India and aboard. The demand for organic product will be increased further, therefore, it is one of the opportunity to the Indian farmers to look at the sustainable farm practices.



### **Market Chain**

The specialized organic agro markets are developing in the metropolitan cities as well as major cities of India and world. The market chain has been developing remarkably in all over the world. The online agro business is also spreading in India.

### **Economical**

Sustainable agriculture is more economical than that of chemical fertilize based farm practices except the initial few years. The market rate for organic goods is significantly more than that of inorganic produce. The cost of production of organic produce is significantly less than that of inorganic produce. Hence, it is also one of the opportunity to the Indian farmers to receive benefits of this new organic era.

### **Healthily Food**

The health conditions and status can be maintained and improved by consuming organic food. Hence, it is also opportunity to the Indian farmers.

### **Concluding Remark**

Agriculture sector is a significant supporter of the Indian economy around which financial benefits and hardships rotate and any adjustment in its structure is probably going to correspondingly affect the current example of social value. Economical rural creation relies on the proficient utilization of soil, water, animals, plant hereditary qualities, backwoods, atmosphere, precipitation, and topology. Indian agriculture faces asset imperatives, infrastructural requirements, institutional requirements, innovative requirements and approach instigated impediments. Feasible improvement is the administration and protection of the characteristic asset base and the direction of mechanical and institutional change in such a way as to guarantee the fulfillment and proceeded with fulfillment of human requirements for the present and who and what is to come. Such sustainable development (in the agriculture, ranger service and fisheries segment) moderates land, water, plant and creature hereditary assets, is naturally non-corrupting, in fact proper, economically and socially sustainable. Hence, to accomplish manageable horticulture advancement the ideal utilization of regular assets, HR, capital assets and specialized assets are required. In India, the agriculture production is vigorously subject to rain, which is the principle purpose behind the declining development pace of agribusiness division. These vulnerabilities hit the little ranchers and workers most noticeably terrible, which are generally driving a hand to mouth life. Along these lines, something must be done to help ranchers and adequate measure of water and power must be provided to them as they feel unreliable and keep on dyeing of dry spell, flood, and fire. India is the second biggest nation of the world regarding population; it ought to acknowledge it is an incredible asset for the nation. India has countless inactive individuals. There is a need to discover approaches to investigate their ability and cause the numbers to contribute towards the development. Particularly in agriculture, aloof joblessness can be taken note. The feasible advancement in India can likewise be accomplished by full use of HR. An enormous piece of poor populace of the nation is occupied with agribusiness, except if we increment their expectation for everyday comforts, generally development of this nation is unimaginable. On the off chance that we continue disregarding poor people, this divergence will continue expanding between classes. Obligation traps in nation are compelling ranchers to submit suicides. Individuals are moving towards city with the desire for better occupation yet it is likewise expanding the ghetto populace in urban areas. Along these lines, rustic populace must be given work in their regions and an opportunity to succeed. India has been conveying the tag of “developing” nation for very long now; for making the move towards “developed” nations, we should shed this enormous reliance on farming area.

### **References**

1. Howard & Sir Albert, (1940), *An Agricultural Testament, Research Foundation for Science, Technology and Ecology, New Delhi.*
2. Bemwad Geier, (1999), *International Federation of Organic Agriculture Movements, in Sustainable Agriculture Solutions: The Action report of the Sustainable Agriculture Initiative, Novello Press, London.*
3. Spare and Sanghavi (1991), *Fertilizer Induced Pollution of Soil Environment and Ground Water, in Prasad, D and Gaur, HN (eds.), Soil Environment and Pesticides, Venus Publishing House, New Delhi, pp. 381-393.*
4. Kaushik, K. K, (1997), *Sustainable Agriculture : Issues and Policy Implications, Productivity, 37(4), Jan-Mar.*
5. Singh, RF, Singh, KN and Pankaj, (2001), *Organic Farming for Sustainable Agriculture, Indian Farming, June, pp. 12-14.*
6. Alam, Anwar and Wani, Shafiq, A. (2017), *Status of Organic Agriculture Worldwide-An Overview, in Proceedings of National Seminar on Organic Products and Their Future Prospects, Sher-e-Kashmir University of Agricultural Sciences and Technology, Srinagar, pp 3-12.*
7. SOEL Survey 2017 and Alam and Shaha 2017

## Comparative Thermal Analysis Studies on Gel Grown Crystals of Li, Cu and Mixed Li-Cu tartrate

**Dadaji V. Sonawane**

Assistant professor, Dep. of physics, J.E.S. Arts, Science and Comm. College Nandurbar.(M.S.)  
 KBC North Maharashtra University, Jalgaon, (Maharashtra)

### Abstract -

Natural as well as Gel grown crystals plays an important role in modern technology development. Gel method for the growth of crystals which are insoluble or sparingly soluble in water is the best alternative for the growth of many crystals. Crystals grown by gel method are relatively perfect compared to the other methods. In the present investigation crystals of Li- tartrate, Cu-tartrate and Mixed crystals of Li-Cu tartrate have been grown by single diffusion gel technique. The Thermal Analysis diffraction studies of these crystals are carried out in this work. The Thermal Analysis diffraction studies on these crystals reveals that these crystals belongs to orthorhombic crystal structure system. The lattice parameters of these crystals are calculated and tabulated in this article.

Keywords – Gel method, Thermal Analysis, Lithium, Copper and Li-Cu tartrate.

### Introduction

It is well established that there are extensive study on tartrate based crystal grown by gel technique, however, we have found that there are few reports on the lithium tartrate based crystal because of its chemical properties. Therefore, in the present study, we have investigated the growth mechanism of lithium tartrate, copper tartrate and mixed lithium-copper tartrate crystals. All the three types of crystals were grown by gel method by using single diffusion techniques, the crystal growth procedures and various different parameters affecting the growth of the crystals are discussed. The present paper contains the comparative study of all crystals under investigation regarding their growth and Thermal Analysis diffraction study. All results obtained are put at a glance in present paper.

### Growth of crystals

The crystals of lithium tartrate, copper tartrate, and lithium-copper tartrate were grown by gel method by using single diffusion technique. Table 1 gives details regarding method and chemicals used, different habits of crystals obtained and their transparency etc. In the present work, we obtained semitransparent, shiny and star shaped lithium tartrate crystals. The copper tartrate crystals were of diamond shaped with bluish color, while the mixed lithium-copper tartrate crystals were whitish blue in color and having a cubic shape. The adopted single diffusion gel technique proved to be beneficial because of it only we successfully obtained well-shaped and good quality crystals. All the well-defined good quality crystals were found below 2 to 3 cm in the gel interface. The optimum growth conditions for gel grown crystals established by varying the different parameters like pH of gel, gel setting time, gel density, room temperature etc. are reported in the Table 1 for the all these three crystals. The suitable value of gel density is found to be 1.04 gm/cm<sup>3</sup> and the pH value is 4 to 4.2.

Table 1. Summary of lithium, copper and lithium-copper tartrate crystals grown by gel technique.

Sr.No.	Type	Method	Chemical Used	Solvent	Quality	Size (mm)
1	Lithium Tartrate	Gel method using single diffusion techniques	Na <sub>2</sub> SiO <sub>3</sub> , C <sub>4</sub> H <sub>6</sub> O <sub>6</sub> 2LiCl	Methanol or Ethanol	Opaque, Transparent, Good	3 x 1 x 1
2	Copper tartrate	Gel method using single diffusion techniques	Na <sub>2</sub> SiO <sub>3</sub> , C <sub>4</sub> H <sub>6</sub> O <sub>6</sub> CuCl <sub>2</sub>	Distilled water	Opaque, bluish color	2.5 x 2 x 1
3	Lithium-copper Tartrate	Gel method using single diffusion techniques	Na <sub>2</sub> SiO <sub>3</sub> , C <sub>4</sub> H <sub>6</sub> O <sub>6</sub> Cucl + 2LiCl	Methanol or Ethanol	Opaque, good	2 x 2 x 1.5

**Table 2 Optimum growth conditions for gel grown tartrate crystals**

Sr.No.	Parameter	Lithium tartrate	Copper tartrate	Copper – lithium tartrate
1	Concentration of tartaric acid	1M, 7ml	1 M, 7ml	1M, 5ml
2	pH of the mixture	4 to 4.2	4.2	3.8 to 4.2
3	Temperature	25 to 30°C	25 to 30°C	20 to 30°C
4	Gel setting time	120 hours	96 hours	96 hours
5	Density of sodium metasilicate solution	1.04 gm/cm <sup>3</sup>	1.04 gm/cm <sup>3</sup>	1.04 gm/cm <sup>3</sup>
6	Period of growth	4 weeks	3-4 weeks	4 weeks
7	solvent	Ethanol or Methanol	Water	Ethanol or Methanol

### III. Thermal Analysis (TGA/DTA)

Thermal analysis is the measurement of how specific physical or chemical properties of a substance changes with temperature. It measures the change in weight of the substance with respect to applied temperature. In present work, thermogravimetric analysis of lithium tartrate, copper tartrate and mixed lithium-copper tartrate crystals was done. It was noticed that the pure lithium tartrate crystal was more stable at high temperature than the copper tartrate and mixed lithium-copper tartrate crystals. We observed 60 % weight loss in the temperature range of 200-212 °C for copper tartrate crystals, whereas for lithium tartrate crystal, weight loss is only about 28% in the same range of temperature. Similarly, for mixed lithium-copper crystals the total loss of weight was around 68 % in the temperature range of 0-310 °C. The details of weight loss with respect to temperature for all three crystals is summarized in Table 2.

#### 3.1 Kinetic data of TGA analysis

**Table 3 Kinetic data of TGA analysis for lithium tartrate, copper tartrate and lithium-copper tartrate crystals.**

Compound	Steps	Temp. range °C	Observed Weight loss %	Calculated weight loss %	Loss of Molecule
<b>Lithium tartrate</b>	I	25-95	18	18.18	2H <sub>2</sub> O
	II	95-260	10	11.90	2H <sub>2</sub> O
	III	260-750	15	15.50	2CO
	IV	750-950	30	32.10	2CO <sub>2</sub>
<b>Copper tartrate</b>	I	25-210	2.15	2.50	5H <sub>2</sub> O
	II	210-240	65.80	66.15	2H <sub>2</sub> O
<b>Mixed Lithium Copper Tartrate</b>	I	30-100	18	19.8	3H <sub>2</sub> O
	II	100-210	1.5	2.0	CO
	III	210-320	49.5	50.42	CO <sub>2</sub> , 2H <sub>2</sub> O

### 3.2 Kinetic data of DTA analysis

**Table no.4 Kinetic data of DTA analysis**

Compound	Sr.No. (Peak)	Peak Temp in °C	Nature of reaction
<b>Lithium Tartrate</b>	1	74.66	Endothermic
	2	148.15	Endothermic
	3	233.57	Endothermic
	4	130	Exothermic
	5	340	Exothermic
<b>Copper Tartrate</b>	1	210-240	Exothermic
	2	240-260	Endothermic
<b>Lithium-Copper Tartrate</b>	1	307.97	Endothermic
	2	73.77	Endothermic

#### Conclusion –

The crystals of lithium tartrate, copper tartrate, and mixed lithium-copper tartrate crystallized in hydrated form in silica gel. The crystal structures of all three types tartrate crystals was found to be orthorhombic. The content of number of water molecules for copper tartrate crystals were found to be four while for lithium tartrate crystal the water molecule content weretwo. Thermogravimetry analysis of these crystals shows decomposition pattern from 30 to 1000°C.

#### References

1. Krishnakumar V. and Dheivanalar S. *Journal Raman Spectroscopy* 40 (2009) 627-631.
2. Ahmad Nazir and Kotru P.N. “*J. Crystal Growth*” 24 (2014).
3. Sawant.D.K.Ph.D.Thesis North Maharashtra University, Jalgaon (2012).
4. Sonawane S.S. Ph.D. Thesis. J.J.T. University Rajasthan (2017).
5. Henisch H.K “*Crystal growth in Gel*”(1970)
6. SawantD.K.Patil H.M. Bhavsar,D.S., Patil J.H. and Girase K.D. “*Journal of scholars Research Library*”3 (2011) 404-413.
7. Patil H.M. Sawant D.K, Bhavsar. D.S. PatilJ.H.andGirase K.D. “*Journal of Therm. Anal.Calorim,*” 107 (2012) 1031.
8. Henisch H.K. “*Crystals in Gel and Liesegang Rings*” (1986)
9. Nandre S.J. Ph.D. Thesis North Maharashtra University Jalgaon (2013).
10. Sawant D.K. Patil. H.M. Bhavsar.D.S. Patil.J.H.andGirase K.D. “*Scholars Research Library Archives of Physics Research*”,2 (2011) 67-73.
11. <http://www.rsic.iitb.ac.in/icp-aes.html>

## **Recent Trends, Methods and Problems in Geographical Education**

**Dr. Jadhav Hanumant Lahu**

*Santosh Bhimrao Patil Arts, Commerce and Science College Mandrup*

### **Abstract**

*The subject of geography included rich, diversity and comprehensive themes that give us an understanding of our changing environment and interconnected world. It includes the study of the physical environment and resources; cultures, economies and societies; people and places; and global development and various participation. As a subject of geography is particularly valuable because it provided information for exploring contemporary issues from a different perspective. This geographical information affects us all at work and in our daily lives and helps us to make information decisions that safe our future. All these facts result in a wide discussion on many topical issues in contemporary geographical activities. Subjects of research are the new geography and economics curriculum as well as construction of modern learning process. The present paper briefly introduces some of the current trends and key issues of geographical environment. As central notions we consider and analyze the training educational goals, geography curriculum, target groups and environment of geography training and training methods as well as the information sources used in geography education. We added here that all the above mentioned things are reflected in planning, analysis and assessment of education and thus in its quality and effectiveness.*

**Keywords:** *Geography Education, Teacher Training, Problems of Geographical Education*

### **Introduction**

These present days the geography is considered as a part of the composite science of Human Society. Its purpose is to study the structure and change the behavior of human beings in the society. Therefore, it is one of the main subject of social sciences and also in science. The main question for the goals of geography training is associated currently with a prior coordination of key qualifications which are required from modern society, with environmental education and intercultural learning, global learning and ensuring value orientation. Moreover, main purpose and contribution of geographic education is development of spatial key qualification.

**Objective:** - To study the recent trends, Methods and Problems in geographical education.

### **Data Collection and Methodology**

A survey model was used in the study. The data were collected through semi-structured interviews which is one of the qualitative research techniques. The interview form consisted of two parts. The first part of data collection is to collect the personal information and the second part covered by the help of interview questions. The interview questions were prepared by referring the opinions of the experts in the field. The interviews were held in the summer of 2018. A pilot interview was carried out by one of the instructors. Following the pilot study, necessary changes were done in the form and questions and finally, interviews were carried out. Each interview took 15 minutes on average.

### **Methods of geographical education:**

Successful geographical teachers always keep in view that teaching must be dynamic, challenging and in accordance with the learner's comprehension. Like any other scholar will be required to carry on his self-education throughout his life because a well-trained Methodologist will confront new developments in his science, judge their merits, relate them to past trends and make a reasoned choice as to what he wants to integrate into his own thinking.' It may also be printed out that a meaningful solution of the problem depends on the methods which are available.

### **Observation:**

The psychologist are came to know about the fact that children possess instinct of curiosity and curious to see the things for themselves and particularly those things which exist around them. The geographers are exploited that this fact to their own advantage. It is certainly more valuable to him than the same fact or facts learnt from the teacher or a book. The principles aspects of observation method are i. To observe ii. To record iii. To interpret. The technique of collection of geographical information by direct observation method is basis on the subjects of the Globe, Charts and Models. Observation method for teaching geography may be used inside the class room as well as outside the class room.

a) **Field Trips:** Field trips help in exploring the environment .Children may be taken out into the larger landscape to observe geographical objects, prepare brief notes, and collect specimens and soon.

b) **Excursions:** Excursions educate as well as entertain. Children learn by interacting with the environment. Excursions to hill stations, to geographical monuments help children to understand certain phenomena.

### **3.2 Laboratory Method:**

The laboratory method of instruction, used so successfully in the natural sciences, has been adopted for application to geography with equal success. The procedure of the laboratory method is similar to that of problem solving approach or a completion of a project or preparation of charts, models, and maps or conducting of experiment to arrive at a general principle. Practical work in geography constitutes the laboratory work. The data collected in the field or a farm or from the statistical reports are transformed into maps and diagrams in the laboratory. After the field observation, the need of laboratory is felt to give concrete shape to the ideas.

### **3.3 Project work:**

The project method is so old and it is based on the principle of learning by doing encourages maximum amount of purposefully activity on the part of the children. Adopting this method, the heart, head and hand are to be functional and main. This means both the physically and also the mentally powers of the child are to be exercised or utilized. Providing a situation, Choosing a Project, Planning, Executing, Judging or evaluating these are the major steps in project work.

### **3.4 Discussion:**

The discussion method is so old to learn geography and it is true that any group of learning geographical education the instructor is typically relies on the students to provide ideas and his experiences, opinions and information about the geographical education. An instructor may use this during classroom periods and teaching time and post flight briefings, after the students have gained some knowledge and experience from instructor. Finally the discussion method is almost the opposite of the lecture method in learning geography education.

#### **1. Problems**

In this present study the existing problems of geography education and possible suggestions to these problems were determined by taking the views of instructors who carry out geography education in various universities schools and colleges. The quality of a teacher is highly important in education; therefore, the quality of teachers is dependent on the people who educate them. Another major problem is gathered by the interviews is about the programs related to geography courses. Studies have put forward that there are various shortcomings and scientific mistakes in geography education programs ranging from primary education to higher education. First, it is seen that geography teaching programs prepared by the Ministry of National Education is not consistent with university geography teaching programs. Secondly the subject matters of geography teaching programs have been taken into consideration according to the interest areas of instructors instead of the real needs of the programs. Additionally, studies in the literature suggest that the programs have objectives and contents that do not serve for educating people that our era requires, there are not applied courses and the course contents are dense and the allocated time is insufficient. After all the views of instructors problems and solution suggestions related to geography education have been determined in this study. Various problems are concerning teaching- and learning process and environment, textbooks, administrators, and other subjects have also been revealed. So the geographical education is more qualitative and job orientated. This education is mostly needed in present era. So there are so many problems in geographical education.

These all are the major problems in geographical education.

#### **Conclusions**

Following are the findings of conclusion of present study,

The education of geography should provide knowledge, skills and attitudes that enable students to understand the human environment, society processes and interaction in the world. The Geographical education also provide knowledge and skills through which students act as responsible citizens in terms of complex key issues that are of great ecological, social, cultural, economic and political importance. The teachers of Geography are encouraged to use various innovative tools in training process and thus to ensure a higher quality of geography education. These goals can be obtained by continuous research, constant efforts to improve the existing situation, finding new ways and forms of education as well as continuous monitoring and evaluation of school and college geography. In present days we are witnessing a parallel change in teaching and learning geography science in secondary and higher secondary schools, colleges and universities. Geography curriculum in secondary and higher education must conform to the expectations of business and science and that's why students need to acquire knowledge and skills that make them competitive exams and so many things. After all and finally all the highlighted above things are the main reason to deepen our future research on issues related to geography education.

#### **References**

1. Basher S.A.S. Methods of Teaching Geography, Discovery Publishing Pvt. Ltd,
2. Bednorz S., Bur kill, S., Lid stone, J.,& Rowling, E. (2000). T e international network for learning and teaching geography: developing links with school education. Journal of Geography in Higher Education.
3. Campbell, J. B. (2007). Glove's as a resource for teaching geographic content and concepts. Journal of Geography.
4. <https://www.researchgate.net/publication>
5. <http://regional-development>.
6. <https://www.scribd.com/document>
7. <https://www.preservearticles.com>

## **Education is the Key of Sustainable Development for Future**

**Mr. Suresh Ragho Pagar**

*Assistant Professor, Head, Department of Geography, M. G. Vidyamandir's,  
Arts, Science, Commerce College, Manmad, Tal.- Nandgaon Dist- Nashik*

### **Abstract: -**

*'Education is the milk of Tigress, whose Drink it do not stay stop roaring' Why, because educated person aware about right and wrong things. It is the main pillar of our society. The future of every Society depends on Education System. Educated person knows his Rights but some person forgets their Duties. Today, in our society various serious problems rising, as like Environmental, Social, Economical etc. It is failure of our education system. Why, because we are unknown or take a very lightly. The future cannot predict it but we need to ready for it. Population is the main problem of our society. The current population of India is 1.38 billion as of 17 March, 2021. It is very huge population. We are tried to fulfill need of our citizen. It is impact that excessive use of recourses. If we are not aware about sustainable use of resources so our future generations cannot better survival. Hence, we are needed to reconstruct educational system for Sustainable Development. The concept of Sustainable Development was adopted by Government in the 'The Earth Summit in 1992', held by United Nation. We are achieving the Goals of sustainable development through the good quality of education. In 2002, United Nations was emphasized on Education for Sustainable Education, at world summit in Johannesburg. In this research paper, we are trying to focus on Sustainable Development through Good Quality of Education and Education System.*

**Key Words: -** Education, Sustainable Development, Conservation, Research, Evaluation of Education System.

### **Introduction: -**

Due to the Globalization and development of Digitalization world like a house, means connect to each other. It is impact on society as a result as a like to mix language, Tradition, Cultural, Economic growth and to develop way and speed of Communication. Today life is so fast and everyone try to development in every sector for better survive without any planning. Hence, create Environment, Social, Cultural and Economical problems. These problems resolved through sustainably. Good quality education is creating new approaches among the people towards the Sustainable Education. Sustainable Education provides the new and alternative approach for it. Education is very simple process of learning, which is start from birth and end up to death. It is continuous process for gain of knowledge. Every person learns every movement in their surrounded environment. It may be positive or negative. The word education origin from Latin word which is 'Educare' which means, 'to bring up or to rise' in short education is to bring up or to rise the individual in the right way. **According to the Aristotle, "Education is the process of training man to fulfill his aim by exercising all the faculties to the fullest extent as a member of society"** Formal Education, Non Formal Education and Informal Education are the type of education. Formal Education is usually at University, Colleges, and School etc. It is systematic teaching learning process. In this education system evaluation process is compulsory. Non formal Education usually provided to out of school. In this education is no limit for age. It is open for everyone. For example professional, vocational education and Adult Education are Non formal education. Informal Education takes place outside schools and colleges. Here child to learn from family, friends, society, social media, Internet, Print Media, Group and environment. Today our Education Department Change education policy for create well citizen for Nation.

### **Objectives: -**

The research work is concerned with prime objective of identifying the problems in Education System in India. The study undertaken confines to the following objectives

To study the importance of Education for Sustainable Development

1. To study the balance of our Environment, Economic and Social need.
2. To aware among the Society the allowing prosperity for now and future Generation.

**Sustainable means to complete our own needs without compromising the ability of future generation to meet their own needs.** In this needs include all Natural, Social, and Economical Resources. Main aim of Education for Sustainable Development is to develop Advance Knowledge, Skills, Attitude, Aptitude and Values among the Students, Teachers, Family, and Society with motivation to take right decision and action for Sustainability. "We hold the future in our hands. Together, we must ensure that our grandchildren will not have to ask why we failed to do the right thing, and let them suffer the consequences." UN Secretary-General Ban Ki-moon, 2007<sup>1</sup>

"Let us proceed together, building a world that is more equal and free, more sustainable and respectful of nature, and more inclusive and supportive. Within the UN system, Education for Sustainable Development

has become a central concept representing a paradigm shift in how we respond to themes such as green jobs, gender equality, climate change, water management and resource governance in joined up ways. Education for Sustainable Development does not only address Sustainable Development Goal 4, “Quality Education”, but gives us the key tools to achieve the overall 2030 Agenda.” María Fernanda Espinosa Garcés President of the 73th UN General Assembly Former Councillor of the World Future Council<sup>2</sup> Above both are Scholar focuses on Education for Sustainable Development.

**Methodology: -**

This research paper mainly depends on secondary data which are obtain from Journals, research papers, newspapers, official website and help by internet.

**Importance of Education for Sustainable Development:**

According to Agenda 21 by UNESCO in 1992, Education for Sustainable Development (ESD) is a primary Goal. UNESCO is taken a leading role of Sustainable Development help by UNICEF, UNFPA, UNDP, UN and UNHCR. May 19-22, 2015, organized the World Education Forum 2015 in Incheon, Republic of Korea by UNESCO together with UNICEF, the World Bank, UNFPA, UNDP, UN Women and UNHCR with 160 countries are participate and Declaration for Education 2030.<sup>3</sup>

All education system includes sustainable development Education system depends on Educational policy and need of goals of our Citizens. Our Education Department decides Vision and Mission of Education. This all vision and Mission reflect curriculum and syllabus. Education Board, UGC and University plays vital role for Sustainable Development through Education. No doubt our Education System aware about Sustainable use of resources. But population of India is very huge. Population is the main problem of our society. The current population of India is 1.38 billion as of 17 March, 2021. It is very huge population. We are tried to fulfill need of our citizen. It is impact that excessive use of resources. Hence, today create Environmental, Social, Cultural, and Economical problem due to the miss management by people. If we are not aware about sustainable use of resources so our future generations cannot better survival. Hence, we are needed to reconstruct educational system for Sustainable Development.

Education policy is vital role for Sustainable Development. If poor and wrong decisions in educational policy its impact on lose of job opportunity, lead to irreversible damage, and nation loss of resources and create environmental, social and economical problems.<sup>4</sup> Our prime and main target is ensuring Childs give totally free primary education with quality. But when we are seeing present situation of various challenges in society as like Environmental challenge, Social Challenge and Economical challenge resolved after sustainable approach in Education System with strong implement.

The concept of Sustainable Development was adopted by Government in the ‘The Earth Summit in 1992’, held by United Nation. We are achieving the Goals of sustainable development through the good quality of education. In 2002, United Nations was emphasized on Education for Sustainable Education, at world summit in Johannesburg. Decades 2005 to 2014 declared ‘Education for Sustainable Development’ by United Nations General Assembly. Focus on we are survival better.

According to UNESCO is “Education for Sustainable Development is far more than teaching knowledge and principles related to sustainability. ESD, in its broadest sense, is education for social transformation with the goal of creating more sustainable societies. ESD touches every aspect of education including planning, policy development, programme implementation, finance, curricula, teaching, learning, assessment, administration. ESD aims to provide a coherent interaction between education, public awareness, and training with a view to creating a more sustainable future (UNESCO, 2012b)”<sup>5</sup>.

**Conclusion: -**

Due to the learners change attitudes, enhance knowledge and up gradation of skills, Ability to solve problems. Education for Sustainable Development is very easy and helpful process for society. In this Education System we are rethinking about learning teaching process. In short **‘we gain new answer with new approach of old question’**. It’s for that we are give new ICT knowledge, Practical / Project Base Education, updated and high Quality of Information, Reorienting education towards the aim of sustainable education for learners.

According to United Nation ‘Sustainable Development Goals: Agenda 2030’ decided 17 goals. Among them 4<sup>th</sup> goal is Quality Education for Education for Sustainable Development. We are create green job opportunity, gender equality, Education for all, pollution control, Control carbon, Skill Education, Value Education, Conservation of Resources, Sustainable use of Resources for future.

**References-**

1. UNESCO, *‘Education for Sustainable Development, Published in 2012 place de Fontenoy, 75352 Paris 07 SP, France.*



2. *Alistair Whitby, 'Advancing Education For Sustainable Development - Key Success Factors for Policy and Practice' Published: January 2019.*
3. *Incheon Declaration and SDG4 – Education 2030 Framework for Action.*
4. *'Planning and financing sustainable education systems in Sub-Saharan Africa' - Education Research Paper No. 07, 1993, 32 p.*
5. *UNESCO, Shaping the Education of Tomorrow; 2012 Report on the UN Decade of Education for Sustainable Development, Abridged; UNESCO: Paris, France, 2012)*

## **Service Industry - Opportunities Challenges and Recent Initiatives in India**

**Dr. G. M. Hugar**

*Assistant Professor, Department of Economics, C S I College of Commerce, Dharwad.*

**Abstract:**

*Service sector constitutes more than 70 percent of the GDP in many developed economies. services is the fastest growing sector in India, contributing significantly to GDP, employment, trade and investment .The existence of a strong service sector is one of the pre-conditions of economic progress of any country India has made substantial progress on this front since the attainment of independence and is credited with having the second fastest growing service sector in the world. Several factors have contributed to the growth of this sector in India. These include growing affluence, improving status of women, growth of IT sector, development of markets, health care consciousness, opening up of the economy etc India emerged as one of the fastest growing economies of the world during the 1990s. The remarkable performance of India's economy is attributable in significant part to the spectacular dynamism shown by the services sector.*

**Keywords:** *Service industry, Manufacturing, Opportunities, Challenges, Initiatives*

### **Service Industry-Opportunities Challenges and Recent Initiatives in India**

**Introduction:**

Due to globalization the world of services has changed in dramatic ways, both in developed and developing countries. India, being among the fastest growing economies has shown great dynamism in its services industry. So opportunities for the services industry in India are fabulous. Service industry is the revenue earner in Indian economy. They work to ensure good quality service and satisfy foreign clients from all over the world who come back with newer projects. So, more work opportunities and more money. More money means more growth of company and if such companies grow they result in global growth for Indian economy. The service industry employs about 30 % of Indian workforce, yet provides about half of its output. It is one of the 3 main sectors. The service sector is a supporting arm for the other 2 core sectors to make them flourish in their areas. Services industry alone contributes approximately 64%share in GDP, growing by 10% annually, further contributing to employment, Foreign Direct Investment, exports and so on. In India, while growth of the services sector has been unusually rapid, it is yet to explore its full potential. LPG has opened the door for the growth of service sector but it entered with so many challenges.

**Objectives of Paper:**

1. Understanding the operational issues, challenges and opportunities of service industry in India.
2. Understanding the effects of globalization on the services sector in context of good governance and humanity.
3. Understanding the Recent Policy Initiatives in Services industry

**Method of Data Collection:**

The study is undertaken in secondary data. Secondary data is collected from reports and Economic Survey.

**Importance:**

The high growth rate has been achieved by the Indian economy over the last decade. Services have contributed around 68.6% of the overall average growth in the GDP in the period from 2002-2003 to 2006-2007. Unlike the manufacturing and agriculture sectors, Services growth has been broad-based and has shown a positive incremental growth since 2000-01. Trade, hotels, transport and communications services had clocked a double-digit growth during the aforementioned four year period.

The Economic Survey 2010 recognized the importance of the sector by stating "For more than a decade now India's services industry has been the powerhouse of the nation's economic growth. This is also a sector that now produces more than half the GDP of the nation." In the period 2000-12, according to the Economic Survey of India, services contributed 65% of India's GDP. Thus the Indian economy over the years has become increasingly dependent on the services sector for its growth performance.

#### **Share of Service industry in the Indian GDP**

Years	Contribution of Services Sector (In %)
1960-61	28.65
1970-71	31.97
1980-81	36.59
1990-91	40.59
1999-2000	47.88
2011-12	65

*Source: 2000-2001.and 2011-12. Economic Survey*

### **Challenges and Opportunities of Indian Service industry:**

The Indian service industry has emerged as one of the largest and fastest-growing sectors on the global landscape and hence has made substantial contribution towards global output and employment. Growing at faster pace as compared to agriculture and manufacturing sectors, Indian service segment comprises of wide range of activities, such as trading, transportation and communication, financial, real estate and business services, as well as community, social and personal services.

New door that has been opened by LPG for the growth of service sector in India but it has entered with so many challenges. The Indian rural market has great potential. All the market leaders consider the segments and real markets for their products and services. It proves that large opportunities in service industry are available. Innovation of new technology, Development of tourism industries, increasing the living standard has extended the scope of service industry. Development of professional courses, Advertising, Entertainment, Marketing, IT industry, development of stock market and financial services all field are giving opportunity to human resource to develop and to increase the living standard.

E-commerce and internet are one of the fastest growing service sub-segments in the Indian economy. Finding the Indian e-commerce space lucrative enough, Amazon, the world's largest online retail company, has entered the market with a promise of ensuring low prices for users and a better platform for sellers. India is the tenth market where Amazon has come up with a country-specific retail Web site. In the Indian economy no doubt the contribution of service industry is tremendous, but still it is not functioning smoothly. Emerging amid liberalization and increasing integration with the global economy, India's service industry offers tremendous potential and daunting challenges.

Lack of infrastructure, complicated policies, complex cultural and inadequate exposure to services standards are challenges that remain even after 67 years of Independence. Yet, we know that an opportunity lies in challenges and adversities. Deficit Budget Inflation, increasing cost of petrol and Depreciation of Indian currency are the major challenges for service sector, which is increasing cost of service sector. The services industry calls for a highly trained and mature workforce. Unlike traditional businesses, the degree and quality of training transcends mere technical or product knowledge to include communications, behavior and interaction. This is because in a service transaction, even seemingly minor issues like tone of voice, body language or personal grooming assume great importance.

### **Recent Initiatives in Services Sector:**

Various initiatives have been taken by the Government to help the services industry. Some recent measures are:

1. Increase in Service Export from India Scheme incentives by 2% for notified services such as Business, Legal, Accounting, Architectural, Engineering, Educational, Hospital, Hotels and Restaurants
2. Increasing the validity period of the Duty Credit Scrips from 18 months to 24 months to enhance their utility in the GST framework;
3. Reducing the GST rate for transfer/sale of scrip's to zero from the earlier rate of 12%
4. Creating a new Logistics Division in the Department of Commerce to develop and coordinate implementation of an Action Plan for the integrated development of the logistics sector.

### **Under Digital India programme (in the IT sector):**

1. E-Visas, Swachhta Action Plan, launch of Global Media campaign, launch of the 'The Heritage Trail' and 'Adopt a Heritage Scheme' to promote world Heritage sites in India, and initiatives by the National Medical and wellness Tourism Board to promote medical Tourism
2. Reduction of GST on bunker fuel, easing procedural compliance for ship registration, measures to promote cruise shipping and preparing a vision for coastal shipping to promote shipping
3. Introducing Buyer's credit under the National Export Insurance Account, concessional financing scheme, Export Development fund, and Project Development fund for CLMV countries to help project exports.

### **Suggestions for strengthening the service industry:**

Only the best way to achieve world-class service standards is to honor human capital/Human Resource. Still there are suggestions to improve the position of service industry in India. Education and training are the first building blocks. Training is an expensive and recurring cost but is an essential catalyst for growth. Hospitality and tourism industries are examples of how training and education can not only transform raw talent into professional service provider but also how training is linked to creating competitive advantage by enhancing service standards. In any service industry customer service is one of the most important parts of a company's overall strategy for conducting business. Without customers you really don't have a business. In any organization the commitment to customer service begins at the top. The company's leaders must buy into the fact that they not only need to meet their customer's

expectations, but actually strive to exceed them. Feedback collecting from customers is an excellent way to track and measure the level of service provided by any industry. If one can consistently make this part of how to conduct business, the customer's loyalty will continue to grow. Meeting and exceeding the customer's expectations in the products and services provided today, is the best way to ensure future growth and success. Take care of customer, giving of quality services, Proximity from your place and Price/ Cost values, Quickness of services, Hygienic Environment and Availability of bulk services these are all the factors which customers takes into consideration while using various services.

**Conclusion:**

Service industry is growing and gaining importance day by day. Newer services are entering into market place. Customer is becoming more and more dependent on services. Service organizations are looking for some innovative ways to improve their services The major challenges for service industry are day by day increasing cost due to inflation. Compounding cost, Confounding communication, Dwindling demand growth, stagnant innovation and Representative leadership are major challenges for service industry. To strike the companioning global market and to increase the contribution of service industry we should focus to provide the services with minimum cost, and with the maximum satisfaction of the customer. Government should providing economic assistant for the development of service sector. It is true that large opportunities are available in the Indian service sector. IT industries, Tourism industries and in entertainment industries reason being today the trend among the people have been developed to focus more on present instead of future due to impact of western culture. Opportunities in education industries are also on boom due to development of various professional courses. Finally it can be said that, the service industry is very important for India, as it is contributing half of the GDP. There is a very good scope to improve further in the services provided by the companies and government. However, this sector has a lot of potential and with just the right policy mix can take the economy to global heights. So, there is a need for change in the quality and also the speediness of the services.

**References:**

1. Bhowmik, Rita (2000): Role of services Sector in Indian economy, An Input–Output approach, Artha Vijnana, Journal of the Gokhale Institute of Politics & Economics, Pune, Vol. XLII, No.2, June.
2. Service sector in India. (2013, August). Retrieved October 2013, from Indian Brand Equity Foundation: <http://www.ibef.org/industry/services.aspx>5Service Sector Statistics. (Retrieved September 27, 2013, from [http://mospi.nic.in/mospi\\_new/upload/sss.htm](http://mospi.nic.in/mospi_new/upload/sss.htm)).
3. Career Opportunities in the Restaurant Industry. (Retrieved September 27, 2013, from Job in India: <http://mabmiles.hubpages.com/hub/CareerOpportunities-in-the-Restaurant-Industry>
4. A Service sector chapter 10. Retrieved September 28, 2013, from India budget: <http://indiabudget.nic.in/es2011-12/echap-10.pdf>.
5. DIPP (2012), “Consolidated FDI Policy (Effective from April 1, 2012)”, Ministry of Commerce and Industry, Government of India, March, 2012, New Delhi
6. Services sector in the Indian Economy by P. J. Gundhl, P. Ganesan & G. Vishwanathan.

## **“Jhansi Rani of Travancore”: Assessing the Pioneering Contributions of Accamma Cherian to the Nationalist Movement in Travancore**

**Abhishek Abraham Mathews**

*Department of History, Catholicate College*

### **Abstract:**

*The Indian subcontinent before its independence from British rule was fragmented into British Indian provinces and no less than 600 princely states. Though the rulers of the princely states stayed aloof from the nationalist movement that was growing elsewhere in India, the people gradually developed a strong nationalist identity for themselves. In spite of the Indian National Congress' apparent ambivalence towards the princes, the people of the princely states organized mass movements which often drew inspiration from the political movements in British India. They took active part in the freedom struggle and played a major part in the eventual integration of the princely states into Indian Union. Women also played a key role in the political movements in princely states breaking social stereotypes and overcoming many obstacles. In the princely state of Travancore, Accamma Cherian became a trailblazer for women of her generation to involve themselves in the political and working class movements. This paper analyses the political upheavals in Travancore during the 1930s which cultivated ground for the entry of hitherto unaffected sections of society such as women into nationalist movement. It also assesses the pioneering contributions of Accamma Cherian to the nascent nationalist movement in Travancore.*

**Keywords:** *Travancore, Nationalist Movement, Accamma Cherian, Travancore State Congress*

### **Introduction-**

The existence Princely States of India were a unique feature of British imperialism in India. An imaginary line was drawn between 'British India' and 'Princely India' and every effort was made to shield the subjects of princely states from nationalist sentiments. The relationship between princely states and nationalist leadership was complex and one characterized by ambivalence. The evolution of this relationship is very crucial in appreciating the wider scope of history of Indian nationalism. Princely states occupied roughly 20% of the subcontinent's population and 40% of its total land area. The imaginary divide between 'British' and 'Princely' *Indias* were time and again reinforced by the British administration. Both the British and the nationalists thought it best to leave the hereditary princes to manage the affairs of their states. However, the divide between British India and Princely India was porous and the exchange of ideas and people between the two continued unhampered. From the perspective of the British administrators the princely states under the Paramountcy of the Crown were valuable allies against nationalism. This attitude towards the princes was not unexpected as some of the princely states were in fact creation of the British and majority of the states owed their permanence to British support. It was not uncommon for the British to reward loyal princes with gifts of new territory. The uniqueness of the princely states was affirmed in the report of The Indian States Committee appointed by the British Indian government in 1928. Also known as the Butler Committee it recognized the duty of the British Raj to "protect the Prince[s] against attempts to eliminate [any of them] and to substitute another form of Government through a widespread popular demand for change" (Ramusack, 2003). The princes committed human and material resources at their disposal to serving the British Empire in India and abroad, including in the two World Wars. The relations between Indian princes and the nationalist movement were fraught with contradictions. In the initial years of formation of the Indian National Congress, the princes served as financial benefactors. Soon, the Congress distanced itself from the socio-political movements in the princely states. In the words of S. H. Patil, "[t]he economic and political demands of the Congress completely neglected the Indian states" (Patil, 1981). Attending the Second Round Table Conference in 1937, Mahatma Gandhi referred to the princes as his "kith and kin". As Indian rulers Gandhi asked the princes to act as "trustees of their subjects for revenue received from them" (Gandhi, 1941). He keenly followed the events in princely states but followed a strict policy of non-interference in their affairs. Part of the reason, according to Barbara N. Ramusack, was that the princely states were regarded as "examples of Indian ability to govern and sources of employment for educated Indians" (Ramusack, 1988). Many leaders of the nationalist movement did indeed accept employment at the durbars of princely states.

Accamma Cherian came to the limelight when the Travancore State Congress came into open confrontation with the princely government. The movement was fuelled by the unrelenting nature of the then Dewan, Sir C. P. Ramaswami Aiyar towards the protests (Menon, 2014). The struggle for democratization in Travancore roughly coincided with the Civil Disobedience Movement in British India and therefore many leaders derived inspiration from Gandhian strategies. The Abstention Movement in Travancore was the first major struggle to demand equal civic rights to all subjects in the state. Joint Political Congress was birthed out of this movement in 1932. Joint Political Congress demanded universal

adult franchise in elections to the legislature. They decided to boycott the elections until their demands were met. The movement enjoyed the support of major communities in the state such as Ezhavas, Muslims and Christians. Eventually, concessions were granted by the Travancore which was satisfactory to Joint Political Congress. The high handed actions of the Dewan continued against the elected representatives in legislature and his actions sparked another mass movement in Travancore (Jeffrey, 1992). Accamma Cherian, who belonged to the Syrian Christian community of Travancore, became attracted to politics during these years.

This period was also important due to the resolutions of Haripura Session of the Indian National Congress (INC) in 1938. While supporting the people's agitations in princely states for responsible government in theory, the resolutions forbade any actions to be undertaken in the name of INC. This decision caused much consternation in Travancore and resulted in the formation of Travancore State Congress, a political party by erstwhile INC sympathizers in 1938. Travancore State Congress (TSC) took upon itself the task to achieve responsible government and attainment of parliamentary government. The strategy of mass demonstrations which was becoming popular in British India was adopted by TSC leaders. This was also a time when the people of Travancore began to see themselves as part of India and identified with the nationalist struggle that raged across the country. The role of TSC was instrumental in bringing about this change. The activities of TSC soon attracted the wrath of the Diwan and he ordered a crackdown on the organization. Most of the prominent leaders were arrested and the organization was outlawed (Menon, 2014). As the leaders were under constant threat of arrest, the President of the party was granted unlimited powers which included nominating a successor. The Presidents came to be called 'Dictators' due to their emergency powers.

Accamma Cherian was a school headmistress when she plunged head long into Travancore politics. By August 1938, Presidents of TSC who were leading the Civil Disobedience Movement against the government were being arrested one by one and finally the burden of leading the struggle fell on Accamma Cherian who enjoyed considerable influence in central Travancore region. Her political life was changed forever when she became the twelfth President or Dictator of TSC. Being born into a Syrian Christian family with liberal attitudes in 1909, Accamma was given the best education and found no difficulty in engaging in political discussions. After completing her graduation and training she took a job in her native place than accept a position in Burma. Her siblings were also active in regional politics. She became involved in women political organizations and participated in the All India Women's Conference in 1935 (Devi, 2007). Her active participation in the Civil Disobedience movement in Travancore earned repute among the people long before she took reigns as Dictator of TSC.

The pinnacle of Accamma Cherian's career came in October 1938, when she was chosen to lead a huge demonstration in the capital city of Thiruvananthapuram demanding the immediate release of political prisoners. Her courage and deeds on that day spread her fame throughout Kerala. On October 23, 1938, Accamma Cherian arrived at Thiruvananthapuram Railway Station and held brief meetings with State Congress and Labour Union leaders. A large crowd clad in *khadi*, wearing Gandhi caps thronged the capital. Their destination was the royal residence in the city's walled 'Fort' area which was inaccessible to all but very few of the kings' subjects mere decades ago. When the rally reached their destination, the king refused to meet the protesters and hear their demands. Troops were brought in to disperse the protesters. When a European officer, Col. Watkis threatened to open fire on the protesters, Accamma's reply was "Now I am leading them, shoot me first". Finally, the government agreed to release political prisoners making Accamma's first major political leadership a success. Her actions brought her the epithet "Jhansi Rani of Travancore" from none other than Mahatma Gandhi (Kerala State Women's Development Corporation, 2008).

Accamma Cherian was instrumental in organizing the female volunteer corps of State Congress called *Desasevika Sangham* (Servants of the Nation). She was arrested for attending the annual session of State Congress. During the 1940s, Accamma Cherian engaged in constructive work throughout Travancore popularizing *Charka* and *khadi* (Devi, 2007). She was frequently jailed for her political activities by the princely government which took a toll on her health. She strongly opposed the proposal of Dewan Sir C. P. Ramaswamy Aiyar to declare Travancore's independence. She was jailed for leading demonstration for Travancore's merger with India. In 1948, she was unanimously elected to Travancore legislature. In 1949, the princely states of Travancore and Cochin were unified and Accamma became a member of the new state's legislature. Abolition of princely rule and formation of independent India with Travancore as its part were cherished dreams of Accamma Cherian. With the attainment of these objectives Accamma gradually retired from active politics. In 1952, at the age of forty two, she married a colleague from the State Congress. She criticised the change in attitude of TSC leaders after gaining power in independent

India. After a few failed attempts to bring her voice to political arena, she retired to a quiet life. Accamma Cherian died in 1982. She was honoured by Government of Kerala by installing her statue in the capital city of Thiruvananthapuram.

**References**

1. Cherian, A. (2011). *Jeevitham Oru Samaram*. SPCS.
2. Devi, R. P. (2007). *Accamma Cherian*. National Book Trust.
3. Gandhi, M. K. (1941). *The Indian State's Problem*. Navajivan Press.
4. Jeffrey, R. (1992). *Politics, Women and Well-Being: How Kerala became 'a Model'*. Palgrave Macmillan.
5. Kerala State Women's Development Corporation. (2008). *Status of Kerala Women*. <https://web.archive.org/web/20081026084416/http://www.kswdc.org/status.htm>
6. Menon, A. S. (2014). *A Survey of Kerala History*. DC Books.
7. Patil, S. H. (1981). *The Congress Party and Princely States*. Himalaya Publishing House.
8. Ramusack, B. N. (1988). *Congress and the People's Movement in Princely India: Ambivalence in Strategy and Organization*. In R. Sisson & S. Wolpert (Eds.), *Congress and Indian Nationalism: The Pre Independence Phase*. University of California Press.
9. Ramusack, B. N. (2003). *THE CAMBRIDGE HISTORY OF INDIA*. In *The Indian Princes and their States (The New Cambridge History of India)*. Cambridge University Press.

## **Ecommerce Testing**

**Mr Dnyaneshwar Fairrao Pathrikar<sup>1</sup> Mr. Dattatraya Bhikaji Raymal<sup>2</sup> Mr Hushikesh Rajendra Lahane<sup>3</sup>**

<sup>1</sup>*Geography, Rajarashi Shahu Arts Commerce And Science Pathri Tq Phulambri Dist Aurnagabad.*

<sup>2</sup>*Computer Science Research Student , Rajarashi Shahu Arts Commerce And Science Pathri Tq Phulambri Dist Aurnagabad.*

<sup>3</sup>*Commerce Research Student,, Rajarashi Shahu Arts Commerce And Science Pathri Tq Phulambri Dist Aurnagabad.*

### **Abstract :-**

The term 'e-commerce' or "electronic commerce" defines the set up and execution of business, trading, commercial process in the virtual world of web with the help of internet. In general, it is all about the buying and the selling of variant types of product on-line, over internet. The e-commerce activities are carried out through specific websites namely **e-commerce websites** equipped with the different and special types of features and functionalities like virtual store of items of different categories, filter and searching products of your desire, payment gateway with multiple options to pay for your purchase and many more features. With such useful functionalities, e-commerce websites has become an integral part of our day-to-day life, and thereby it's flawless and uninterrupted working is a much needed requirement.

### **Introduction:-**

In Ecommerce Testing, eCommerce is a commercial activity of buying and selling goods/services digitally through the internet. Amazon, Taobao, Walmart, Flipkart, Ola, and Uber are the top eCommerce companies globally and most of them have a presence in India. -The share of eCommerce sales in total retail sales is around 8% globally, in the US it is 13.5% and in India, it is 2.2% and it's growing in double digits everywhere. No Smartphone users globally raising to 2.7 billion, the volume of eCommerce transactions is bound to grow exponentially. Ecommerce vendors should host a vibrant website with superior performance/user experience features to enhance their online sales. Websites should be tested thoroughly in all aspects before it is deployed to users.

In this article let's see various techniques in testing eCommerce sites.



### **What is eCommerce Testing?**

It is a process of checking all the features and functions of a website to ascertain whether it works as per its original specifications and also ensuring it performs to the expected speed if the load reaches designed levels or more.

The Purpose of Testing is to Enhance:

1. Reliability by fixing defects in the code.
2. Quality by removing ambiguities, misunderstanding of requirements of coders/analysts.
3. Performance level by ensuring the right level of resources are allotted to manage the load and fine-tuning/optimizing the code.
4. The user experience by removing unwanted navigations/process steps and improving look and feel.
5. Security by stressing coding standards and structures.
6. Compliance with all rules and regulations by adhering to set policies/principles.
7. Availability of the website to users on a 24×7 window without any disruption.

### **How does eCommerce Testing Work?**

Below are the steps shows how does it work:

The success of Web site development/implementation depends on the depth of the testing carried out before it is deployed online.

1. As the first step of the testing process, we need to identify scenarios to be tested, which



1. It Will have to be derived from the system requirement documents (SRS or BRD)
2. Need to spell out various functionalities to be tested and it should cover end to end to processes of the application.
3. Are defined as a high-level asset of actions.
4. Are brief one-liners.
5. Should focus on what to test rather than how to test.
6. 2. The next step is to identify test cases for the scenarios identified. There could be multiple test cases derived from each scenario.
7. A test case consists of:
8. A list of actions to be executed to verify a feature or functionality of the applications.
9. Set of test data for testing each action.
10. Steps to be followed, Preconditions.
11. Expected results.
12. Unique conditions that may be used by Tester to check the functionality.

More resources are required to run through test steps and document the results. Test cases should be simple, unambiguous, end user-oriented, cover all the features and it should be easily identifiable. Test scenarios and test cases should be prepared along with system requirement documents and once the development of the application module is complete the testing team should get into the testing activities interacting with the development team.

### **Types of Testing**

Below are the Types of Testing:

eCommerce applications are hosted either as a web site or mobile apps. Websites are accessed by Desktops/Laptops and mobiles through browsers using URLs. Mobile apps are downloaded from the apps store on mobile devices.

### **eCommerce Testing should cover scenarios of:**

1. Website access thru Desktops/Laptops and mobile
2. Mobile Apps

### **1. General Testing**

There are some general testing the eCommerce applications undergoes like any other applications and they are listed in the table below:

Type of Testing	Process
Functional	Verification of each function of application as per requirement specification
Usability	Measuring the comfort of end-users while transacting in the application
Security	Assessing threats, Vulnerabilities, risks and recommend remedial steps
Database	Checking data integrity/consistency and database objects
A/B	Comparing two versions of software to measure incremental performance improvements.

### **2. Specific Testing**

There are specific types of testing pertaining to eCommerce applications and they are listed below:

Types	Testing Process
The workflow of the application (Step by Step testing)	Register/Login to website, Products Search, Filters on Product Range, The sorting order of product display, Shopping cart features, Product Reviews, Order Confirmation Shipping Instructions Payment processing, Invoice generation,

	Cancellation Delivery tracking
Browser Compatibility	Verification of functioning of application with all browsers and its versions
Devices Compatibility	Accessibility of the website in all intended end-user devices. It could be Desktop/Laptops or mobile devices like iPad, Tab, Smartphones in any OS (ios, android, windows), etc.
Page Display	Checking the format of pages, font size, page Settings, display of products related to browsing history, related pages, look and feel of the page, Cookies, analytics, and social sites.
Content	Authentication of content for quality, legality, integrity and piracy aspects
Availability	Continuous Availability of services 24×7 with little downtime
Performance	Checking Home page loading, Search speed, Transaction speed, Load handling, scalability, and stability. Check Throughput and response time at various stages of operation and compare it with norms.
SEO (Search Engine Optimization)	Verification of SEO parameters like HTML, Keyword & Phrases, Screen handling, Quality of content, Responsive design and backlinks, etc.
System Integration	Check the functionality of the interface, activation of the interface at frequent interval and its performance
Globalization	Support of Multiple languages, Multi-region Culture management, and accounting

### Testing Tools in Ecommerce Testing

Some of the widely used tools for testing websites are:

1. **Selenium:** Open-source testing suite for web Applications in any browsers/platforms. It enables automated functional & regression testing using simple scripts. It has a record/playback facility for authoring tests without knowledge of script language.
2. **JMeter:** Used mainly in performance & load testing and it is an open-sourced tool in Java.
3. **Spur:** Tool to verify web design and used by the web development company.
4. **Browsers:** Tool to check cross-browser layout differences and scripting errors on a website.
5. **Link research tool:** SEO tools to check content quality on the website.
6. **Click heat:** Provides a pictorial heat map of clicks to assess hot and cold zone in an HTML page.

### Conclusion :-

With more and more users embracing online shopping, a good response time/speed and stability of the website plays a big role in retaining customers. A well-tested eCommerce site will provide the vibrancy needed for the success of the online business.

### Recommended Articles

This is a guide to Ecommerce Testing. Here we discuss types, tools, What is Ecommerce Testing? how does it work?. You can also go through our other related articles to learn more –

1. [Ecommerce Shopping Websites](#)
2. [What is a Bug in Software Testing?](#)
3. [Types and Handling Errors in JavaScript](#)
4. [Useful Differences of Load Testing vs Stress Testing](#)

### References :-

1. <https://www.educba.com/kernel-methods/>
2. *Introduction to E Commerce :- Combining business and information Technology by Dr. Mrichael Brush ,Fach bereich 6 , Hochschule anhalt and Prof Dr Corinna V lang ISBN 978-87-403-1520-2*

## **Technological Revolution: The Future of Agriculture**

**Mr. Shivaling B. Rajmane**

*Assistant Professor, D. R. K. College of Commerce, Kolhapur Affiliated to Shivaji University, Kolhapur*

### **Abstract:**

India is famed for production of milk, rice, jute and pulses, but such operations are highly relying on pick of peoples to produce. It is observed that, peoples are still much better than the machines or robots but significance of automatic operations is unavoidable. Over the centuries, farmers are adopting various types of agricultural technologies in farming operations in order to yield more. Nowadays advances in agricultural technology like sensing, intelligent robotics etc. creates new growth waves in agri-business models. There is a big potential for remote sensing and robotics technology in agricultural activities. Such agri-business models are more sustainable, more efficient, quality boosters and cost effective too. Such devices are useful to maintain the quality of soil, to eliminate crop diseases/pests, to monitor the growth of their crops, to manage the health as well as wealth of their livestock etc. As per the opinion of agriculture engineer, Richard Green, "We can double the food production by the use of technology in agriculture". Present paper focuses on such type of innovations in agriculture field which will improve the agricultural produce. Advanced agriculture is now characterized with use of various types of science and technology in farming operations like biotechnology, nanotechnology, remote sensing, field documentation, adaptation technology, farm mechanization etc. Decisive impact of such technologies can be assessed by observing the farming outcomes before using the technology and after using the technology.

**Keywords:** *Biotechnology, Nanotechnology, Intelligent Robotics etc.*

### **Introduction:**

Cropping pattern, cropping intensity, irrigation intensity, income of the farmer and use of technological change are highly associated with one another. Few innovative technological changes taken place in agricultural field are being considered over here in the present paper which are helpful and consistently will help the crop growers to improve crop quality, quantity and reduce cost of production.

### **Eliminating Pests And Diseases:**

As per the report of 'Food and Agriculture Organization' of United Nations about 20.00 percent to 40.00 percent of total crop yields losses each year due to the impact of crop diseases and pests. Application of remote devices like drones and robots will help the farmers to spot and smash such diseases and pests early enough. Multispectral cameras affixed on drones will capture, collect and identify the problem or pest in the farm field which will help the farmers to pinpoint the crop diseases and pests. The company named 'Agribotix' located at Colorado working in the field of supplying software and drones are used to map the unhealthy patches of large vegetation fields. Such captures images also reveal the irrigation and pest problems. Now company has developed the system to differentiate weeds and crops through the experiments made in more than 50 countries. As a result system can ping a message to the farmer saying that, weeds growing in the field at these places. Modern technology will definitely help the farmers to eliminate autonomously pests and diseases from their farm fields. Instead of spraying the diseases and pests controllers all over the farm field it could be delivered to the actual spot which will definitely reduce cost and pesticide use. The RIPPA prototype robot shoots weeds with directed micro doses of weed controlling liquid. Nowadays scientists are working on robots using laser blasts close to the crops in order to control weeds. In such system cameras will identify weed first and then concentrated lasers will heat the same to goes die or become dormant.

### **Ripe For The Picking:**

Strawberry harvester developed by Green at United Kingdom can pick strawberry very faster than humans. Powerful algorithms supported by cameras are helpful to pick the fruits for every two seconds straightforwardly results in picking 15 to 20 fruits per minute. Now farmers are demanding the robots that can pick all type of vegetables, differentiating them with their size, color and shape. Timely picking is a success key, because too early or too late picking is wasteful. Therefore identification is tough task and scientists are working on it. Manuela Zude-Sasse, agricultural engineer working in precision farming at Germany attached sensors on apples for detecting size, level of pigment etc. by which it is possible to understand developmental stage and to provide alert to the grower regarding right time of picking through smartphone. She had experiment the same on other fruits like citrus fruits, bananas, pears etc. Smartphone app developed by her uses captured images by cherry cultivators to calculate the rate of growth.

### **Crop Sensors:**

Crop sensors are helpful to understand 'how and what crops are feeling'. It is advantageous in using fertilizers and curtails down its wastage. Through reflectors farmers can understand when and under what quantity crops needed fertilizers.

**Animal Trackers:**

Smart collar devices developed to monitor the fitness and many more of cattle's in livestock farming are much helpful. It will help in fertility, understanding the mood, readiness to mate, signs of illness etc. By monitoring the activities of cattle's, time spent on each activity etc. early alerts is sent on owners' smartphone. Cameras supported by thermal imaging can be installed in cowsheds to detect environmental and humid conditions. Continuous observing cameras established in poultry farms to track the movements of birds will also be helpful to understand the problems well in advance.

**Autopilot Tractors:**

Scientists have designed GPS tractors in recent days, without the drivers help such tractors can drive themselves in very accurate manner. Once the farmer provide necessary details like farm width, path etc. through GPS tracking then automatically automated tractors and automated sprayers can be controlled by computer system which is helpful to reduce the required time, human errors and energy.

**Field Documentation:**

Documentation of yield is now very easy and specific due to the invention and use of GPS system. Such system can collect the information regarding humidity, moisture, drainage system etc. which will help the farmers in planning their farming activities well in advance in very proper way.

**Telematics:**

In farming operations now scientists have developed telematics, which helps farmers to communicate with equipment, dealers in two way manners. By using telematics farmer can understand and fix the problems of equipment by using telematics board. It is an very effective recent development in the farming operations used by the advanced cultivators in their farming operations.

**Mobile Technology:**

More productive use of smartphones has been started now for monitoring the growth of crops. It is more useful in irrigating the crops and stopping the water wastages. Sensors affixed at the end of filed are sent alert on farmers' smartphone once irrigation is over. It automatically reduces the use of water.

**Ultrasounds And Many More For Livestock:**

Testing the DNA, checking of baby animals in womb, finding the meat quantity to be produced by animal etc. is now possible through the use of technology. Abovementioned activities can be done well in advance.

**Conclusion:**

Discussion made in the research paper shows that, technology is now unavoidable part of the farming. It is making and will make more advantageous changes in the farming operation which is helping and continuously will help the farmers to produce and earn more.

**References**

1. Shiparw A. S. (2017). *Innovations in Agriculture Operations. Journal of Commerce and Management Studies, Vol. 3, Issue 5, pp1-3.*

## **Economic Empowerment of Women in India**

**Mr. Manish Annasaheb Maske**

*M.A.Economics, Tilak Maharashtra Vidyapeet, Pune*

### **Abstract:**

*This paper focuses facts on both sides of the relationship between empowerment and growth. First, it shows that poverty and lack of opportunity create differences between men and women so that as economic growth reduces poverty, women's situation improves on two aspects: the first, as poverty is decreased, the condition of everyone, including women, improves and the second is that inequality of gender declines when poverty decreases. However, economic growth is not enough to achieve full equality between men and women. Policy steps are also important in order to achieve gender equality. It is clear that such policy action is warranted if the empowerment of women also encourages further growth and the launching of a virtuous cycle.*

**Keywords:** *Women Empowerment, Economic Empowerment, Women, India, Empowerment of Women.*

### **Introduction:**

Women's empowerment was needed in ancient Indian society because of gender inequality and masculine supremacy. For several reasons, women are suppressed by their families and culture. Male members of the family and community in India and also in other countries have been targeted at different levels of violence and discriminatory practices. False and ancient practice has taken the form of well-designed rituals and customs for women in the culture since antiquity. Many woman gods in India have a history of honoring women's types such as mother, sister, daughter, wife and other female family or friends. It does not say, however, that the need for country growth can only be fulfilled by respecting or honoring women. In any way of life, it needs to inspire the rest of the half population. India is a popular nation, which shows that there are so many people with many religious convictions in the Indian society as 'unity is diversity.' For women a special place has been provided in every religion which functions as an important eye curtain and helps to continue many ill practice against women as normal since years (including physical and mental). There was the custom in ancient Indian society, among other patriarchal practices: sati pratha, nagar vadhu system, dowry system, sexual assault, domestic violence, infanticide by women, parda pratha, feminine burning, sexual harassment at work, child marriage, child labor, devadashi pratha, etc. All such bad practices are due to the intricate and patriarchal structure of male superiority in society. The male-dominated country can be transformed into an equally dominating rich economy by empowering women. Empowering women can easily encourage everyone in the family to develop without any additional work. A woman is seen as responsible for everything in the family so that she can handle all the issues from her own point of view better. Women's empowerment would automatically motivate everyone. Empowerment of women is best for any large or small human, economic or ecological problems. In recent years, we are faced with the benefits of women's empowerment. Women are more aware of their families, communities and country's health, education, work, jobs and obligation. They participate in every area and are really involved in every area. In this way the government of India has initiated several schemes for women's empowerment. After years of hard fighting, women are finally getting their right to go down the right path.

### **Can economic development cause women's empowerment?**

Gender inequality among poor people is always greater, both at home and abroad. As an example, although worldwide gender differences in gross primary and secondary registration have declined rapidly between 1991 and 2009, they remain more prevalent in poor countries (7% of primary registration, 13percent of secondary enrollment) compared to middle income countries (3% of primary registration, 2% of secondary registration) and rich countries (0 percentage points for primary, 1 percentage point for secondary). And there are continued differences in poorer and more isolated populations among children in countries (World Bank, 2011). In East Asia and Latin America, the participation of women in the labor market increased by 15% from 1971 to 1995, which is more rapid than that of men, and the gender pay gap has reduced. Women's life expectancy has risen over the last 50 years (World Bank 2011) by 20-25 years in developing countries, while male life expectancy has not improved to a much. Will women's empowerment follow naturally as countries grow and thus no special measures are required to boost the status of women? Is the battle against poverty necessary and economic development conditions in developing countries sufficient? Recent research shows that economic development may also have a significant positive effect on gender equality by reducing poverty and increasing opportunity.

### **Relaxing the grip of poverty through economic development:**

Also in countries with the highest preference for boys, it is not clear how much less treatment is systematically paid for girls than for boys in normal circumstances. Obtaining girls less than boys, for example, is clearly very difficult to observe, because families that are watched can alter their behaviour. Also, households may misreport the portions of boys and girls when they are asked to keep records as to how much each member absorbs during a given time period. Homes may eventually give boys and girls the same number, but girls may have different needs. Angus Deaton (1989, 1997) proposed a genius for indirectly determining whether girls are given less to eat than boys using household consumption data. He noticed that the household actually gets

poorer when a child is born because one more person is to eat – one for a long time that remains unproductive. This suggests that adult family members must reduce their own consumption to fund new expenses. An indirect calculation of the "child's cost" can be made by observing how much domestic consumption of "adult goods," such as cigarettes, alcohol or adult clothes, drops when a child is born. If families spend less on girls than children, for instance, when girls are allowed to eat less than boys, adults are allowed to reduce their adult consumption in less numbers when they have a supplementary girl than when they have another boy. However, there is no proof that holidaymakers are reducing adult consumption less for a girl than for a young child either in the Côte d'Ivoire, where Deaton initially conducted analysis, or in Pakistan, where he repeated the analyzes (Deaton 1997). For example, in the vaccination rates the lack of obvious discrimination in daily life is also apparent. The disparity in vaccination between boys and girls is minimal or inexistent in India (according to the National Family Health surveys, girls have received 4.55 shots, and boys 4.79 shots). Rajasthan is one of the lowest female-to-male states in India and the lowest vaccination rate in India. However, the immunization rates of Banerjee et al. (2010) between boys and girls are not different: boys were on average 1.19 immunized, while girls 1.18 received immunizations.

#### **Economic Development, fertility, and maternal mortality**

Women are more likely to be absent compared to men in childbearing years other than before birth and early childhood. This is not, of course, because of active discrimination but because women bring and give birth and it is risky in itself. This is not because of active discrimination. Maternal mortality is possibly the source of lower parental investment in children rather than specifically influencing the health of women (and not men), since if parents are expecting girls to die even more as young women than boys, they are more likely to invest in boys. The sudden drop in maternal death (based on successful policy) in Sri Lanka has led to convergence in educational standards for boys and girls Jayachandran and Lleras-Muney (2009) find it obvious. It is estimated that an improvement in life expectancy per year contributes to 0.11 per year in girls' (relative to children) education. This provides two possibilities for economic growth, to increase women's relative well-being: it decreases their chances of killing each child, and it also reduces fertility in economic development. This is possible.

#### **Giving women hope by expanding their opportunities**

It could lead to unequal treatment in the household by women having less chance of entering the labor market. Parents have lower ambitions than children for their daughters and young people have lower aspirations themselves. In West Bengal, for example, Beaman et al. (2011) have found that 86 percent of the parents wanted their daughters either a housewife or whatever their lawyers preferred for her where no woman had ever been the local chief (the corresponding fraction was below 1 percent for the boys). If women don't work outside the home, they may believe they don't have to be as strong and safe and that they don't need formal training. The public report on basic education (PROBE) conducted in India in interviews with parents in five northern states (The PROBE Team, 1999) found that up to 10percent of them thought it was not necessary for girls to obtain education—just 1percent thought this was the case for boys. Fifty-seven percent wanted their children to study "as far as possible; only 28% wanted their daughters to study the same thing. Many parents felt it was not required to educate girls because only girls are supposed to marry and care for their families. 32% of parents report they want adolescents to graduate from high school or college in the Beaman et al (2011) survey, but only 18% want that for their girls.

#### **Freeing up women's time**

The way they are expected to spend time is a key source of inequality between women and men. The World Development Report 2012 was reviewed using data for 23 multinational usage countries in Berniell and Sanchez (2011) and 12 Countries added to increase the data set to represent poor countries. The pattern is clear and unsurprising: women do most of their housework and care at each income level and spend less time working for the market as a consequence. The gap is between 30% more of the time used for women's housework in Cambodia and 6 times more in Guinea, and 70% more of the time spent on childcare in Sweden, and ten times more in Iraq. These differences affect the ability of women to participate in marketing, participate fully in their professional lives and so on. That is one reason why women in developing countries are more likely than not to be engaged in informal work (such as running a small business). They can run a shop from their home, for example, so that they can remember children simultaneously, rather than take on productive jobs. This reduces the chance of an autonomous income which clearly implies, as we can see below, its negotiating capacity in the household.

#### **Economic Development and women's rights**

There is a strong link between economic growth and women's rights empirically, in areas as diverse as rights to property, access to land, access to bank loans, violence against women, abortion policies and so forth. The strong negative correlation of Doepke & Tertilt (2009) between the lack of rights and per capita GDP is 0.4 or higher across countries. The expansion of women's economic rights historically preceded their access to political rights in the United States and Europe (Doepke and Tertilt, 2009, Fernandez, 2009). Whilst the data cannot deduce causality, two paths of discussion suggest why economic growth could bring men to voluntarily

surrender their women's economic rights. Dr. Doepke and Tertilt (2009) argue that men are willing to surrender certain rights to women to ensure that children are better educated when the importance of human capital in the economy increases (the argument requires that women care more of their child's human capital and that the negotiation of household decisions is important for the power of negotiations which we discuss below). The compromise now lies between their usefulness and their children's usefulness (children, grandchildren, and future generations). Fernandes (2009) argued that the father's interest as husbands (who would like to take all the rights) started to conflict with their interests as fathers, as fertility declined (who would like to protect their daughters against their future son-in-laws). The balance begins to decline towards the latter interest and women's economic rights increase with the growth of economy and a decline in fertility. Doepke and Tertilt offer historical accounts consistent with their theory and Fernandez offers suggestive evidence that states with a rapid decline in fertility are more likely to increase women's rights in the US. Their rights have been granted to women. There is still a lot more to be done empirically, and this is a very important field of research. These two documents, however, provide convincing theory that economic growth can lead to a rise in the rights of women. Indeed, doepke and tertilt explicitly conclude, rather than pursue direct legislative changes for women's rights, that institutions like the World Bank which are concerned with the rights of women would be well-inspired to focus on programs conducive to economic development (such as education policies).

**Conclusion:**

Empowerment for women is closely linked with economic development. Although development itself will empower women, empowering women will lead to improvements in decision making, which will directly affect development. Contrary to what some of the more ambitious politicians say, however, there is no evidence that a one-time push towards women's rights can instill a virtuous cycle that mutually strengthens women's empowerment and growth while women will gradually become equal partners in rich societies.

**References:**

1. Doepke, M. and M. Tertilt (2009), "Women's Liberation: What's in it for Men?" *Quarterly Journal of Economics* 124(4): 1541-1591.
2. Beaman, L., Chattopadhyay, R., Duflo, E., Pande, R., and P. Topalova (2009), "Powerful Women: Does Exposure Reduce Bias?" *Quarterly Journal of Economics* 124(4): 1497-1540.
3. Banerjee, A., Duflo, E., R. Glennerster, and D. Kothari (2010), "Improving Immunization Coverage in Rural India: A Clustered Randomized Controlled Evaluation of Immunization Campaigns with and without Incentives," *British Medical Journal* 340:c2220.
4. Berniell, M. and C. Sanchez-Paramo (2011), "Overview of Time Use Data Used for the Analysis of Gender Differences in Time Use Patterns," *Background paper for the WDR 2012*.
5. Deaton, A. (1989), "Looking for Boy-Girl Discrimination in Household Expenditure Data,"
6. *World Bank Economic Review* 3(1): 1-15.
7. Fernandez, R. (2009), "Women's Rights and Development," *NBER Working Paper No. 15355*.
8. Greenwood, J., Sshadri, M. and M. Yorukoglu (2005), "Engines of Liberation," *Review of Economic Studies* 72: 109-133.
9. Cheston S and Kuhn L. 2002. "Empowering Women through Microfinance", *Draft, Opportunity International*
10. Pillai J.K 1995. "Women and empowerment" *Gyan Publishers House, New Delhi*.
11. Hoshemi, S.M. 1996. "Rural credit programmes and women's empowerment in Bangladesh" *World Development* 42 (34), 635-653
12. <http://www.importantindia.com/19047/short-paragraph-on-women-empowerment/>
13. <http://www.newincept.com/central-government-schemes-for-women-empowerment.html>
14. <http://www.indiacelebrating.com/speech/women-empowerment-speech/>

## **The Role Employee Participation in Human Resource Development**

**Prof. Deepali R. Chandramore**

*MGV's SPH Art's, Science and Commerce Mahila Mahavidyalaya, Malegaon Camp*

### **Abstract**

*Human Resources are the asset of organization. The concept of employee participation plays a vital role in the global landscape of business as organizations attempt to optimize the intellectual power inherent in today's diverse workforce. Employees are the integral part of organization, and they must participate in each and every activity of organization. Employee participation represents a sustainable workforce capable of promoting organizational policies, procedure and competitive advantage in current market situation. Organizations actively pursue higher levels of employee engagement to increase productivity, employee with positive energy within the corporate culture, and enhance organizational goodwill within the industry or the broader business community. Leadership, creativity and innovation in human resource practice to gain maximum returns on investments in human is essential for organizational development.*

**Key words:** *Employee participation, Job satisfaction, Productivity, Human Resource Development.*

### **Introduction**

In global scenario organization have to face challenges related to employee. There are scientific methods for recruitment, selection, training, promotion, incentives of employee. And one of the important issue is the gap between Management and employee. Recently management-employee disputes are raises, employee participation is the way out for this problem. Employees must be able to react quickly and accurate to the changing. Human resources must adopt new technique and technology of modern age. To effectively manage employee participation in such contexts, there is a need to better understand strategies of employee participation as well as to generate better performance measurement systems. These principles are rooted in recent theoretical work on employee involvement and are presented at a level of abstraction suitable for generalization across performance measurement contexts and purposes. Behavioral markers describing processes associated with each principle and example measurement strategies are presented to illustrate development of specific measurement tools and metrics, based on the principles. The principles and behavioral markers presented can guide development of measurement systems to assess, train, and improve employee involvement a core capacity of effective organizations. Many contemporary organizations are placing a greater emphasis on employee involvement systems as a means of generating higher levels of job satisfaction. Employee involvement is the major element of job satisfaction.

### **Objectives of Research Paper:**

- 1) To study employee participation in management.
- 2) To study factors affecting employee participation.

### **Literature Review**

V. Flora, M. Pahor (2014) 1 Researcher examines the key role of management in employee participation. And focused on techniques of employee participation practice. Researcher develop a comprehensive index of employee participation and its implementation. Employee participation and its implementation is highly depends upon the attitude of management toward employee.

Komal Bhatti (2007)2 Researcher findings are employee participation has impact on employee's job satisfaction. Employee productivity and employee commitment both having significant impact on growth of organization. The researcher's motto is to find out relationship among employee participation, job satisfaction, and employee productivity and employee commitment.

### **Methodology**

The present paper is primarily based on secondary data. And the data is collected from annual reports, research journals, government website and some other published sources like research articles.

### **Employee Participation – The Key Aspect In Management Strategy**

Employee participation is about the participation and influence of employees in decision-making throughout the company. Employees used their competencies in the routine work, the concept of employee participation is in many respects more embracing. The influence to be achieved through participation is not necessarily associated with the job of the individual and the immediate work situation, but can also be achieved through such activities as participation in meetings at a department or company level or through elected representatives. Still, the concepts are closely related. The lack of control by employees over and in their working life and the result in employees are not able to handle situation that participation may help to solve. An intention to democratize and humanize working life is common to the early research into workers' or employee participation and Management should have to plan for employee participation. In management strategy employees related schemes included. The disputes between management and employee may minimize because of employee participation. It is the bridge that reduces gap between these, there is peaceful and sound environment in organization. It helps in smooth functioning of organization.

### **Positive Impact Of Employee Participation On Productivity**

Employee performance is measured by their efficiency and effectiveness in total productivity. Because



of this management know the productive and efficient worker. Efficiency and effectiveness these are the two element by which productivity can be measured. Management must adopt strategy for employee involvement in various process of organization. Their views are very important in each and every activity of organization. Scientific management says that employees are not machines, they are human beings. So give them chance for participation in organization positively definitely it leads to good productivity.

According to Miller and Monge (1986) job satisfaction increases productivity level and bring out high quality productivity, employees are being motivated. There is maximum utilization of potentials of employee.

**Job Satisfaction**

Bhatti & Qureshi (2007) Employee participation is one of the important drivers for job satisfaction. These are the vital elements of Human Resource Management and interrelated to each other. Human resource is the basic factor that having significant impact on all aspects of organization.

When employing the concept of employee participation, we are fully aware of the fact that we are dealing with a human beings not a machines, making its deconstruction in specific analytical contexts necessary. Employee job satisfaction is one of the important technique through which employee retention is possible. Management should take into consideration the suggestions and views of employees. They are the representatives of whole workforce. Delegation of authority and responsibilities, remuneration, compensation, promotion, demotion, training all this are important part of human resource management. Without considering employee participation these functions cannot performed very well.

Following table shows the statistics of number of workers in India according to 2001 census. From total population nearby 50 % of population is engaged in industrial activities. The number of non-workers are also a big number compare to total population.

<b>Number of Workers (*000s)</b>			
<b>Category</b>	<b>Persons</b>	<b>Males</b>	<b>Females</b>
Total population	1,028,610	532,157	496,453
Total workers	402,235	275,015	127,220
Main workers	313,005	240,148	72,857
Marginal workers	89,230	34,867	54,363
Non-workers	626,376	257,142	369,234
Cultivation	127,313	85,417	41,896
Agricultural labourers	106,957	57,329	49,446
Household industry workers	16,957	8,744	8,213
Other workers	151,190	123,525	27,665

Source: PCA India, Census of India 2001

<b>Work Participation Rate</b>		
<b>Total workers</b>	<b>Number</b>	<b>Rate (%)</b>
Persons	402,234,724	39.1
Males	275,014,476	51.7
Females	127,220,248	25.6
<b>Main Workers</b>		
Persons	313,004,983	30.4
Males	240,147,813	45.1
Females	72,857,170	14.7
<b>Marginal Workers</b>		
Persons	89,229,741	8.7
Males	34,866,663	6.6
Females	54,363,078	11

\*Source: PCA India, Census of India 2001

Above figures highlights the employees participation rate according to 2001 census. Percentage of work participation is higher in case of male compare to females. From total worker 39 % worker participation rate. It is not satisfied one. There is need of more and more worker participation in near future.

Direct and Indirect participation of employee of in management is time to time required. In literatures there is in depth research on employee involvement and all other aspects related with it. In modern business environment there is need of adoption of new techniques for employee participation.

**Measurement of Implementation of employee participation in organization**

The implementation of employee participation in companies depends on the management and their attitude towards employees. It was a challenge to measure the level of implementation of employee

participation. measure the perception of participation by interviewing employees. Employees can enter in organizational decision making process in many ways. There are many ways in which employees enter the decision-making process. It is a complex procedure. Composite *index of participation implementation (IPI)* is a tool through which level of implementation of employee participation can be measured. As a comparison and in line with some of the existing research, there was a simpler *index of the presence of bodies (IPB)*. The index of the presence of bodies – IPB – measures the mere presence of employees' participation bodies in the company (works council, employees' representatives on the board of directors, etc.). It is defined as the number of bodies present divided by the expected number of bodies, multiplied by 100. The number of expected bodies depends on the legal form and size of the company and ranges from two (employees' assembly and worker representative or work council) to four (work council, employees' assembly, employee representative in supervisory board and employee representative in managerial board in a public limited company with more

The index of participation implementation – IPI – measures how the participation is actually implemented. The index focuses on indirect participation through representative bodies. It is a simple average of several forms of putting employees' participation into practice, quantified in a way that uses 100 for the optimal state and compares the actual state to this optimum. (Franca, V., & Pahor, M. 2014) "Employee Involvement" is how businesses can improve their performance by cultivating employee interest and dedication. Drawing from organizational behavior, human resource management, and industrial relations, an outstanding contribution to the field by comprehensively addressing the wide range of employee participation methods, and consistently referencing what really works in the real world.

### **Findings and Conclusion**

Future research needs to expand on employee participation theory. In modern age employee as well as organizational need changes, the attitudes and culture also change. New generation having new ideas new hopes so organization must open mindy accept the suggestions and views of employee, as they are vital part of organization.

### **References:**

- 1) Busck, O., Knudsen, H., & Lind, J. (2010). The transformation of employee participation: Consequences for the work environment. *Economic and Industrial Democracy*, 31(3), 285-305.
- 2) Franca, V., & Pahor, M. (2014). Influence of management attitudes on the implementation of employee participation. *Economic and Industrial Democracy*, 35(1), 115-142.
- 3) Bhatti, K. K., & Qureshi, T. M. (2007). Impact of employee participation on job satisfaction, employee commitment and employee productivity. *International review of business research papers*, 3(2), 54-68.
- 4) Cotton, J. L. (1993). *Employee involvement: Methods for improving performance and work attitudes*. Sage Publications, Inc.
- 5) Miller, K. I., & Monge, P. R. (1986). Participation, satisfaction, and productivity: A meta-analytic review. *Academy of management Journal*, 29(4), 727-753.

## **Geographical Study of Tribal Main Workers in Nashik District, Maharashtra**

**Rajendra S. Pawar**

*Assist. Prof. in Geography, P.V.P. College, Pravaranagar*

### **Abstract**

*Work may be defined as participation in any economically productive activity. All those who had worked for the major part of the one year preceding the date of enumeration were recorded as main workers (at least 6 months or 183 days) while those who worked for sometime during the preceding year but not for the major part, have been treated as marginal workers. All those, who had not worked at all during the last year, preceding the date of enumeration, were recorded as non workers. Persons engaged in household duties, students, dependents, retired persons, retires, beggars are some of the categories grouped as non workers. There has been no conceptual change in defining the workers between 1981 and 1991 census. At the 1991 census there has been mainly a three-fold classification of population namely main workers, marginal workers and non workers which was adopted for 1981 also. In addition to this, the main workers of 1991 are distributed in nine industrial categories of economic activities but in earlier census of 1981 this presentation was up to four industrial categories only.*

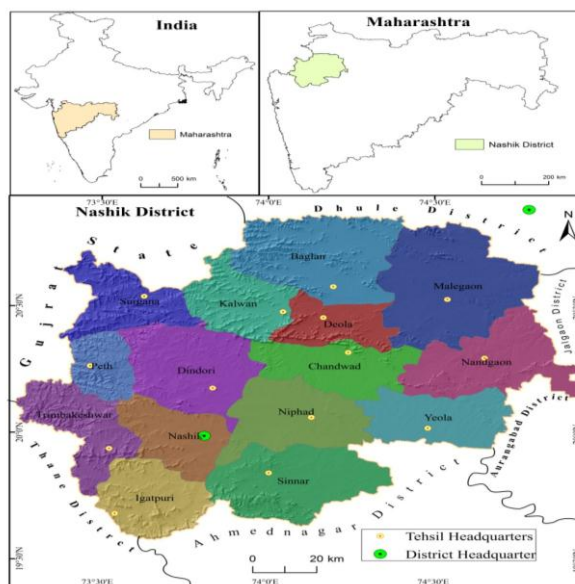
### **Introduction**

The study of occupational structure provides background for formulating future development plans. The term 'work' is used in special sense in Census, 1991 as below. The work is defined as a participation in economically productive activity. This participation is physical and mental in nature. However, person doing any economically productive activity is considered as worker. Thus, work involved actual work, effective supervision and direction of work. The distribution of population in different types of occupations is referred to as occupational structure. It can be categorized into two types, namely, main workers and marginal workers. Main workers can be sub-categorized as farmers (Cultivators), agricultural labours, domestic workers and other workers. Main workers are those who work at least six months in one year preceding. The marginal workers are those who work some time but not for the period more than six months in one year preceding. Food, shelter and clothes are the basic needs of human being and in order to fulfil these needs human being involves in occupations. The economically active population actually takes part in the process of goods and services (Henry, 1971). During ancient times, needs of food were fulfilled by hunting and collecting necessary materials from the forest. A few decades ago a man started farming followed by industrial activities. Later, started to avail technology and exchange services for earning purposes. Thus, increasing purchasing power of human resulted the development of industrial and service sectors. Hence, the study of occupational structure holds a key position. The socioeconomic development of any region depends on the number of persons who are economically active with the quality and regularity of work. The ratio of economically active population in various occupations indicates the economic profile of various group of society. The occupational structure of society is a product of a variety of intimately related factors. The nature and variety of physical resource base lays down a basic foundation for the availability of land for agriculture, fishing, forestry and mining (Chandana, 1986). Therefore, study of occupational structure is essential to understand the activities carried by scheduled tribe, its distribution and participation in different economic activities. If more people are engaged in primary activity implies that the region is undeveloped, if more people are engaged in secondary activity means that the country is in the process of development and if more people engaged in tertiary activity means the field is farming.

### **Rational of the study**

A study of occupational structure considered the number of persons in the form of employment, unemployment and underemployment in industrial and other activities. Therefore, such study provides the groundwork for social and economic development for policy makers and planners. This chapter has attempted to assess the occupational structure of tribal population in Nashik district. The data pertaining scheduled tribe population has obtained at Tahsil level from District Census Handbook Nashik District in 1981 and 2011. These data were then converted into a percent and represented by choropleth method. The relationship between worker and literacy has computed using (Lorenz curve). In addition to this, bar graphs and pie charts have drawn to representing different characteristics of occupational structure in the study region.

**Fig. No. 1**  
**Location Map of Study Area**



**Objective:-**To study the sex-wise distribution of tribal main workers in Nashik district

**Hypothesis:-** Tribal male are more engaged in main workers activities

**Methodology**

The present study is primarily based on both secondary and primary data. The secondary data have been obtained from Nashik District Census Handbook, Statistical Handbooks, Socioeconomic Abstract of Nashik District, Tribal Development Department Nashik and Census of India from 1981 to 2011. For delineating tribal main workers growth rate method has been applied to examine tribal main working population. Following techniques have been used in the present study.

Population of Current Decade - Population of Previous Decade

$$\text{Population Growth Rate} = \frac{\text{Population of Current Decade} - \text{Population of Previous Decade}}{\text{Population of Previous Decade}} \times 100$$

Later on, collected data have classified, proceed and presented in the form of tables and maps by applying appropriate cartographic techniques.

**Analysis and data analysis**

**Level of economic development of different regions within the district.**

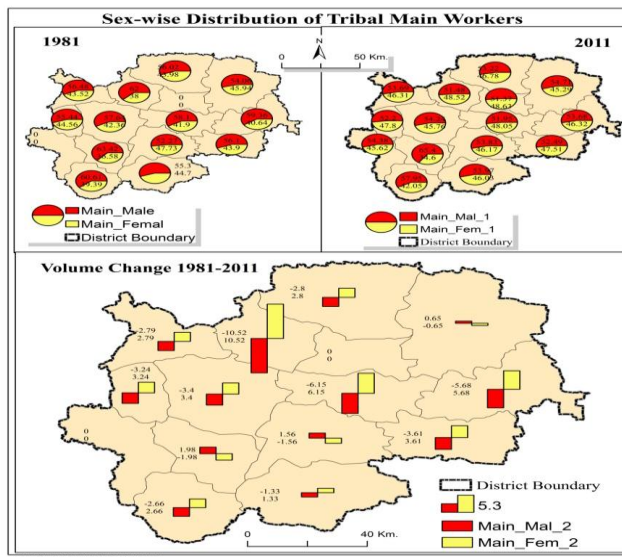
**Table No. 1 Sex-wise Distribution of Tribal Main Workers in Nashik District**

Tahsil	1981		2001		2011		Volume Change of (1981-2011)	
	Male	Female	Male	Female	Male	Female	Male	Female
Nashik	63.42	36.58	57.74	42.26	65.40	34.60	1.98	-1.98
Peint	55.44	44.56	52.39	47.61	52.20	47.80	-3.24	3.24
Dindori	57.64	42.36	53.53	46.47	54.24	45.76	-3.40	3.40
Surgana	56.48	43.52	53.70	46.30	53.69	46.31	-2.79	2.79
Kalwan	62.00	38.00	51.73	48.27	51.48	48.52	-10.52	10.52
Baglan	56.02	43.98	52.69	47.31	53.22	46.78	-2.80	2.80
Malegaon	54.06	45.94	57.06	42.94	54.71	45.29	0.65	-0.65
Chandvad	58.10	41.90	52.82	47.18	51.95	48.05	-6.15	6.15
Nandgaon	59.36	40.64	52.13	47.87	53.68	46.32	-5.68	5.68
Yevla	56.10	43.90	52.87	47.13	52.49	47.51	-3.61	3.61
Niphad	52.27	47.73	53.81	46.19	53.83	46.17	1.56	-1.56
Sinnar	55.30	44.70	56.63	43.37	53.97	46.03	-1.33	1.33
Igatpuri	60.61	39.39	57.48	42.52	57.95	42.05	-2.66	2.66
Trimbakeshwar	N.A.	N.A.	54.25	45.75	54.38	45.62	N.A.	N.A.
Deola	N.A.	N.A.	53.60	46.40	51.37	48.63	N.A.	N.A.
District Total	57.64	42.36	53.88	46.12	54.76	45.24	-2.88	2.88

**Source:** District Census Handbook, Nashik District for 1981 and 2011.

**Note:** Calculated by Researcher, Figures are given in percentage, N.A. = Data not available.

**Fig. No. 2 Sex-wise Distribution of Tribal Main Workers in Nashik District**



**Source:** District Census Handbook, Nashik District for 1981 and 2011.

Table No. 1 shows the sex-wise distribution of tribal main workers of Nashik district during census year 1981 to 2011 along with volume of change during the same decadal years. According to census 1981 data Nashik tahsil had highest tribal main workers in male category that was 63.42% whereas Niphad tahsil was 52.27%. And Remaining all the tahsil had been shown 54.06% to 62% of sex-wise tribal main workers in the male category. In the same decade, in terms of female main tribal workers, Niphad tahsil had recorded highest female main tribal workers and lowest was recorded in Nashik tahsil (36.58%) whereas remain all the tahsil were recorded between 38% to 45.94% female tribal main workers. According to census 2011, the highest male tribal main workers are found in Nashik tahsil, that is 65.40% and lowest is found in Kalwan tahsil (51.48%) whereas remaining all the tahsil have 51.37% to 57.95% of male tribal main workers. In the female section, highest female tribal main workers are found in Deola tahsil (48.63%) and lowest is found in Nashik tahsil (34.60%). Whereas remain all the tahsil have female tribal main workers between 42.05% to 48.52%. Table shows that main workers of male tribal population are more than female tribal population. The below map of Nashik district shows the volume of change during 1981 to 2011 of sex-wise distribution of trial main workers. The highest male tribal main workers are found in Nashik tahsil which is recorded 1.98% whereas the lowest sex distribution in male main tribal category is 0.65% in Malegaon tahsil. These changes are in positive sense. Whereas the negative change in male tribal workers between -1.33% to -10.52%. This negative change in sex ratio is as follows; Sinnar -1.33%, Igatpuri -2.66%, Surgana -2.79, Baglan -2.80, Peint -3.24 etc. In male volume of change, the highest change is observed in Kalwan tahsil i.e. 10.52% and lowest is observed in Sinnar tahsil i.e. 1.33%. The negative change in female sex is observed only in three tahsil namely Nashik (-1.98), Malegaon (-0.65%) and Niphad (-1.56%).

**Conclusion**

1. It is observed that among tribal population there were 45.90 percent cultivators and 45.77 percent agricultural Labours in 1981 in study region, accounting total 91.67 percent workers in agriculture. Only 8.33 percent workers have involved other than agriculture.
2. In 2011, there were 32.70 percent cultivators and 56.49 percent agricultural Labours together 89.19 percent and only 10.82 percent workers have engaged in other than agricultural activity.
3. During last two decades 13.20 percent cultivators have found decrease and 10.72 percent agricultural labours have increased in agricultural sector. The proportion of other workers is found less and it has decreased by 2.34 percent because of high illiteracy, lack of skills and technical education among tribal population. The household workers are slightly increased by 0.15 percent.
4. The percent of agricultural labours have increased during study period due to small land holding as they work on other's fields as labourers.

**Recommendations**

1. It has been noted that the tribal youth farmers get very low output from agricultural activity. Taking into account the difficulty, lack of capital for agricultural activity the government has contrived the system to give subsidy for the purchase of farm implements under this scheme farmers

2. Adding to the confusion, adult services are often provided through multiple agencies with eligibility requirements that differ from agency to agency. Thus, families and counsellors need to help youth see the importance of disclosure and work to educate youth to disclose appropriately.
3. To help tribal youth understand the importance of disclosure and to lead them through various situations where disability disclosure may be an issue.
4. Manpower this kind of problems has been created mainly due to the propensity of the employers not to remain in the tribal regions. Some of the employees have been reported at the time of field study that they have been transferred in the tribal zone as a matter of punishment thus it seems that there is a need to motivate the manpower involved in the scheme. It is necessary to improve their initiatives and efficiency.
5. The tribal peoples in the sinner, Nashik and Igatpuri tahsil were getting sufficient employment through some small scale industries which have been already trained in their region in those regions such as Surgana, Peint and Trimbak, the small scale industries have so far not been produced. In these regions also the small scale industries on the basis of minor forest product may be started. In this way the tribal people in these regions may make more benefit in conditions of usage. For this purpose MIDC can play vital role in the growth of the industrial backward region.

#### **References**

1. Arun, K. (2000): *"Dimensions of Population Growth and its Social Implications"*, Anmol Publications, New Delhi.
2. Bakshi S.R., and Kiran Bala, *Social and Economic Development of Scheduled Tribes*, Deep and Deep Publications Pvt. Ltd., New Delhi, 2000.
3. Bano, Z. (2002), *"Tribal Women: The Gender Issues"*, SAJOSPS, Vol-3, No.1, July- December, Pp.24-28. 43
4. Bhende, A. and Kanitkar, T. (2000): *"Principles of Population Studies"*, Himalaya Publishing House, Mumbai.
5. Biswas, R. K. (2006): *"Demographic Study of Primitive Tribe-A Comparative Framework"*, Saad Publications, New Delhi.
6. Chopra, G. (2006): *"Population Geography"*, Commonwealth Publishers, New Delhi.
7. Dashora, R. and Sharma, A. (2003): *"Role of Tribal Women in Education"*, Yojana, Vol-47, No.6, June, Pp.40-43.
8. Ghatowar, A. K. (2012): *"Women Decision Making in India"*, SSDN Publishers and Distributors, New Delhi.
9. Government of India, (1981, 1991 & 2001): *District Census Handbooks, Nashik District*.
10. Pant, B. R. (2010): *"Tribal Demography of India"*, Anamika Publisher and Distributors Private Limited, New Delhi.
11. Panwar, R. (2011): *"Tribal and Indian Society-An Impact of Tribal Development"*, Signature Books International, New Delhi.
12. Sastry, V. and Rao, M. (2005): *"Changing Patterns in Tribal Societies"*, The Associated Publishers, Ambala.
13. Xaxa, V. (2004): *"Women and Gender in Study of Tribes in India"*, Indian Journal of Gender Studies,

## **An Overview of Digital Revolution for Implementing the New Trends of Online Marketing**

**Dr. Arti C. Lokhande**

*Asst. Prof., Department of Commerce, MGV's Smt. Pushpatai Hiray Arts, Science & Commerce Mahila College, Malegaon Camp, Dist.- Nashik.*

### **Abstract**

*Today we are having a fairly well developed in businesses and the world has transformed from knowledge to techno savvy. Now-a-days every customer wants to purchase everything on one click, so digital revolution helps businesses through electronic or online way. Online Business affects the whole business and the value chains in which it operates. It enables a much more integrated level of collaboration between different components of a value chain than ever before. Adopting online business also allows companies to reduce costs and improve customer response time. Many companies that transform their business practices stand to benefit immensely from innumerable new possibilities brought about by technology. This paper gives an overview of the Digital Revolution and how business models are significant to Online Marketing for the growth of their businesses.*

**Keywords:** *Digital Revolution, Online Marketing, Business Models, Transformation, Prospective Customer.*

### **Introduction:**

Online Marketing refers to marketing and advertising efforts that use the web and email to drive direct sales through Internet. The internet has transformed business marketing to the great extent. The internet is likely to be at the heart of business. Online marketing enables marketers to build relations with customers and prospects through regular, low-cost personalized communication, reflecting the move away from mass marketing. Online marketing trends change fast in the digital world. Online or E-Business is a super set of business cases. E-commerce is one of the aspects of e-business. Some other important aspects of e-business which are successfully carried through the internet are e-auctioning, e-banking, e- directories, e-engineering, e-franchising, e-gambling, e-learning, e-mailing, e-marketing, e-operational resource management, e-supply, e-trading, etc. Those aspects of business which are digitized and work well on the internet.

### **Objectives: -**

- 1) To study the concept of Digital Revolution.
- 2) To study the recent trends of Online Marketing.
- 3) To study the Business Models of Online Marketing.

### **Research Methodology: -**

For the fulfillment of the objectives from the present study, the researcher used to collect secondary data as source of information from books, journals, Magazines and Internet, along with personal observation with academicians and experts.

### **Overview of the Digital Revolution:**

Every revolution having their strong bases, and on that bases, revolution changed entire scenario all over the World. As seen the history of Digital Revolution which started from 1980's and ongoing. Day by day the Cell phone subscribers and Internet users are rise and used to it frequently. The began in the mid-20<sup>th</sup> century Digital Revolution was boost and is also called as Third Industrial Revolution. Because Transformation started from Analog to Mechanical and Electronic Technology to Digital Technology in businesses and new business era emerged. The digital revolution marked the beginning of information age. In the 20<sup>th</sup> century the rise of the service economy caused people to leave the industrial cities and move out into the suburbs. Now it is the stage of fourth Digital Revolution also because of major changes and growth in the economy of the country in a better and effective way and development to come due to Digitization happens all over the world. India is on the brink of digital revolution and it is the top Internet user's country. Digital Revolution in India resulted in broad bands and phones. The launch of 3G, 4G and 5G services are best examples of Digital Revolution. Before technology developed the growth of businesses was slow but now with the help digital technology every customer enjoying their shopping and their business work or deals on just one click from home or any place.

### **The recent trends of Online Marketing:**

The internet allows companies to react to individual customer demands immediately without any loss of time. It does not matter where the customer is located, it's a 24/7 service provider to the customer, this is the online marketing. Online Marketing is to facilitate the customer online journey and make the task easy to marketer through using new online marketing tools. Modern marketers use all the fresh methods which resolve around the internet. Now companies use campaigns and social media as a platform to reach out to the customers and expand their prospective customers. Some companies making brand awareness for customers and use to advertise their websites information through new digital marketing tools.

### **Top Trends driving for Online Marketing:**

**Content Marketing-** It is the top most marketing trend to focus on how to create an integrated content marketing strategy. In this trend, it uses short video with valuable, relevant and consistent content to attract and retain the prospective customers through social media posts such as blogs, Facebook, etc.

**Chat Bots-** Chat Bots trend is more customer oriented and aims to respond to a customer's query artificially. The Facebook messenger is one of the most popular booster for their active users.

**E-mail Marketing-** Advance E-mail marketing tools now useful for converted into campaign. It is one of the effective ways to convert leads into prospective customers. Letting customers know about special offers or introducing new products and services information, provide review for their previous purchases, share tips to get more out of a product or services information, provide invitation for new events, refer it to others, etc.

**Social Media Marketing-** Trend in social media marketing are often controlled by the efforts of the social networks. It has seen Facebook, What's App and Instagram in particular make changes in business strategy. Now need to pay to play to get the reach prospective customers to have an impact of these social media network. Social Media have continued to innovate in their targeting and remarketing options for Online Marketing.

**Big Data Marketing Application-** In marketing, Big Data is providing insights into which content is most effective at each stage of a sales cycle, how investment in Customer Relationship Management system can be improved, in addition to strategies for increasing conversion rates, prospect engagement, revenue and customer lifetime value.

**Mobile Marketing-** Most of the leading companies are looking at adaptive mobile design approaches which have the benefit of serving more relevant, contextual content for users and reducing load times. Mobile also has a large impact on search marketing as Google vigorously follow its mobile first mantra.

**Business Models are Significant to Online Marketing for the growth of their Businesses:**

With the help of E-Commerce following are Business Models which playing an important role in digitization for online marketing:

**1) Business to Business Model:** In this business model commerce transactions between businesses such as between manufacturer and a wholesaler or between wholesalers and retailers. Pricing factor is the base on the quantity of orders and is often negotiable. Business to business dealings takes place over the Extranet. The extranet consists of two intranets connected via the internet, whereby two organizations are allowed to see confidential data of the other. Normally only that much information which is necessary for the business to take place is made available to the partner over the extranet. This Model have existed long before the internet came into use.

**2) Business to Consumer:** In this model, businesses conducted directly between and an end users or consumers whom consumes their products or services. Now it is more powerful and very like from today's customer. This is the selling goods and services through the internet to the innumerable customers spread all over the world. This business model concerns establish virtual shops and offer goods and services to whoever visits their websites, i.e., selling products on the web.

**3) Consumer to Business:** In this model consumers create value and businesses consume that value. This model is also known as a reverse auction or demand their own price, which is often binding for a specific goods or services. The website collects the demand bids then offers the bids to participating sellers.

**4) Consumer to Consumer:** This model of innovative ways to allow customers to interact with each other. This is the business facilitates an environment where customers can sell these goods and services to each other.

**Conclusions: -**

It is concluded that, the most of the established and establishing companies now believe and focus on Online Marketing. Online marketing is anticipated that in order to nurture growth of business and have edge over competitors and also important to announce your presence to the ever-growing number of online customers. It is ultimately resulting in consolidated increase in revenue of businesses. Now the many customers to stay connected with online for surfing different things which they want in one click. Most of the businesses go for growth strategy in establishments striving to reach their existing and prospective customers to stay connected with them irrespective of distance, time and space. The advance online marketing tools has changed their way of online marketing which is almost they done in online platform. The way of businesses sells their products or services as per the requirements and satisfaction of the customers. Many time customers are comparing many of the products or services to other competitors (business) and after that customer willing to purchase whichever product they want to buy. The online marketing is the only one platform to providing the update information and buying activities of products or services easily to the customers. There are some popular online businesses icons- Amazon, Flipkart, indiamart, indiabookhouse, Snapdeal, Shopclues, Myntra, ebay, etc. It is the success of Online Business to keep touch with their customers for long time.

**References:**

1. Louis Colombus, "Ten ways Big Data is Revolutionizing Marketing and Sales", May 9, 2016, article available online.
2. Ernest A. Capozzoli, Thomas K. Pritchett, *E-Commerce: A Conceptual Framework*, Journal of Asia-Pacific Buisness.
3. "E-Commerce", C.S.V. Murthy-Himalaya Publishing House, New Delhi, 2002.
4. "International Business", P. Subba Rao-Himalaya Publishing House, New Delhi, 2010.
5. "Compare and Contrast Essay: Online Shopping vs. In-store Shopping", 123HelpMe.com. 25 Jan 2016.



## **Over The Top (OTT) Platforms In India: Issues And Challenges - An Empirical Study**

**Sujith T. S<sup>1</sup> Dr. M. Sumathy<sup>2</sup>**

<sup>1</sup> PhD. Research Scholar, School of Commerce, Bharathiar University, Coimbatore

<sup>2</sup> Professor and Head, School of Commerce, Bharathiar University, Coimbatore

### **Abstract:**

*OTT platforms in India are growing rapidly in terms of subscribership mainly due to a number of factors such as convenience, ease of use, lower internet cost, drop in price of smart phones, etc. The drop in prices of smart phones and cellular data has enabled a large chunk of the population to gain access to online platforms. A youth oriented population has led to the increase in the viewership of OTT platforms such as Netflix, Amazon Prime, Disney+Hotstar, YouTube, etc. Digital India plays a crucial role in promoting the utilization of OTT platforms to stream diverse content from everywhere India. The present study identifies the problems faced by OTT platform in India. The study identifies major challenges such as government regulations, competition, content challenges, societal and legal challenges etc. The study concluded that live streaming is still a challenge for popular content like news, sports, and entertainment events and the multi-device viewing remains a major concern of OTT platform.*

**Keywords:** Internet, online streaming, smart phones, OTT.

### **Introduction:**

The Coronavirus disease (Covid-19) has affected almost every industry in India. Over-the-top (OTT) platforms gained most from nationwide lockdowns as much of the population was forced to tookenward and outward home based entertainment options. The number of OTT paid subscribers increased by 30%, from 22.2 million to 29 million from March to July 2020. Over the Top or OTT is the media offered directly to the users over the Internet. It bypasses traditional media distribution methods such as cable and satellite television. Different types of OTT platforms serve different purposes. The most popular platforms allow you to observe your favourite TV shows on a good range of connected devices. This was never possible with traditional cable TVs because of the technological limitations. The Indian Over the Top market is anticipated to emerge the world's 6th biggest with a market size of \$2.9 Bn by 2024, growing at a CAGR of 28.6% during 2020-2024, according to a [report](#) by PwC. Ever since the Ministry of Information and Broadcasting announced [new and stricter digital guidelines](#) on February 25, 2021, the future of OTT players in India has remained doubtful. The new guidelines include a three-tier monitoring mechanism to tighten the government's grip on OTT content. But the problem goes deeper than the age suitability. If we look at some of the most viewed programs on OTT platforms, we will soon realize that much of the content is full of controversy and that objections have been raised by some viewers or by government agencies. It is not unlikely that OTT will harm political or religious sentiments, but it may ultimately have an impact on the viewers and revenue of these OTT platforms. The present study identifies the various challenges faced by Over the top (OTT) platform in India.

### **Research Methodology:**

The study is based on secondary data and follows descriptive research design. The secondary were collected from articles, journals, newspapers and various websites.

### **Discussion:**

#### **Problems faced by the OTT platform in India**

##### **Government Regulations:**

The new government regulation states that content must be removed if any government agency or individual opposes any controversial issue. According to the new digital guidelines, OTT platforms will be subject to a three-tier monitoring system. The first level includes an adequate classification of all content on OTT platforms. In addition, a grievance redressal officer on each platform should make his / her contact details available on the website. The Ministry of I&B should implement the second level resolution within 15 days of receiving the complaint. The third floor will have an Inter-Departmental Committee (IDC) set up by the I&B Ministry. The committee is chaired by an authorized official of the Ministry and will consider complaints referred to by the Self-Regulatory Body or the Ministry.

##### **The Cost Of Censorship:**

Adherence to the above guidelines and removal of content (when such cases occur) can hurt OTT shows as they are more expensive to produce than TV shows. According to a KPMG report, *Made in Heaven* or *Mirzapur* can fetch an average of Rs 1-2 crore per episode, while TV shows can fetch an average of Rs 10-15 lakh per episode.

### **Need for More Power:**

OTT platforms handle high resolution video data. This means more processing power is required, especially compression. This means that more fiber capacity is required, which can range from 10GB to 100GB. It comes with a high energy requirement.

### **Multicast Challenge:**

One of the problem that OTT platforms face is that ISPs need to support certain proprietary multicast protocols. Another related challenge is that multicasting requires different versions of multicast streams to enable dash protocols or all approaches that fit a size based on a single video version.

### **Content Challenge:**

Content is at the heart of OTT platforms and does not seem to be the most important factor in attracting viewers or users. It is also true that if these services are not able to create and deliver the content that viewers want, they will not be successful in the long run.

### **Content Discovery**

There is no longer the patience to browse through hundreds of channels to find something that viewers want to see. Modern users browse more than a few pages and then find the content they need. This makes it important for OTT platforms to improve their content detection functionality.

### **Meeting Demand**

It's always hard to tell which content is going viral. When a video content goes viral, it can be found to be unprepared for OTT platforms.

### **Viewer Retention**

Maintaining a viewer base is a major challenge facing OTT platforms. Content offers viewers what they want, provides high quality video content, and ad content does not intrude, allowing viewers to avoid it. Intrusive promotional content and low video quality were found to be the main reasons why viewers switched from certain content. It is therefore important to address these issues in order to maximize audience retention.

### **Conclusion:**

Many challenges are facing OTT platforms and players in India. Reaching the global market and meeting the challenge of multi-device viewing remains a major concern of OTT platform. There are business, government regulations, competitors, societal and legal challenges are also a big concern of the OTT platform players. In fact, true live streaming is still a challenge for popular content like news, sports, and entertainment events. It requires the lowest-possible latency and handling tens of millions of viewers at the same time while delivering high-quality audio-video content.

OTT has certainly created new opportunities for distributing content to viewers in any market. On the other side, viewers have their own choice of choosing the programs and the flexibility of when, how, and where to watch their favorite content. As OTT continues to gain popularity, the IP technologies underlying the Internet will have to evolve. It is, however, a big challenge because these technologies are not simple to scale. Thus, there are still many challenges that continue to persist in this space which will further evolve into newer opportunities in the coming years.

### **References:**

1. <https://inplayer.com/how-ott-providers-can-overcome-the-challenges-they-face/>
2. <https://www.streamingmedia.com/Articles/Editorial/Featured-Articles/The-Four-Problems-Facing-OTT-Services-and-How-to-Solve-Them-121401.aspx?CategoryID=425>
3. <https://www.livemint.com/news/india/india-is-the-world-s-fastest-growing-ott-market-pwc-report-11603355739242.html>
4. T.S, S., & Sumathy, M. (2021). An empirical study on the growth of over the top (OTT). In *An empirical study on the growth of over the top (OTT) media platform in India* (pp. 104-109). Academic Province .
5. Sundaravel, E. and Elangovan, N. (2020). *Emergence and future of over-the-top (OTT) video services in India: an analytical research*. International Journal of Business, Management and Social Research, 08(02), 489-499.
6. News18.com (2019). Four Out of Five Smartphone Owners in India Use At Least One OTT Entertainment App.

## **The Geographical Study of Rural Settlements Size in Daund Tahsil, Pune District (MS)**

**Mr. Parkhe Sakharan Baban<sup>1</sup> Dr. Chimangunde Vishavraj S<sup>2</sup>**

<sup>1</sup>Ph.D. Research Student & Dept. of Geography, S.C.S. Mahavidyalaya, Shrigonda- Dist- Ahmednagar, Maharashtra.(India),

<sup>2</sup>Dept. of Geography, Shri Sant Janabai Mahavidyalaya, Gangakhed. Dist- Parbhani. Maharashtra.(India),

### **Abstract**

*The rural villages is a vital part of India and the overall World. The house and settlements is a main of human life. All rural villages part is energetic in the nation. The every rustic settlements has a size. The studying geography of rural settlements, population size, areal size, size of settlements is very significant. The size of rural settlements, average population size and average areal size has been calculated by using statistical formula and SOI toposheets have suitably been used to study the size of rural settlements. In the study region many factors affect the rural settlements size.*

**Keywords** - Rural Settlements Size, Average Population Size, Areality, Total Population, No of Rural Settlements.

### **Introduction**

According to Singh, "Size of the village is determined by population and area of the region. Size and density of rural settlements are closely related with spacing. As the spacing increases, the density of villages must increase at given density of population." (Singh, 1975). "The variation in size and spacing of rural settlements from area to area is a physically established fact, due to the variations in ecological conditions." (Mandal, 1978). "The size speaks about the nature of soil, topography, socio-economic background of the culture group of a particular area." (Singh, 1998). "The size of settlements and their spacing is an important aspect of study in Geography. It has vital importance for understanding the settlement system." (Murthy, 1999).

The size of a rural settlements is one of the greatest vital aspects in the study of rural settlement geography. To define the size of rural settlements, various criteria such as population, density, number of houses, houses types, area of settlement, settlement types etc. were used. There are several elements like physical, social, economical and cultural, which touches distribution, size, spacing, shape and morphology of different settlements. The rural settlements are significantly influenced by physical and cultural elements. The effect of physical - cultural factors can be experiential by studying the rural settlements with respect to their size, spacing, types, patterns, house types and building Material. The following pages an attempt has been made to study the effect of numerous physical and cultural elements on rural settlements of Daund tahsil. This region gets scanty precipitation. The correlation formula is also used for study of correlation between, average population size, average areal size of rural settlements.

### **Study Area**

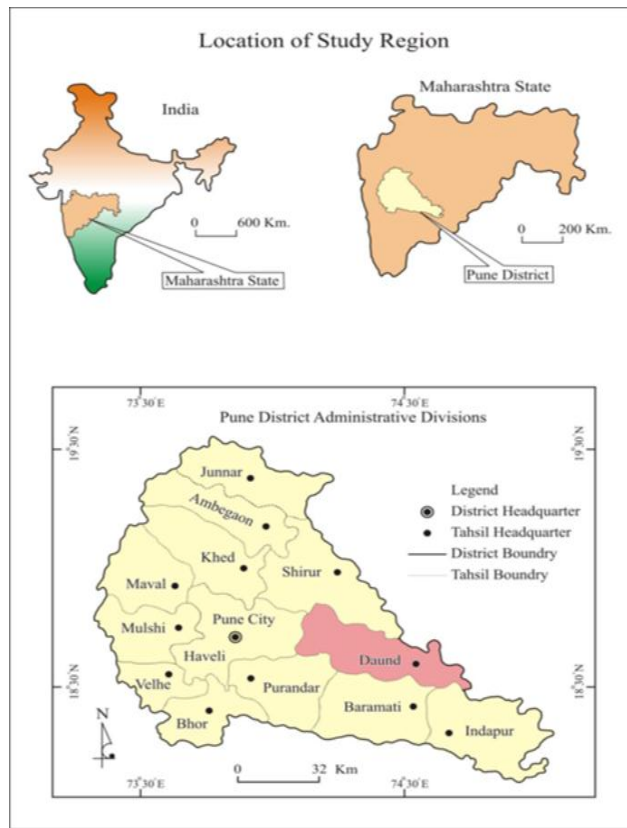
Daund tahsil is located in the western Maharashtra, in Pune district. The geographical area of the Tahsil is between 18° 18'' to 18° 40'' North latitudes and 74° 06'' to 74° 50'' East longitude. Daund tahsil total area is 1288.04 Sq. Km. and the total of 13 tahsil in the Pune district. The tahsil total 102 villages and 2 town and Six revenue circle. The study region height is 500 to 600 mt in MSL. The space is separated by numerous river basin like Bhima and its tributary Mula-Mutha. The certain lake are available in study region Warvand, Kasurdi etc. The area practiced semi arid weather and rain shadow zone with light precipitation. In this area black soil founded. The Sugarcane, Bajara, Jawar, Onoion, Groundnut crop taking study part. According to 2011 census, Daund tahsil total population is 3,82,535 ( Male-1,98,269 & Female- 1,84,266 ). The Daund tahsil density is 297 persons per Sq. km. The study area irrigated land is 74,463 hectares (58.05%). The Transport & communication system very good developed in study area. Daund railway junction, Solapur Pune National highway, industrial area, other major state roads are obtainable in region.

### **Objectives**

1. To study the average population size, total population, areality in study region;
2. To understand the rural settlements average population size, areality, area in revenue circle wise distribution in Daund tahsil.

### **Materials and Methods**

1. Census of India (2011), "Registrar General of Census Report", Government of India, New Delhi. ( Daund tahsil, Pune district, Maharashtra, India.)
2. Data for study the rural settlements population, area, no of rural settlements of Daund tahsil has been collected from District Census Handbook. (1991, 2001, 2011 census.)
3. This six revenue circle is- Rahu, Yavat, Kedgaon, Patas, Daund, Ravangaon etc.
4. The comparative study of average population size, these six revenue circle in Daund tahsil,Pune district. (M.S.)
5. The Daund tahsil revenue circle wise rural settlements average population size, areality,area use excel and draw a chart.



**Results and Discussions**

The covariance of spacing of rural settlements depend on such vital aspects as fertility of land, productivity of farming, nature of yields, distribution and availability of water, density and size of rural population, mode of living and several other factors. It is the most important function of nature of soil, topography, availability of water (irrigation), socio-economic and cultural background of the specific region.

$$S = \frac{P}{N}$$

Where,

**S** = Average size of population of rural settlements in a circle,

**P** = Total population within circle,

**N** = Total number of rural settlements within circle.

**Average Population Size, Arealty, Total population, No of Rural Settlement in Daund tahsil.**

S r. N o.	Circle	1991				2001				2011			
		Total Popul a tion	No of Ru ral Set tl.	Ave rage Pop ula tio n	Are alit y Km 2	Total Popul a tion	No of Ru ral Set tl.	Ave rage Pop ula tio n	Are alit y Km 2	Total Popul a tion	No of Ru ral Set tl.	Ave rage Pop ula tio n	Are alit y Km 2
1	Rahu	37703	20	1885 .15	3.4 4	41765	17	2456 .76	3.3 2	46310	17	2724 .11	3.3 2
2	Yawat	37191	18	2066 .16	3.5 7	56882	21	2708 .66	3.3 7	65710	21	3129 .04	3.3 7
3	Kedgao n	56274	23	2446 .69	3.6 0	50640	16	3165	3.5 4	56791	16	3549 .43	3.5 4
4	Patias	-	-	-	-	61540	16	3846 .25	4.2 8	66735	16	4170 .93	4.4 0

5	Daund	61910	21	2948.09	3.65	51162	18	2842.33	3.02	47696	17	2805.64	2.98
6	Ravangan	37563	21	1788.71	4.03	37195	15	2479.66	4.03	40941	15	2729.4	4.22
	Daund Tahsil	230641	103	2239.23	3.66	299184	103	2904.69	3.62	324183	102	3178.26	3.64

**Resource- Computed by researcher.**

The average population per rural settlement is shown in table. It clearly shows that area of Daund tahsil is occupied by southern part is mountainous or undulating area and Northern and north west also occupied by Bhima and Mula mutha river catchment area, medium black cotton soil. In the study area is close to Pune city, so transport facility is very strong in region. National highway no.65 ( NH 9) and Central railway line goes to central part of tahsil all circle, remaining Rahu circle. New Mula mutha canal Irrigation facility is very strong in study area. In 1991 census, Daund tahsil is 5 circle. The highest average size of population is Daund circle and it is 2948.09 persons per rural settlement. The lowest average size of population is Ravangan circle and it is 1788.71 persons per rural settlement and Rahu circle is 1885.15 persons per rural settlement. The medium average size of population is Yawat circle is 2066.16 and Kedgaon circle is 2446.69 persons per rural settlement. The average size of population is 2239.23 persons per rural settlement in Daund tahsil. In 2001 census, Daund tahsil is 6 circle. The highest average size of population is Patas circle and it is 3846.25 persons per rural settlement. The lowest average size of population is Rahu circle and it is 2456.76 persons per rural settlement and Ravangan circle is 2479.66 persons per rural settlement, Daund circle is 2842.33 persons per rural settlement. The medium average size of population is Yawat circle is 2708.66 and Kedgaon circle is 3165 persons per rural settlement. The average size of population is 2904.69 persons per rural settlement in Daund tahsil. In 2011 census, Daund tahsil is 6 circle. The highest average size of population is Patas circle and it is 4170.93 persons per rural settlement. The lowest average size of population is Rahu circle and it is 2724.11 persons per rural settlement and Ravangan circle is 2729.4 persons per rural settlement, Daund circle is 2805.64 persons per rural settlement. The medium average size of population is Yawat circle 3129.04 and Kedgaon circle is 3549.43 persons per rural settlement. The average size of population is 3178.26 persons per rural settlements in Daund tahsil. The size of the rural settlements is well-defined by many geographers. Rural Settlements According to Areality is derived with using the following formula –

$$A = \sqrt{\frac{Ra}{N}}$$

Where,

A = Areality in km<sup>2</sup>.

Ra = Rural area of circle in km<sup>2</sup>.

N = Total number of rural settlements within circle.

With using this formula of areality is calculated of sub division means circle of study area. The areality in Daund tahsil is uneven in 2011 census. It is ranging from 2.98 km<sup>2</sup> in Daund circle and 4.40 km<sup>2</sup> in Patas circle. In Rahu circle, is 3.32 km<sup>2</sup>, in Yawat circle 3.37 km<sup>2</sup>, Kedgaon circle 3.54 km<sup>2</sup> and Ravangan circle 4.22 km<sup>2</sup>. Areality is very low found in the Daund circle. This circle acquired only 151.637 km<sup>2</sup> area and the 17 rural settlements in the circle. The high areality Daund tahsil circle like Patas circle, obtainable area is 310.686 km<sup>2</sup> and number of 16 rural settlements. The areality of circle Ravangan is second largest areality in study area. In study area the medium areality circle name is Rahu, Yawat and Kedgaon circle.

**Conclusions**

The average population per rural settlements is shown in table. It clearly shows that area of Daund tahsil is occupied by southern part is mountainous or undulating area and Northern and north west also occupied by Bhima and Mula mutha river catchment area, medium black cotton soil. In the study area is close to Pune city, so transport facility is very strong in region. National highway no.65 ( NH 9) and Central railway line goes to central part of tahsil all circle, remaining Rahu circle. New Mula mutha canal Irrigation facility is very strong in study area. In 1991, 2001, 2011 census show the increase of population, increase circle, increase rural settlements in study area, but areality are constants.

In the study area, 1991 census only 5 circle, but 2001 and 2011 census 6 circle in study region. In the study area the areality is very slowly changes, because of population increase and new circle and rural settlements created.

**References**

- Haggett, P. (1965): - 'Location Analysis in Human Geography', Arnold Publication, London.
- Singh, S. (1997): 'Geomorphology and Rural Settlement in Arid Environments'. J, vol –
- XLIV, NO-2.

4. Pawar D.H. and Patil Swati V. (2010): "Spatial Characteristics of Rural Settlement: A Case Study of Panhala Tahsil". *Goa Geographer*, VII (1): 72-76.
5. Powell, Baden, B.H. (1892), *Land systems of British India*, London Vol. P.97.
6. Dr. Chimangunde V. S. & Assit.Prof. Parkhe S.B, ( 2021 January ), *The Geographical Analysis of Rural Settlements History with Prefix- Suffix in Daund Tahsil, Pune district.*
7. ( M.S.) Vol. III. Akshar Wangmay.
8. Blache, Vidal de La. (1926), *Principles of Human geography*, New York, P.316.
9. Kumbhar, A. P. (1997): 'Rural Habitat (A study of Rural Settlement in Nira Valley)', Sumeroo Prakashan, TilaknagarDombivli (East) Thane.
10. District Census Handbook. ( Pune District - 2011, 2001, 1991. Maharashtra.)
11. Census of India, (2011), "Registrar General of Census Report", Government of India, New Delhi.( Daund tahsil, Pune district, Maharashtra.)
12. Socio-Economics review and District statistical Abstract of Daund tahsil, Pune district. ( 2011, M.S.).
13. District Gazetteer of Pune district. (M.S.)
14. Topo sheets of Daund tahsil, Pune district, Maharashtra. ( Survey of India )

## **Importance of E-Resources: Issues and Challenges**

**Mrs. Rakte Jyoti Bhausaheb**

*Librarian, J.B.S.P. M's Arts and Science College Shivajinagar, Gadhi. Tq. Georai, Dist. Beed -431143.*

### **Abstract-**

*In today's world electronic resources (e- resources) have become very popular, and libraries are no exception. Today, the academic libraries are procuring more and more e-resources for their libraries. Knowledge centers are the repositories of the intellect of ages stored in the form of recorded information for use of present and future generations to come. Digital technology has made it more easy, speedy and comfortable to apply the stored intellect. This paper is to present basic information of various aspects of e-resources and significance of e-resources in modern age.*

**Keywords-** *E-resources, Need of E-resources, Importance of E- resources, Types of E-resources, Issues and Challenges etc.*

### **Introduction-**

An electronic resource is defined as a resource which require computer access or any electronic product that delivers a collection of data, be it text referring to full text bases, electronic journals, image collections, other multimedia products and numerical, graphical or time based, as a commercially available title that has been published with an aim to being marketed. The data may store on CD ROM, on tape, via internet and so on. The entry of modern library was changed the entire library system, it invented many new techniques for the storage of data which created the documents in an electronic form. Thus, the librarians change the present situation into innovative techniques, namely electronic resources, it is a collection of data, files, journal, thesis etc in an electronic form, all the data may digitalize, the user can use it through computer, smart phone via internet, through this e-resources the user can get numerous resources depending upon their needs, it will make them satisfy. The e-resources on magnetic and optical media have a vast impact on the collections of libraries. These are more useful due to inherent capabilities for manipulation and searching, providing information access is cheaper to acquiring information resources, savings in storage and maintenance etc. and sometimes the electronic form is the only alternative.

### **Definition of E-Resources-**

1. According to Wikipedia: E-Resources means, 'Information (usually a file) which can be stored in the form Electrical signal usually, but necessary on a computer.'
2. Resources in the electronic form that is readable using various electronic components.
3. Electronic resources (or e-resources) are materials in digital format accessible electronically.  
Examples of e-resources are electronic journals (e-journal), electronic books (e-book) online databases in varied digital formats, Adobe Acrobat documents (.pdf), WebPages.

### **Research of Objectives-**

1. To study need of e-resources.
2. To study types of e-resources.
3. To study Importance of E-Resources Issues and Challenges.

### **Research Methodology-**

The current study 'Importance of E-Resources: Issues and Challenges' are based on secondary data collected from different sources. The secondary sources are concerned they were accumulated from online databases, articles and books. The research method applied to the current study is descriptive research method.

### **Need of E-Resources-**

E-Resources enable the librarian to provide better service to the user community. The few considerable points are mentioned bellow:

1. To filter search and reach to information quick we want. This is hard to do with printed materials.
2. To make rapid and effortless search of information. We could not do rapid search when printed resource is not available in library.
3. To save time and money of both library servants and user. There is no need of help of staff every time and user can get direct access of information through computer or internet.
4. To save space of library.
5. To carry out or transfer data easily.
6. To make available in more quantity.
7. To make better preservation of information collection,
8. To make use for more user at a time.

9. To acquire up-to-date information.
10. To browse huge amount of information to make deep study or research work.
11. To search information worldwide available.
12. Printed material is limited and exclusive.

#### **Importance of E- Resources-**

The E-resources plays a vital role in the all over world, every user must know the importance of e-resources, it is accepted by all kind of people because of its accessibility, affordability, usability and readability.

1. The information preserves at standard interval and can be reserved always up-to-date in electronic media.
2. Smooth the progress of easy replication into new media and sharing the data.
3. Incorporation of special media (Image, Sound, Video etc.)
4. Afford hyper links to related additional resources.
5. The electronic resources unresponsive to environment exposure and if handle with care, it will prove huge stability which cannot be attain on paper-based print media.
6. Saves massive time by providing easy and immediate access without slaying time for processing, printing, binding and delivery.
7. It also saves the space of the library.
8. It gives awareness to the user community such as PG students, research scholars, faculty and staff.
9. The user can get all the data in digitalized format, so there is no need for printing and binding.
10. The cost of e-resources is less than the print version
11. It allocates the interactive facility.
12. Have possible to preserve delicate / valuable unique materials.
13. To access and recover appropriate articles, number of search engines is available
14. It facilitates concurrent access to huge number of users.
15. Numerous access and through limited networks become easy
16. Smooth the progress of access to physically challenged persons.
17. It consents to remote access from anywhere at any time.

#### **Types of E-Resources-**

Information has been embedded in variety of types. So there should have priority to study types of e-resources. Some of the types of e-resources related to higher education are given below.

- 1. E Books** - E books are books in electronic forms. It can be used via internet browser, a computer or other electronic device. It can be downloaded to computer, laptop, and tablet. It is like printed book. E books are available on subscription by some publisher or by some institutions. There are so many free e book websites like Project Gutenberg, book boon, many books, book spot Google Scholar etc.
- 2. E Journals** - Like e books, e journals are also in electronic form or it may be defined as any serials produced, published and distributed nationally and internationally via electronic networks. These are used mostly for research purpose
- 3. E Magazines (E-Zine)** - These are also electronic magazines. It deals with product advertisement, educational, cultural, and political and some social issues. It has attractive quality of pictures and graphs than other resources.
- 4. Full text Databases** -Today's these are numbers of databases available on the network. They are either free or with charges. Full text database is compilation of document or other information in form of database in which the complete text of each referenced document is available for online viewing, printing or downloading. These databases are made available by some publisher on subscription like ProQuest, j gate ebsco etc.
- 5. Indexing and Abstracting Databases** - This database provides bibliographic information about journals including abstracts of the articles used for the reference work. These resources can be used to find reference sources in research and some other works. These resources are useful for data mining.
- 6. Reference Databases** - The databases mostly used for references which are available both online and offline. These include Encyclopedias, dictionaries, almanacs.
- 7. Statistical Databases** - This database contains numerical databases useful for business and study.
- 8. E Thesis** - This database includes Ph.D., M. Phil. and other master degree thesis and dissertations. These can be used for further research by research scholars.
- 9. E Newspapers** - There are many newspapers which are available on internet also. We can read them with zooming conveniently and can save the part which we want.



**10. Patents** - E-patents are the exclusive right granted by the government to make use of an invention for a specific period of time.

**11. E Standards** -Written definition, limit rule, approved and monitored for complains by authoritative agency.

**12. E Images** - Due to adventure of e-images facility this type of databases is developed.

**13. E Audio visual resources** - These types of databases are included images, videos, audios and text.

**14. E-Clipping-** The main objective of e-clipping is retrospective search and comprehensive analysis of new items.

#### **Issues and Challenges of E-Resources-**

The adoption of the e-resources has made a great advantage over the library services for easy retrieval of required information within a short period of time. There are some of the challenges in offering the high level of the services to users. Some of the challenges facing with e-resources management are discussed below:

##### **1. Shortage of library funds-**

ICT demand more funds for its infrastructure and continuing services. Most of the libraries have inadequate fund for acquiring e-resources and so the users do not get their needy information at the right time. Therefore, shortage of library fund to establish and run the same is challenges were identified for implementation of the digital libraries.

##### **2. Technical infrastructure-**

In a digital information service system, infrastructure such as software, hardware, internet facilities and other physical equipment's are required to provide easier, faster and comprehensive access to information. Absence of stable technical network infrastructures in terms of servers, physical cabling and wireless access points are challenges were identified for implementation of the digital libraries.

##### **3. Lack of professional skills-**

Due to lack of management and technical skills, the academic library professionals are not able to handle the e-resources. Therefore, shortages of the professional skilled personnel who can establish or run digital library are challenges were identified for implementation of the digital libraries.

##### **4. Online / virtual crimes and security-**

Web/cybercrimes have become a common threat on internet. To overcome this issue, compulsory Virus Proof procedures should be adopted while downloading e-information from any other system. To secure the system from viruses, the databases can be modified by hacker proof procedures. Separate login and password systems are to be compulsorily adapted to the Network systems. To overcome the above database security problems and issues, it is essential to install a database security software or firewall technology to protect the databases.

##### **5. Privacy / confidentiality-**

Maintaining privacy and confidentiality is another problem in accessing online information. To control pirating of software, copying or downloading all the contents of any e-resource at a time, right to obtain information and right to withhold or ban the access is essential and so there is a delicate challenge between privacy and rights to information. Protecting one network from another to maintain confidentiality of information is another problem in securing databases on Internet and Intranet.

##### **6. Copyright issues-**

Large scale of piracy of software and plagiarism is an important issue that the present day the academic library professionals are facing in providing electronic/digital information service. The cost and timeliness in retrieving the information are also considered. When negotiating access with a publisher, the librarian must agree to certain restrictions on photocopying or distribution of electronic materials. The library is responsible for maintaining the awareness of all users about copyright issues.

##### **7. Collection of e-resources-**

Collecting the materials and making it available to all current and future users is another core value of librarianship. The challenge is for the librarian to contribute to establish realistic collection-development policies covering acquisition of and provision of access to electronic resources for users now and in the future. A digitized collection means that libraries share the use of the collections with other institutions, not only locally, but also globally. It is the publisher who dictates how much access will be provided, which issues will be available, and how much that access will cost.

##### **8. Organizational structure-**

Technology has broken down the rigid hierarchical structure of the organizations which is another important issue in changing the roles of the librarian in the knowledge society. Far from emulating the organization of conventional libraries, the organization and structure of digital libraries and the division of

labour within them, are open to considerable experimentation.

### **Conclusion-**

In conclusion, this paper has discussed the importance, issues and challenges of e-resources, it is very familiar among the various fields of peoples, in fact, it is now hard to envisage a world without e-resources. The stipulation and use of e-resources is element of the complete system, to both the students, institutions and information professionals. The e-resources assist to deliver the sources to their user very fast, so the user time was saved. Nowadays e-resources have totally reduced the usage of paper material. These e-resources are convenient to use, reachable at a reasonable cost and can be accessed from anywhere and by many users concurrently, these databases are most advantageous utilize to put in to the academic excellence and achievement of its user community.

### **References-**

1. A.Y. Kenchakkanavar. (2014). 'Types of E-resources and its Utilities in Libraries', International Journal of Information Sources and Services. Vol.1. Issue 2.
2. Bhat, Ishwar. (2009). Increasing the Discovery and use of e-resources in University Libraries. 7th International CALIBER-2009. <http://www.inflibnet.ac.in/caliber2009/CaliberPDF/67.pdf>
3. Chennupati K Ramaiah. (2003). Electronic Resources Management in Libraries. Allied Published Private Limited. p. 86-101.
4. Chandel A.S. (2011). Challenges of electronic resources management, transformation of agricultural libraries in collaborative era, edited by M.S. Pathania et al. P. 10-21.
5. S Haridasan. (2009). 'Impact and Use of E-resources', Social Scientists in National Social Science Documentation Center (NASSDOC)India.
6. Sunil Kumar Satpathy & Biswanath Rout. (2010). Use of E-Resources by the Faculty Members with Special Reference to CVRCE, Bhubaneswar, DESIDOC Journal of Library & Information Technology. 30. No. 4. p. 11-16.
7. <https://www.inflibnet.ac.in>.
8. <https://www.researchgate.net>
9. <https://www.wikipedia.org>

## **Importance Enterprise Resource Planning (ERP) in Business: A Study**

**Gourab Das<sup>1</sup> Subrata Das<sup>2</sup>**

*Assistant Professor, Department of Commerce Vidyanagar College*

### **Abstract:**

*Globalisation leads all the business firms to adopt Enterprise Resource Planning (ERP). These are the set of combination of key functions of the organisation like production, sales, operation, finance in a suitable integrated way. ERP helps to set very effective and transparent policy from the point of view of any business firms. This paper presents the importance, modules and advantages of ERP in today's business scenario.*

**Keyword:** ERP, Business, Planning, Benefits etc.

### **Introduction**

ERP is a systematic planning of how business resources (material, employees, customers, vendors etc) are acquired and moved from one state to another dynamically balancing and optimising the resource of the company. It is based on a common database and a modular software design. The common database can allow every department of business to store and retrieve information and realise. The ERP information must be optimised, reliable, accessible, integrated and easily shared.

So, in brief ERP can be defined as a system/ software which enable whole the company to access information at a particular point of time to the external users by which all the enterprise resource can be dynamically balancing and optimising.

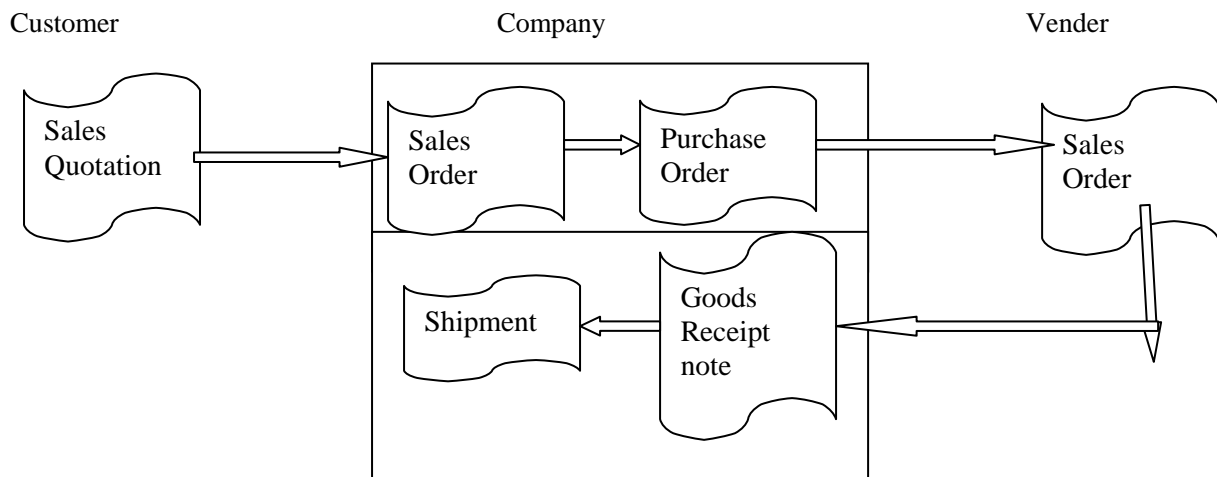


Fig: Business Process

### **Characteristics of ERP:**

ERP System critically include the following characteristics,

- 1) ERP is an integrated system that operates all the company detail in real time, without informing the periodic update to the end user.
- 2) By using a single database all the applications can be supported by all the resources of the company.
- 3) A consistence look and feel throughout each module of ERP can be handled properly.
- 4) ERP is a software architecture that facilitates the flow of information among the different functions within an enterprise.
- 5) ERP enables decision maker to have an enterprise wide view of the information they need in a timely, reliable, and consistent fashion.
- 6) ERP provides the back-bone for enterprise wide information system.
- 7) The installation of ERP system is done without elaborating any application details i.e; here the encapsulation method is followed.

### **Review of Literature**

**Dr.Nawaz & Dr. Channakeshavalu.(2014).** analysed the ERP process, benefits issues and challenges of from the point of view of business firms in global market.

**Muhayfith & Shaiti (2020)** pointed out the benefits in business performance were achieved after implementing the ERP but also some of the benefits cannot be achieved. They also discussed the positive and negative impact of ERP in business level.

**Ross & Vitale (2000)** found out that business is close to collaborative model which deals with its upliftment, competitiveness, improve business practice and polices and also different ERP module implication to increase efficiency of the business.

**Objective of the study**

- To find out the concept and importance of ERP.
- To analyse the modules to be adopted for ERP.

**Research Methodology**

This study is an explanatory in nature and is based on secondary data only. Secondary data are collected from different sources like internet, research paper, relevant books, journals, website of different company etc.

**ERP Components:**

The following are the usual components of ERP

- 1) Transactional database.
- 2) Management Portal/dashboard.
- 3) Business intelligence system.
- 4) Customizable reporting.
- 5) Search.
- 6) Document Management.
- 7) Messaging/ chat/ wiki.
- 8) Work flow management.

**Levels of ERP:**

For implementation of ERP we can process three levels of ERP.

1) **Basic ERP Processing:**

ERP Processing by a control unit for a device or processing medium.

2) **Intermediate ERP Processing:**

This type of ERP processing can be provided by the basic processing and also issues several permanent error messages.

3) **Full ERP Processing:**

This type of ERP processing can be performed by fully provided functions such as – the errors, logging data collected by a control unit and processing request by the users.

Based on integration ERP can be inter related six separate dimensions of levels –

- 1) System specifications of level.
- 2) System user integration level.
- 3) Technology integration level.
- 4) Organisation integration level.
- 5) Socio- organisational integration level.
- 6) Global integration level.

**Benefit or advantages of ERP:**

There are many advantages of ERP system implementation. Some of the benefits are –

1) **Integrated system:**

ERP integrate different operational areas within a single communicational and productivity area.

2) **Cost effectiveness:**

Despite the initial investment ERP system significantly reduces the company operations.

3) **Increasing work efficiency:**

ERP system integrates various sub-divisions of organisation and enhances the work efficiency by reducing the paper documents and providing the user-friendly interface.

4) **Integrated decision making:**

The management of the organisation use ERP for making major decisions.

5) **Product standardisation:**

ERP enables standard product manufacturing and marketing.

6) **Improving and optimizing management:**

The implementation of ERP system facilitates the centralised and optimised management of the organisation.

7) **Improve visibility:**

ERP centralises the total organisation which facilitates order or revenue tracking, invoicing, receiving, inventory transmitting etc.

8) **Optimising the organisational communication:**

ERP improves both the intra or inter organisational communications.

9) **Automatically data processing:**

Though ERP provides a centralised system so that any resources of the organisation can use and pass the information from one to another.

**Modules of ERP:**

There are many ERP modules in ERP software. Each ERP module corresponds to a major functional area of an organisation.



1) ERP Finance module:

All kinds of organisations get their benefit for the implementation of ERP financial module. It can gather financial data from various functional departments and generates financial reports and statements.

2) ERP HR module:

HR module stream lines the management of Human resource and human capitals which maintains the complete employee's database including contact information, salary details, attendance etc.

3) ERP Production module:

The ERP production module is used to accumulate the vast knowledge of implementing production planning, production optimisation, production utilisation, manufacturing capacity, component and material resources etc.

4) ERP Purchasing module:

Purchase module refers the procurement of raw material. It automats the processes of identifying the potential supplier, negotiating price, ordering the purchase order to the supplier and billing process.

5) ERP Inventory module:

This module facilitates process of maintaining the appropriate level of stock in a ware house.

6) ERP sales and marketing module:

Sales module implements function of order placement, order scheduling, shipping & in-voicing. ERP marketing module directly used for promoting and marketing work.

**Phases of ERP implementation:**

ERP implementation goes to various inter connected phases. These phases generally sequential but several times come as overlapping way.

For a typical ERP project the implementation phases are given below: (These different phases of ERP are also known ERP life cycle)

1. Pre evolution screening.
2. Evolution Package.
3. Project Planning.
4. GAP ANALYSIS
5. Re Engineering Process.
6. Process Customisation.

7. Implementation team training.
8. Customers and Users training.
9. Testing.
10. Post implementation, re-checking and support.

**Conclusion:**

it can be said that the impact of ERP system on today's business are essential. ERP system makes the business function smoother and easier. Different activity level like operation, production, sales, financing – in all cases ERP should be implemented so that business can able to get competitive advantages. Developed ERP system, helps any business firms to remove different barriers and increases communication level with different levels of management. It will also help to enhance the profitability and efficiency of any business firms. So ERP is mandate for any business to be in the market in this era of globalization.

**Bibliography:**

1. Dr.Nawaz.M.N & Dr. *Channakeshavalu.(2014). K.* The Impact of Enterprise Resource Planning (ERP) Systems Implementation on Business Performance. Asia pacific Journal of Research. Vol 2(4).pp 30-47.
2. Elragal.A.A & Ayman M. Al-Serafi (2011). The Effect of ERP System implementation on Business Performance: An Exploratory Case-Study. IBIMA Publishing. Vol. 2011 (2011), DOI: 10.5171/2011.670212
3. Muhayfith & Shaiti (2020).The Impact of Enterprise Resource Planning on Business Performance: With the Discussion on Its Relationship with Open Innovation. Journal of Open innovation, Technology, Market & Complexity. Vol 6. Pp 2-24.
4. Ahmad. M & Cuenca. R.P. (2013). Critical success factors for ERP implementation in SMEs. *Robot. Comput. Manuf.* Vol-29, pp. 104–111
5. Ross, J.W. & Vitale, M.R. (2000). The ERP revolution: surviving vs. thriving, Information Systems Frontiers, Vol. 2, No. 2, pp.233–241.
6. [https://www.researchgate.net/publication/244484470\\_Review\\_Paper\\_Critical\\_Success\\_Factors\\_for\\_ERP\\_Implementation](https://www.researchgate.net/publication/244484470_Review_Paper_Critical_Success_Factors_for_ERP_Implementation)
7. [https://www.academia.edu/46878613/Exploring\\_knowledge\\_sharing\\_in\\_ERP\\_implementation\\_an\\_organizational\\_culture\\_framework](https://www.academia.edu/46878613/Exploring_knowledge_sharing_in_ERP_implementation_an_organizational_culture_framework).

## **Feature Based distance Measurement Approach for Detection, Verification and Authentication of Individual**

**Ghugre Vijaymala Tanaji**

*Department of Mathematics, Rashtramata Indira Gandhi College, Jalna. (MS) India.*

### **ABSTRACT:**

*Identification and authentication is done using various biometric sign like fingerprints. The recognition rate depends on quality of fingerprints images. Finger prints quality also varying from rural and urban population. Rural populations perform physical work than urban population. Therefore the ridges, valleys, bifurcation, joints, minutia etc. features are not good quality hence it reduces recognition rate accuracy. To improve recognition rate of such images there is need to improve the quality of features. In this paper we have used the rural fingerprints database which is collected from IIT Delhi research lab which consists of 1632 fingerprints images. Out of which we have preprocess 800 sample images using testing, we were tried to improve the quality of features.*

**Keywords:** *Rural fingerprints, neural network, pattern recognition, fingerprint training and testing.*

### **Introduction:**

In the fingerprints recognition system the main objective of the fingerprints enhancement algorithm is to reduce low quality noisy images of rural fingerprints databases. There are several factors that affect the quality of fingerprints image, videlicet presence of noisy fingerprints images variations of pressure between the fingerprints and acquisition sensor, worn artifacts and environmental conditions during acquisition process. An input fingerprint image is thereby converted by the enhancement algorithm to reduce the noisy fingerprint images. The rural fingerprints database collected is collected from IIT Delhi research lab.[5] We have performed various algorithms, techniques and tools for automatic recognition of humans. The fingerprint database enables researches in developing, testing and publishing human recognition algorithms. Image Analysis and Biometrics (IAB) Lab at Indraprastha Institute of Information Technology (IIIT Delhi). We have Work on rural fingerprint database. Fingerprint recognition refers to the automated method of verifying a match between two human fingerprints. Fingerprints are one of many forms of biometrics used to identify an individual and verify their identity. Because of their uniqueness and consistency over time, fingerprints have been used for over a century, more recently becoming automated advancement in computing capabilities. Fingerprint identification is popular because of the inherent ease in acquisition, Neural networks are now one of the most commonly used classifiers for fingerprint Classification systems have developed a neural network classification system and feature of fingerprints since, several works use feed-forward neural network An artificial neural network is an interconnected group of artificial neurons that uses a mathematical model or computational model for information processing based on a connectionist approach to computation. In most cases an adaptive system that changes its structure based on external or internal information that flows through the network. Conventional approaches have been proposed for solving these problems. Although successful applications can be found in certain well-constrained environments, none is flexible enough to perform well outside its domain. This research paper is written based on feature extraction images have implement and evaluation for fingerprint testing recognition in MATLAB environment is performed.

### **PRE-PROCESSING:**

We have used the Gabor filter based algorithm. This algorithm used for fingerprint testing algorithm mainly includes. In image processing, a Gabor filter, is a linear filter used for edge detection. Gabor filters, simulated visual vertex cells, have the properties of spatial localization, orientation selectivity and spatial frequency selectivity. Gabor filters can be used for both image reconstruction and image analysis. The Gabor filters are self-similar: all filters can be generated from one mother wavelet by dilation and rotation. Thus, image analysis by the Gabor functions is similar to perception in the human visual system.

Gabor filters have both frequency selective and orientation selective properties. Gabor filters can remove noise and preserve the true ridge and valley structures thus showing good performance.

**Step 1. Centralizing:** Divide the input image into non overlapping blocks Compute the gradients at each pixel estimate the local ridge orientation of each block centered at pixel.

**Step 2. Cropping:** Selecting the region of interest from the center point take 175 x 175 pixel area.

**Step 3. Sectorization:** The region of interest is divided into collection of sectors with Center is of 12 pixels, Five concentric bands of width 15 pixels -Sixteen sectors in each band -Total Eighty sectors.

**Step 4. Normalizing:** Remove effects of sensor noise and gray level deformation due to finger pressure differences. Normalize each sector separately to a constant means and variance. Normalization is a pixel wise operation which does not change the clarity of the ridge and valley structures.

Wiener2 low pass filters-filters have a grayscale image that has been degraded by constant power additive noise. Wiener2 uses a pixel wise adaptive Wiener method based on statistics estimated from a local neighborhood of each pixel.

$J = \text{wiener2}(I, [m \ n], \text{noise}) \dots\dots\dots[\text{eq.1}]$

filters the image I using pixel wise adaptive Wiener filtering, using neighborhoods of size m-by-n to estimate the local image mean and standard deviation. If you omit the [m n] argument, m and n default to 3. The additive noise (Gaussian white noise) power is assumed to be noise.

$[J, \text{noise}] = \text{wiener2}(I, [m \ n]) \dots\dots\dots[\text{eq.2}]$

also estimates the additive noise power before doing the filtering. Wiener2 returns this estimate innoise.

Gradient vector of scalar function:The gradient of a function of two variables, F(x,y), is defined

$$\nabla F = \frac{\partial F}{\partial x} + \frac{\partial}{\partial y} \dots\dots\dots[\text{eq.3}]$$

and can be thought of as a collection of vectors pointing in the direction of increasing values of F. In MATLAB software, numerical gradients (differences) can be computed for functions with any number of variables. For a function of N variables, F(x,y,z, ...),

$$\nabla F = \frac{\partial F}{\partial x} i + \frac{\partial F}{\partial y} j + \frac{\partial F}{\partial z} k + \dots[\text{eq.4}]$$

Gradient (f,x) computes the gradient vector of the scalar function f with respect to vector x in Cartesian coordinates.

Gradient(f)computes the gradient vector of the scalar function f with respect to a vector constructed from all symbolic variables found inf. The order of variables in this vector is defined by symvar. Scalar function represented by symbolic expression or symbolic function. Vector with respect to which you compute the gradient vector.

Default: Vector constructed from all symbolic variables found in f. The order of variables in this vector is defined by symvar. Once the network weights and biases are initialized, the network is ready for training. The multilayer feedforward network can be trained for function approximation (nonlinear regression) or pattern recognition. The training process requires a set of examples of proper network behavior network inputs p and target outputs t. The process of training a neural network involves tuning the values of the weights and biases of the network to optimize network performance, as defined by the network performance function net.PerformFcn. The default performance function for feedforward networks is mean square error mse the average squared error between the networks outputs a and the target outputs t. It is defined as. There are two different ways in which training can be implemented: incremental mode and batch mode. In incremental mode, the gradient is computed and the weights are updated after each input is applied to the network. In batch mode, all the inputs in the training set are applied to the network before the weights are updated. This chapter describes batch mode training with the train command. Incremental training with the adapt command is discussed in Incremental Training with adapt and in Adaptive Filters and Adaptive Training. For most problems, when using the Neural Network Toolbox software, batch training is significantly faster and produces smaller errors than incremental training. For training multilayer feedforward networks, any standard numerical optimization algorithm can be used to optimize the performance function, but there are a few key ones that have shown excellent performance for neural network training. These optimization methods use either the gradient of the network performance with respect to the network weights. The gradients are calculated using a technique called the algorithm, which involves performing computations backward through the network. The computation is derived using the chain rule of calculus and is described in Training Algorithms. As an illustration of how the training works, consider the simplest optimization algorithm gradient descent. It updates the network weights and



biases in the direction in which the performance function decreases most rapidly, the negative of the gradient. One iteration of this algorithm can be written as where  $x_k$  is a vector of current weights and biases,  $g_k$  is the current gradient, and  $\alpha_k$  is the learning rate. This equation is iterated until the network converges. The fastest training and testing function is generally `trainlm`, and it is the default training function for feed forwardnet. The quasi-Newton method, `trainbfg`, is also quite fast. Both of these methods tend to be less efficient for large networks, since they require more memory and more computation time for these cases. Also, `trainlm` performs better on function fitting (nonlinear regression) problems than on pattern recognition problems. When training large networks, and when training pattern recognition networks, `trainscg` and `trainrp` are good choices. Their memory requirements are relatively small, and yet they are much faster than standard gradient descent algorithms. See Speed and Memory Comparison for Training Multilayer Networks for a full comparison of the performances of the training algorithms shown in the following table 1. As a note on terminology, used to refer specifically to the gradient descent algorithm, when applied to neural network training. That terminology is not used here, since the process of computing the gradient and by performing calculations backward through the network is applied in all of the training functions listed above. It is clearer to use the name of the specific optimization algorithm that is being used, rather than to use the term alone. Also, the multilayer network is sometimes referred to compute gradients and in a multilayer network can also be applied to many different network architectures. In fact, the gradients and for any network that has differentiable transfer functions, weight functions and net input functions can be computed using the Neural Network software .

**Fingerprint Images**

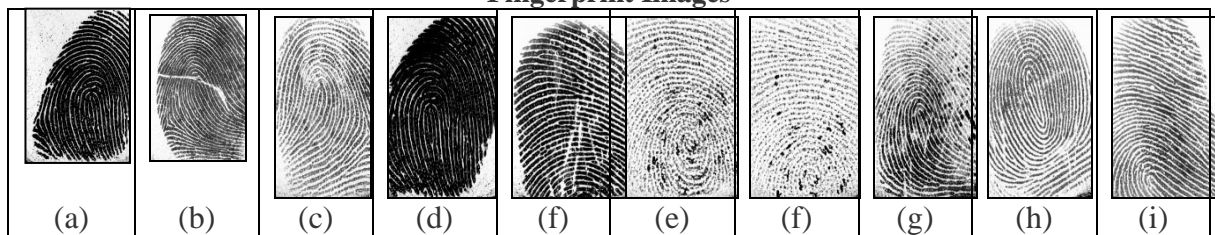


Figure -1.Rural fingerprint database

**METHODOLOGY:** The complete work has been shown in the following

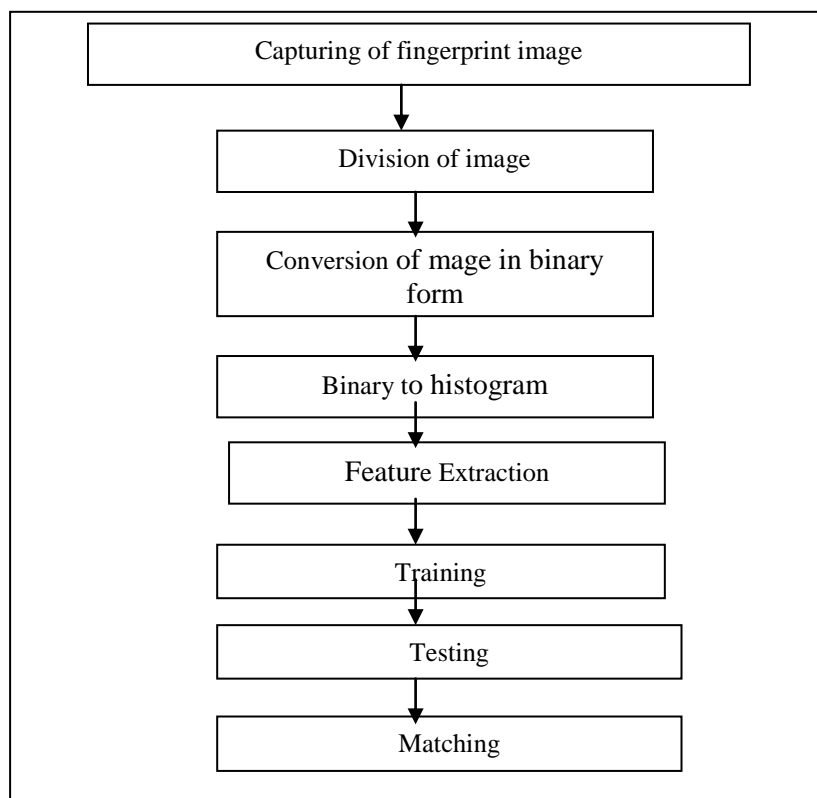


Figure3: Distance measure of rural fingerprints:

Table 1. Distance measure of Rural Fingerprint

Name of Image	Image Match No	Distance
601_bmp	6	965072.4735
602_bmp	7	980034.7391
603_bmp	8	942003.7049
604_bmp	2	884631.405
605_bmp	6	824176.6244
606_bmp	2	856398.7598
607_bmp	2	825650.9394
608_bmp	2	859010.7371
609_bmp	6	849207.0847
610_bmp	2	869703.2476
611_bmp	6	888668.3306
612_bmp	2	847761.7342
613_bmp	7	939883.9399
614_bmp	6	0.0006028
615_bmp	6	778100.1346
616_bmp	6	0.00066028
617_bmp	4	974823.042
618_bmp	7	891373.2357
619_bmp	6	897207.1193
620_bmp	2	100306.6491
618_bmp	2	901919.6497
619_bmp	2	825214.889
620_bmp	6	0.00066028
621_bmp	6	0.00066028
622_bmp	6	0.00066028
623_bmp	6	686652.4027
624_bmp	6	692739.0303
625_bmp	6	794203.9193
626_bmp	6	0.00066028
627_bmp	6	0.00066028
628_bmp	6	0.00066028
629_bmp	6	824965.7865
630_bmp	6	633885.705

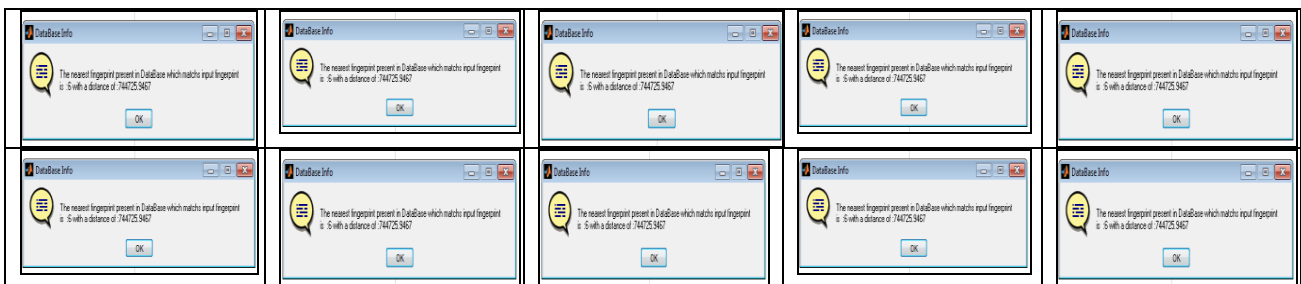


Figure -2. Matching input fingerprint with distance

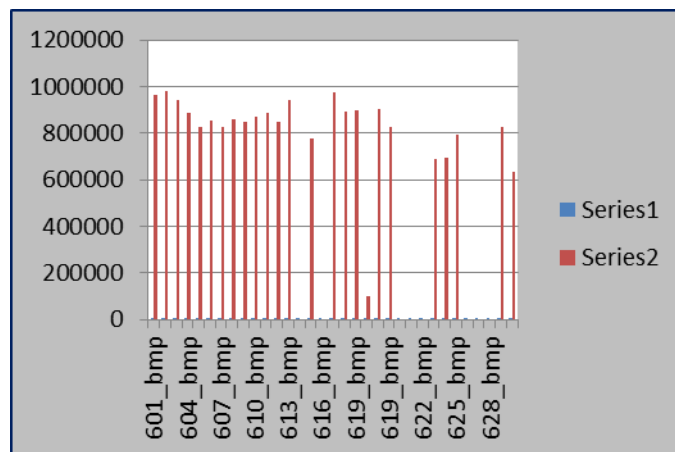


Figure -3. Graphical representation with distance measure rural fingerprint

### Conclusions:

In large scale deployment of fingerprint recognition systems, especially in rural fingerprints database, there are some challenges involved. Along with the sensor noise and poor image quality, presence of scars and warts, and deteriorating ridge/minutiae patterns in fingerprints from rural population affect the data distribution. Since there is no research that evaluates the performance of automatic fingerprint verification/identification in rural fingerprints databases. We will studied the performance using standard fingerprint recognition systems and fingerprint databases collected from the rural fingerprints databases, Indian population now a day's it has been work on unique identification where but when there is enhancement with such noisy fingerprints hence our research work concentrated on same. In this paper we have perform testing fingerprint images of rural fingerprint image database. We have selected 800 images out of 1632. The sample result of first thirty images out of Eight hundred given in Figure 2. Fingerprint image enhancement techniques are employed prior to training and testing to obtain a more reliable estimation of minutiae locations very much useful to enhance the quality of rural fingerprint image database.

### Acknowledgement:

We are very much thankful to Image Analysis and Biometrics (IAB) Lab at Indraprastha Institute of Information Technology, IIIT Delhi for providing rural fingerprint database and Special thanks SAP DSR Phase-I of Dept of Computer Science &IT, Dr. Babasaheb Ambedkar Marthwada University, and Aurangabad.

### References

- [1] Bhalerao, Babasaheb V., Ramesh R. Manza, and Yogesh M. Rajput. "Use of quality measures for rural indian fingerprint image database enhancement and improve the recognition rate." *International Journal of Computer Applications* 70.18 (2013).
- [2] Bhalerao, Babasaheb V., and Ramesh R. Manza. "Development of Image Enhancement and the Feature Extraction Techniques on Rural Fingerprint Images to Improve the Recognition and the Authentication Rate." *IOSR Journal of Computer Engineering (IOSR-JCE)* 15.1 (2013): 01-05.
- [3] Vatsa, M., et al. "Analyzing fingerprints of Indian population using image quality: a UIDAI case study." *Emerging Techniques and Challenges for Hand-Based Biometrics (ETCHB), 2010 International Workshop on. IEEE, 2010.*
- [4] Puri, C., et al. "On analysis of rural and urban Indian fingerprint images." *Ethics and Policy of Biometrics. Springer, Berlin, Heidelberg, 2010. 55-61.*
- [5] D. Maltoni, D. Maio, A. Jain, and S. Prabhakar, "Hand-book of fingerprint recognition". Springer Verlag, 2003.

## **A Study of Benifit and Challenges of Goods and Service Tax (GST) In Retail Industry in India**

**Mr. Sanjay J. Kasabe<sup>1</sup> Dr. Bharat Patil<sup>2</sup>**

<sup>1</sup>*Department of Commerce, Sundarrao More Arts, Commerce, and Science College Poladpur Raigad (MS)*

<sup>2</sup>*Department of Commerce, Kanya Mahavidyalaya, Kadegaon (MS)*

### **Abstract**

Goods and Service Tax or GST because it is thought is ready to be a game changer for the Indian economy. GST is meant to incorporate of these taxes into one tax with seamless ITC and charged on each merchandise and services. so excise duty, special extra duty, service tax, VAT to call some can get repealed and can be value-added into GST. Investigator takes objectives for gift study to know the conception of GST, to review the options of GST in retail business and to judge the benefits and challenges of GST. investigator used secondary knowledge for gift study. investigator resolve that thanks to confound surroundings of Indian economy, it's demand of your time to implement GST in retail business. Consumption and productions of products and services is doubtless increasing and since of multiplicity of taxes in current tax regime administration complexities and compliance value is additionally fast.

**Key Words:** GST, Impact, benefit and challenges in retail industry, developing counties and Indian retaining industry.

### **Introduction:-**

Retail business is that the backbone of the Indian economy and accounts for regarding of 100 percent of its gross domestic product. GST in India is that the replacement of all previous taxes on the products and services. it's associate tax which will take over all previous taxes. There are several challenges before the govt. for its implementation, success and correct profit gain. In Indian retail sectors organized and unorganized retails ar existence. The share of organized sectors is a smaller amount than 2 hundredth and majority contribution of unorganized sector. The E-commerce sale continues to be but seven-member of overall retail sector sales in India. below Excise duty, Service, VAT and tariff registered solely eighty three.5 lakhs tax payers and certain it'll increase to two large integer in Goods and service Tax (GST). Some sectors in India can face negative impact for brief term on existing stock. However in long amount organized and unorganized retail is taken into account it'd have positive impact for the complete retail sector.

The impact of GST on retail sector goes to be positive because it can being down total indirect taxes , increase provide chain potency and facilitate seamless input reduction. Once implementation of GST. State boundaries are irrelevant from taxation and documentation purpose of read. Vanishing state boundaries can cut back the quality for retailers and increase the distribution reach .as well as potency. the products and repair Tax (GST) launched on first Gregorian calendar month 2017 in India GST has additional and fewer compact each major and minor business sectors within the country. GST being associate all-encompassing national tax, it'll eliminate the levying of extra taxes on the inter-state movement of products and services. Some industries ar seeing growth as results of shrunken taxes. and a few others face a decrease in sales owing to multiplied taxes. GST is applied in numerous rates i.e. from, 5%, 12%, eighteen and twenty eighth looking on the things. If the retailer's annual turnover is up to twenty lakhs and interstate group action is enclosed, then GST registration is obligatory.

Retail is one in all the biggest industries in India and additionally fifth largest sector in world. India is one in all the quickest growing retail markets within the world. The expected growth of Indian retail business to achieve one.3 trillion USD in 2020 at a compound annual rate of 16.7%. Retail sector foresees a year-on-year rate of thirty five per cent. Recently, the 2 main developments within the Indian landscape that have/will impact {the sector the world the arena} are Government's stand to introduce merchandise and Services tax (GST) and therefore the Athenian announcement of ending of Rs five hundred and Rs 1,000 notes. Consideration the advantages it brings within the long-standing time, introduction of GST has been a lot of appreciated by the business during this sector. However, the move of ending has brought mixed reactions.

In India, a twin GST model is to be enforced below that all intrastate provide of products and services can attract CGST (Central merchandise and repair Tax) and SGST (State merchandise and repair Tax), whereas IGST are levied on interstate provide. Compensation for any revenue loss are provided to the States and a mechanism are established to resolve any conflicts between the states.

Now the controversy is that that all industries can get accomplished by GST. it's quite clear that the GST tax regime might not have a standardized impact on all sectors. However, analysts ar of the read that Indian retail sector can take in the truthful a part of the deal.

### **Impact on the Retail Sector**

The conception of manufacturer, seller, and provision of products and services are done away with and a brand new subject provides event are introduced. GST is obligatory on the availability of all merchandise and services except alcoholic liquor for human consumption. The key retail areas that are possibly to be compact are compiled below.

### **Tax Input Credit**

Taxes earlier charged on the availability of services, like rent payments for retailers and skilled charges for services, etc. are expressed as credit below the GST. within the current tax structure, the duty (CVD+SAD) got the import of products may be a value to retail, even if unhappy (special extra duty) refund is out there subject to numerous conditions. below the GST, the payment of duty also will be thought-about as credit. This is often expected to boost the supply of credit that is successively expected to bring on a positive impact for retail.

### **Central Tax**

GST implementation can end the Central excise (CST). Within the current system of taxation, most retail corporations set up their warehouse and outlet locations keeping in mind the CST—and tax levied on any sale or purchase of products within the course of interstate trade or commerce. Once GST is place into action, IGST—a worthy tax—shall be applied on all interstate provide of products. Since IGST may be a worthy tax, retail corporations can have the choice of move down some locations used only for the transfer of products from depot to retailers.

### **Retail provide**

Under GST, that may be a destination primarily based tax, tax is collected by the state wherever the products or services are consumed. Therefore, it becomes extremely imperative to pick the suitable place of provide for creating a tax payment. On careful analysis of the GST model, it ought to be noted that POS for retail are the placement of the products at the time of provide to the client i.e. the placement of the outlet/store. It will be deduced that for retail B2C group action, CGST+SGST are charged. Even for home deliveries created by a retail merchant at intervals his native limits, the rule remains constant. Therefore, below the GST regime, the place of provide for retailers are the ultimate location wherever the products ar delivered to the shoppers. Examine GST impact on Indian producing.

### **Promotion Schemes**

We often realize retailers providing their customers varied promotional schemes like 'Buy one, get one free', free samples, etc. The free product isn't subjected to excise. However, with the GST, free samples can also be in charge of tax deductions. scan to grasp additional however GST can impact the obtain One Get One schemes.

### **Packaging and Labeling**

Activities Since GST may be a destination primarily based tax; it'll be applicable solely on transactions regarding the availability of products and services. However, it'll not be applicable on the processes of packing or labeling that occur at completely different levels at intervals a retail facility.

### **Compliance**

With GST, the check-post connected verification for interstate movement of products associated services could return to an finish. However, the GST law prescribes carrying of valid documents together with consignments important on top of Rs. 50,000. The GSTN (Goods and Services Tax Network), associate IT network, can handle the whole GST compliance system and manage processes associated with registrations, returns, payments, etc. The GSTN network is anticipated to method 3 billion vouchers monthly with fifty,000 transactions per hour.

### **Benefits of Retail Sector**

- 1) Reduced Taxes:- GST can cut back tax the burden on retail merchant as they pay many alternative types of tax within the current state of affairs like CAT, CST, Octroi, Service Tax and far additional. GST can contour everything into one revenue enhancement in order that it'll be easier for the retail merchant to perceive the taxation and to pay it in ammunition.
- 2) Seamless Input Tax Credit:- GST can cut back the burden of tax on the retail sector because it can go off tax ranging from the producer's purpose to the client purpose. GST can create (an impression /a bearing |a control |a sway } on the flowing effect of taxes and facilitate to contour into one class.
- 3) Increased potency in provide chain: -Since the retail business will be applied in each state upon single registration, the retailers won't have to be compelled to maintain warehouses in each state, and this can be terribly helpful concerning value to the retailers. The transportation business can flourish as they might carry additional merchandise from one state to the opposite because it can become simple to transfer merchandise below GST. The time interval also will cut back the transporting the products because the interstate boundaries would be additional free –flowing. GST can facilitate the retail sector become

additional economical in their operations.

4) Tax on promotional item of gifts:- within the new GST model, any provide inconsiderately can have an effect on tax and thus, everything can have to be compelled to be accounted for. The retailers would offer out gift and promotional things with merchandise as a district of their selling strategy that wont to be tax-exempt within the current taxation system. once the GST gets enforced, no such rule are applicable and retails can have to be compelled to pay tax on the gift.

5) Growth of retail market:- GST can result in the unification of markets because it can contour the state and therefore the central tax and eliminate all the confusion of taxation in numerous markets. The retailers will simply expands their business on the far side boundaries as they need to register their business just the once then will carry operations all told the states. this can additionally contribute towards the expansion of the retail market and facilitate boost the economy of the country.

6) Better strategies:- GST can force the retailers to re-think their provide chain ways and re-model their network because it can open plenty of doors and opportunities for retailers to expands their business. it'll offer them the liberty to draft higher business ways and implement it for any growth of retail sectors.

7) Reduce complication:- The retailers would be able to do the business with additional ease because the taxation and different policies would be efficient below the new GST rules, and that they wouldn't have to be compelled to waste their time in paying varied taxes and waiting to meet all different policy needs of the present taxation system.

8) Beneficial to start-ups:- The retail sectors would begin attracting plenty of start-ups as they might have to be compelled to register their business just the once and additionally claim the advantages of taxation for start-ups below the new GST laws. They might even be able to do business operations additional freely with the new place and would get additional drawn to be part of the retail sector.

#### **Challenges For GST In India**

It's typically grappled with varied challenges of GST of selling

- 1) Non-reconciliation of Tax rates
- 2) Non-availability of acceptable Manuals for GST procedures
- 3) Lack of fine automation system
- 4) Deficiency of masterly officers (At least for now)
- 5) Handling recent registration/ Double registrations.
- 6) Neither tight system for 100 percent scrutiny of tax Return/Audit
- 7) Nor correct system for Cross Verifications with different taxation administrations.
- 8) No excellent mechanism to manage nonpayment.
- 9) No excellent mechanism to manage retail inflation,
- 10) No correct policy to face the new competitors,
- 11) Complex regulative and taxation framework,
- 12) Inadequate infrastructure for distribution of products,
- 13) Lack of correct foreign direct investment policy of India etc.

#### **GST in Future**

“Passing of the GST bill in Rajya Sabha is a very progressive step and long anticipated one. GST is one in every of the vital tax reforms that has potential to make one single market in India for product & services and can boost country's economy considerably.” aforesaid the Chairman, {India |India |Republic of India |Bharat |Asian country Asian nation} Retail Forum and President & business executive Walmart India, Krish Iyer. The government is unrelentingly making ready the economy for a seamless GST implementation. Given this, it's important that the retail trade conjointly gears up for the GST in order that a swish and unhampered shift to the landmark tax reform will be punctually succeed.

#### **Conclusion:-**

There square measure more blessings of GST on retail sector underneath the new GST laws and it'd be an excellent boost for the retail sector because the policies and taxation would be streamlines underneath one head. The business would flourish a lot of conducive to the expansion of retail trade and successively of the economy as they'd be ready to do the activities with none hindrances, a lot of freely, and be ready to expand the business into totally different. The availability chain can profit hugely because the price of transport and reposition can scale back underneath the new GST laws and facilitate the retailers scale their profit, that might conjointly result in reduced costs for the ultimate client over a amount of your time,. The merchant will directly pay the taxes on-line and can not got to undergo a middleman

#### **References**

1. Agogo Mawuli (2014): “Goods and repair Tax An Appraisal” Paper given at the the PNG

2. *Taxation analysis and Review conference, vacation hostelry, Port Moresby, 29-30.*
3. *Dr. R. Vasanthagopal (2011), "GST in India: a giant Leap within the Indirect Taxation System", International Journal of Trade, social science and Finance, Vol. 2, No. 2, April 2011.*
4. *Ehtisham Ahamad and Satya Poddar (2009), "Goods and repair Tax Reforms cuckoo inter governmental thought in India", "Asia analysis Center", LSE, 2009*
5. *.Girish Garg, (2014), "Basic ideas and options of excellent and repair Tax in India".*
6. *www.gstindia.com/basics-of-gst-implementation-in-india/*
7. *www.prsindia.org/billtrack/the-constitution-122nd-amendment-gst-bill-2014-3505/*
8. *Sehrawat et. al., Vol.3 (Iss.12): Dec, a pair of015] ISSN- 2350-0530(O) ISSN- 2394-3629 (P) Impact Factor: 2.035 (I2OR) Http://www.granthaalayah.com ©International Journal of analysis - GRANTHAALAYAH [133-141*
9. *www.taxguru.in/goods-and-service-tax/goods-service-tax-gst-2.html*
10. *www.thehindu.com/bussiness/industry/ten-things-to-know-about-gstbill/article7137615.ece*
11. [www.top10wala.in/facts-about-gst-india-advantages/](http://www.top10wala.in/facts-about-gst-india-advantages/)
12. <https://en.m.wikipedia.org>
13. <http://www.gst.gov.in>
14. <https://gstcouncil.gov.in>
15. <https://cbic.gst.gov.in>
16. <https://selfservice.gstsystem.in>

## **Artificial SuperIntelligence : Present View and Future Prospects**

**Prof Yaseera Tausif Nevrekar<sup>1</sup> Dr Saima Shaikh<sup>2</sup>**

*Assistant Professor, Dept Comp Sci, Maharashtra College of Arts, Science and Commerce.  
Director Maha Care Incubation Center, Head Dept B.Sc I.T/ M.Sc I.T, Maharashtra College of Arts,  
Science and Commerce*

### **Abstract**

The purpose of this paper is to explore the subject of Artificial SuperIntelligence (ASI) and identify in summary form the principal drivers, present status of Artificial SuperIntelligence (ASI) and future prospects. Artificial Intelligence has emerged out to be one of the most popular terms of computer science in recent times. Artificial SuperIntelligence (ASI), is the hypothetical AI that doesn't just mimic or understand human intelligence and behavior; ASI is where machines become self-aware and surpass the capacity of human intelligence and ability. Today we are at second level (Narrow Intelligence) where machines are trained for a particular activity/function. The next level of evolution (General intelligence) which might come in few years might enable machines to follow your command and communicate with other machines to improve productivity. The final level that may come in the next few decades will see these machines surpassing the humans. Artificial SuperIntelligence (ASI) is the hypothetical AI, i.e. we have not been able to achieve it but we know what will happen if we achieve it. So basically it is the imaginary AI which not only interprets or understands human-behavior and intelligence, but ASI is where machines will become self-aware/self vigilant enough to surpass the capacity of human intelligence and behavioral ability. With SuperIntelligence, machines can think of the possible abstractions/interpretations which are simply impossible for humans to think. This is because the human brain has a limit to the thinking ability which is constrained to some billion neurons.

SuperIntelligence has long been the muse around the dystopian science fiction which showed how robots overrun, overpower or enslave humanity. In addition to the replication of multi-faceted human behavioral intelligence, the concept of artificial SuperIntelligence focuses on the perspective of not just being able to understand/interpret human emotions and experiences, but instead, it must also evoke emotional understanding, beliefs and desires of its own, based on its understanding functionality.

**Key words:** Artificial SuperIntelligence (ASI), hypothetical, dystopian science, robot.

### **Introduction**

ASI would be exceedingly far-far better at everything or whatever we do, whether it be in maths, science, arts, sports, medicine, marketing strategies, hobbies, emotional relationship, or applying a precise human intellect to a particular problem. ASI would have a greater memory with a faster ability to process and analyze situations, data, and stimuli actions. Due to this fact, we can rest assured that the decision-making and problem-solving capabilities of super-intelligent beings/machines would be far superior and precise as compared to those of human beings. The possibility and potential of having such powerful machines at our disposal may seem appealing, but this concept itself is a fold of unknown consequences. What impact it will have on humanity, our survival, our existence is just a myth or pure speculation. Engineers and scientists are still trying to achieve full artificial intelligence, where computers can be considered to have the apt cognitive capacity as that of a human. Although there have been surprising developments like IBM's Watson supercomputer and Siri, still the computers have not been able to fully simulate and achieve the breadth and diversity of cognitive abilities that a normal adult human can easily do. However, despite the achievements, there is a lot of theories that predict artificial SuperIntelligence coming sooner than later. With the emerging accomplishments, experts say that full artificial intelligence could manifest within a couple of years, and artificial SuperIntelligence could exist in the 21st century possibly.

In the book SuperIntelligence, Nick Bostrom describes the initials with "The Unfinished Fable of Sparrows". The idea was basically that some sparrows wanted to control an owl as a pet. The idea seemed awesome to all except one of the skeptical sparrows who raised her concern as to how they can control an owl. This concern was dismissed for the time being in a "we'll deal with that problem when it's a problem" matter. Elon Musk has similar concerns regarding the super-intelligent beings and considers that humans are the sparrows in Bostrom's metaphor and the owl is the future ASI. As it was in the case of sparrows, the "control problem" is seemingly concerning because we might only get one chance to solve it if a problem arises.

The danger is in the fact of "whatever it takes" to complete a given task. Super intelligent AI would be at utmost efficiency to achieve a given goal, whatever it may be, but we'll have to ensure that the goal completion is done in correspondence to all the needed rules to be followed to maintain some level of control.

The Foundations Of Superintelligence



The Superintelligence concept was discussed way back in 1951, by computer pioneer Alan Turing. Turing raised the possibilities that the human species would be “greatly humbled” by AI, and its applications may surpass the general unease of making something smarter than oneself. Restricting this unease by curtailing progress on AI may be neither feasible nor preferable. The most interesting part of Life 3.0, a term used to discuss the advent of AI in human life explains that the real issue is the high potential of facing misaligned objectives. Cybernetics founder Norbert Wiener echoed the same thought way back in 1960, “We had better be quite sure that the purpose put into the machine is the purpose which we really desire.” We can say that though it is unclear how to imbue a superintelligent AI, being a gift to humanity and potentially will not to the elimination of humanity. Perhaps the most common response among AI specialists and data science experts being “we can always just switch it off.” Alan Turing himself raised this possibility, though he did not put much faith to this in 1951. It is safe to assume for now, that if a machine can think, it might think more intelligently than we do, and then where should we be? Even if we could keep the machines in a subservient position, for instance by turning off the power at strategic moments, we should, as a species, feel greatly humbled. This new danger is certainly something which can give us panic attacks.

### **Superintelligence is Different**

A prerequisite for having a meaningful discussion of SuperIntelligence is the realization that SuperIntelligence is not just another technology, another tool that will add incrementally to human capabilities. SuperIntelligence is radically different. This point bears emphasizing, for anthropomorphizing SuperIntelligence is a most fecund source of misconceptions.

Let us consider some of the unusual aspects of the creation of superintelligence:

#### **• Superintelligence may be the last invention humans ever need to make.**

Given a SuperIntelligence’s intellectual superiority, it would be much better at doing scientific research and technological development than any human, and possibly better even than all humans taken together. One immediate consequence of this fact is that:

#### **• Technological progress in all other fields will be accelerated by the arrival of advanced artificial intelligence.**

It is likely that any technology that we can currently foresee will be speedily developed by the first SuperIntelligence, no doubt along with many other technologies of which we are as yet clueless. The foreseeable technologies that a SuperIntelligence is likely to develop include mature molecular manufacturing, whose applications are wide-ranging:

- a) very powerful computers
- b) advanced weaponry, probably capable of safely disarming a nuclear power
- c) space travel and von Neumann probes (self-reproducing interstellar probes)
- d) elimination of aging and disease
- e) fine-grained control of human mood, emotion, and motivation
- f) uploading (neural or sub-neural scanning of a particular brain and implementation of the same algorithmic structures on a computer in a way that perseveres memory and personality)
- g) reanimation of cryonics patients
- h) fully realistic virtual reality

#### **• Superintelligence will lead to more advanced superintelligence.**

This results both from the improved hardware that a superintelligence could create, and also from improvements it could make to its own source code.

#### **• Artificial minds can be easily copied.**

Since artificial intelligences are software, they can easily and quickly be copied, so long as there is hardware available to store them. The same holds for human uploads. Hardware aside, the marginal cost of creating an additional copy of an upload or an artificial intelligence after the first one has been built is near zero. Artificial minds could therefore quickly come to exist in great numbers, although it is possible that efficiency would favor concentrating computational resources in a single super-intellect.

#### **• Emergence of superintelligence may be sudden.**

It appears much harder to get from where we are now to human-level artificial intelligence than to get from there to SuperIntelligence. While it may thus take quite a while before we get SuperIntelligence, the final stage may happen swiftly. That is, the transition from a state where we have a roughly human-level artificial intelligence to a state where we have full-blown SuperIntelligence, with revolutionary applications, may be very rapid, perhaps a matter of days rather than years. This possibility of a sudden

emergence of Super Intelligence is referred to as the singularity hypothesis.

• **Artificial intellects are potentially autonomous agents.**

A Super Intelligence should not necessarily be conceptualized as a mere tool. While specialized SuperIntelligence s that can think only about a restricted set of problems may be feasible, general Super Intelligence would be capable of independent initiative and of making its own plans, and may therefore be more appropriately thought of as an autonomous agent.

• **Artificial intellects need not have humanlike motives.**

Human are rarely willing slaves, but there is nothing implausible about the idea of a SuperIntelligence having as its super goal to serve humanity or some particular human, with no desire whatsoever to revolt or to “liberate” itself. It also seems perfectly possible to have a superintelligence whose sole goal is something completely arbitrary, such as to manufacture as many paperclips as possible, and who would resist with all its might any attempt to alter this goal. For better or worse, artificial intellects need not share our human motivational tendencies. Artificial intellects may not have humanlike psyches. The cognitive architecture of an artificial intellect may also be quite unlike that of humans.

Artificial intellects may find it easy to guard against some kinds of human error and bias, while at the same time being at increased risk of other kinds of mistake that not even the most hapless human would make. Subjectively, the inner conscious life of an artificial intellect, if it has one, may also be quite different from ours.

For all of these reasons, one should be wary of assuming that the emergence of superintelligence can be predicted by extrapolating the history of other technological breakthroughs, or that the nature and behaviors of artificial intellects would necessarily resemble those of human or other animal minds.

Artificial Super Intelligence :

Magic as a Metaphor The science fiction writer Arthur Clarke famously wrote, “Any sufficiently advanced technology is indistinguishable from magic.” Yet, humanity may be on the verge of something much greater, a technology so revolutionary that it would be indistinguishable not merely from magic, but from an omnipresent force, a deity here on Earth. It’s known as artificial super-intelligence (“ASI”), and, although it may be hard to imagine, many experts believe it could become a reality within our lifetimes. We’ve all encountered artificial intelligence (“AI”) in the media. We hear about it in science fiction movies like “Avengers Age of Ultron” and in news articles about companies such as Facebook analyzing our behavior. But artificial intelligence has so far been hiding on the periphery of our lives, nothing as revolutionary to society as portrayed in films. In recent decades, however, serious technological and computational progress has led many experts to acknowledge this seemingly inevitable conclusion: Within a few decades, artificial intelligence could progress from a machine intelligence we currently understand to an unbounded intelligence unlike anything even the smartest among us could grasp. Imagine a mega-brain, electric not organic, with an IQ of 34,597. With perfect memory and unlimited analytical power, this computational beast could read all of the books in the Library of Congress the first millisecond you press “enter” on the program, and then integrate all that knowledge into a comprehensive analysis of humanity’s 4,000 year intellectual journey before your next blink.

#### HISTORY OF AI

Artificial Intelligence (AI) is not new; it has been present for almost a century. Here’s a brief glimpse of AI history:

1956 – The possibility of creating an electronic brain gave birth to AI.

1964 – Eliza, a natural language processing computer and one of the first chatbots was introduced.

1980s – Driverless, autonomous car was introduced.

1997 – Deep Blue supercomputer defeated world chess champion Gary Kasparov in a chess match.

2010 – Siri virtual assistant based on natural language interface was revealed.

2012 – Next Level Visual Smartness image recognition tool by Google researchers trained giant neural networks for image recognition by not providing any identifying information. The AI was able to learn to detect pictures using deep learning algorithm.

2015 – Alpha Go computer program became the first computer game program to defeat a human professional.

2016 to 2017 – Several tools such as Google Tensor Processing Unit, Intel Nervana NNp, NVIDIA Tesla V100, Neuromorphic chip, Apple A11 Bionic and IBM Power91 were introduced.

Today, AI is a key trend for developers in embedded systems. Some key driving factors for the growth of AI have been:-

- A. Increasing amount of data
- B. Data storage power
- C. Better computational power
- D. Improvements in security
- E. Automation

The history of AI is a similar story of exponential growth in intelligence. In 1936, Alan Turing published his landmark paper on Turing Machines, laying the theoretical framework for the modern computer. He introduced the idea that a machine composed of simple switches—on's and off's, 0's and 1's—could think like a human and perhaps outmatch one.<sup>1</sup> Only 75 years later, in 2011, IBM's AI bot "Watson" sent shocks around the world when it beat two human competitors in Jeopardy.<sup>2</sup> Recently big data companies, such as Google, Facebook and Apple, have invested heavily in artificial intelligence and have helped support a surge in the field. Every time Facebook tags your friend autonomously or you yell at Siri incensed and yet she still interprets your words is a testament to how far artificial intelligence has come. Soon, you will sit in the backseat of an Uber without a driver, Siri will listen and speak more eloquently than you do (in every language), and IBM's Watson will analyze your medical records and become your personal, all-knowing doctor.

While these soon-to-come achievements are tremendous, there are many who doubt the impressiveness of artificial intelligence, attributing their so-called "intelligence" to the intelligence of the human programmers behind the curtain. Before responding to such reactions, it is worth noting that the gradual advance of technology desensitizes us to the wonders of artificial intelligence that already permeate our technological lives. But skeptics do have a point. Current AI algorithms are only very good at very specific tasks. Siri might respond intelligently to your requests for directions, but if you ask her to help with your math homework, she'll say "Starting Facetime with Matt Soffer." A self-driving car can get you anywhere in the United States but make your destination the Gale Crater on Mars, and it will not understand the joke. This is part of the reason AI scientists and enthusiasts consider Human Level Machine Intelligence (HLMI)—roughly defined as a machine intelligence that outperforms humans in all intellectual tasks—the holy grail of artificial intelligence

HLMI is not just another AI milestone to which we would eventually be desensitized. It is unique among AI accomplishments, a crucial tipping point for society. Because once you have a machine that outperforms humans in everything intellectual, we can transfer the task of inventing to the computers. Although artificial SuperIntelligence surely comes with its existential threats that could make for a frightening future, it could also bring a utopian one. ASI has the capability to unlock some of the most profound mysteries of the universe. It will discover in one second what the brightest minds throughout history would need millions of years to even scrape the surface of. It could demonstrate to us higher levels of consciousness or thinking that we are not aware of, like the philosopher who brings the prisoners out of Plato's cave into the light of a world previously unknown. There may be much more to this universe than we currently understand. There must be, for we don't even know where the universe came from in the first place! This artificial SuperIntelligence is a ticket to that understanding. There is a real chance that, within a century, we could bear witness to the greatest answers of all time.

### **The Current State of Ai**

AI in its current state is far from being super intelligent. Suppose if an intelligent cyborg from future turns time wheels and arrives in present-day San Francisco to meet its predecessors, it would pity the primitiveness of them. Imagine meeting Neanderthals from Western Africa tens of millennia ago.

The truth is, most of the AI models are capable of doing one thing alone. If you employ a program that translates languages for you to convert speech into text, it will fail miserably. Humans, on the other hand, can do a plethora of tasks. A human can translate English to Spanish and convert speech to text quite easily. This is why Artificial Super Intelligence is a thing of a far future. The ASI should be able to brew coffee while humming an Elton John song and writing Christmas postcards to all his cyborg buddies.

There are a few new projects and models in AI which are starting to perform a set of different task simultaneously such as Multi-task Learning and Transfer Learning. However, these algorithms perform better only when the set of tasks are closely related. Such as finding the sentiment from a text piece and extracting named entities from it.

### **Future perspective of Artificial Super Intelligence .**

There's virtually no major industry modern AI — more specifically, "narrow AI," which performs objective functions using data-trained models and often falls into the categories of deep learning or machine learning — hasn't already affected. That's especially true in the past few years, as data collection and analysis has ramped up considerably thanks to robust IoT connectivity, the proliferation of connected

devices and ever-speedier computer processing. Some sectors are at the start of their AI journey, others are veteran travelers. Both have a long way to go. Regardless, the impact artificial intelligence is having on our present day lives is hard to ignore:

**Transportation:** Although it could take a decade or more to perfect them, autonomous cars will one day ferry us from place to place.

**Manufacturing:** AI powered robots work alongside humans to perform a limited range of tasks like assembly and stacking, and predictive analysis sensors keep equipment running smoothly.

**Healthcare:** In the comparatively AI-nascent field of healthcare, diseases are more quickly and accurately diagnosed, drug discovery is sped up and streamlined, virtual nursing assistants monitor patients and big data analysis helps to create a more personalized patient experience.

**Education:** Textbooks are digitized with the help of AI, early-stage virtual tutors assist human instructors and facial analysis gauges the emotions of students to help determine who's struggling or bored and better tailor the experience to their individual needs.

**Media:** Journalism is harnessing AI, too, and will continue to benefit from it. Bloomberg uses Cyborg technology to help make quick sense of complex financial reports. The Associated Press employs the natural language abilities of Automated Insights to produce 3,700 earning reports stories per year — nearly four times more than in the recent past.

**Customer Service:** Last but hardly least, Google is working on an AI assistant that can place human-like calls to make appointments at, say, your neighborhood hair salon. In addition to words, the system understands context and nuance

### **Working Towards Artificial SuperIntelligence**

Researchers all around the world are working towards developing smarter AI. The road to ASI is paved by the idea that a machine should adopt a human brain's way of working and supersede it. In the longer run, it is inevitable that ASI will better us in everything by miles. There are chemical and biological boundaries to what a human brain can achieve. There are none for a super-intelligent sentient. With time, it is only going to be much smarter and better.

#### ***i. Mimicking The Human Brain***

The first step towards Artificial SuperIntelligence would be to improve the cognitive abilities of machines. Numerous projects are religiously working towards mimicking human brains and give cognizance to machines. The real progress in this aspect may not be out in the open as most of the companies and organizations do not reveal much for the sake of a competitive edge.

However, one example would be the Blue Brain Project. This is an initiative by EPFL, which is trying to achieve a total digital reconstruction of the mammalian brain. The project is expected to enlighten us more about consciousness and how it can be implanted digitally. Currently, they have simulated the synapses of the size of a bee's brain.

Google DeepMind, reportedly, is also working on similar projects. Their mission statement goes like: We're on a scientific mission to push the boundaries of AI, developing programs that can learn to solve any complex problem without needing to be taught how.

It is really important for AI to collaborate with neuroscience. Human minds are one of the most prestigious creations of evolution. How do we clone hundreds of millennia-long evolution process into algorithms and codes much faster, is the question we need to answer.

Google Brain, a deep learning project from Google, is also attempting to have intelligence similar or equal to human-level. Numenta, a machine learning company is also working on creating cortical learning algorithms.

#### ***ii. Genetic Engineering And Immortality***

Years after years, researchers have been working to beat biology. Genetic engineering has become an immense part of our current and future. How do we stop aging? Or find cures for the most dangerous of diseases? How do we rejuvenate and regrow lost limbs and body parts? Eventually, how do we reach immortality and live happily ever after?

Wondering what all of it has to do with AI, particularly ASI? Potentially, all of it!

Imagine a bionic arm which understands signals from brains and helps an amputee just like a normal human hand would do. A flurry of nanobots to boost the immune system, fight with fatal diseases and keep humans alive forever. A program developed to immortalize you by keeping a copy of your brain inside a computer. The possibilities are endless so we must let fly our imagination.

This brings us to the point where we can think of the possibility that an ASI program much smarter than the human brain is running things inside a human body. You may think this is one wild Matrix fan theory. But, futurists have discussed at length about such human and machine co-existence.

### **Possible pitfalls of SuperIntelligence**

Tech firms such as DeepMind and Sentient Technologies, as well as countless academic teams at prestigious technical universities all over the world, have been working diligently for years on the creation of an AI with a neural network capable of all the mental functions humans can access every day (and often take for granted). While it's still possible that a temporary AI winter – a period in which the pace of AI development slows considerably – could occur due to the limitations of certain components or technologies, Gizmodo noted that this is fairly unlikely based on the advancements that have already occurred in the field. Root concepts of superintelligent AI exist in the evolutionary computation projects of Sentient Technologies and competing firms working on autonomous decision-making capabilities for AI, according to PC Magazine.

So what is the danger? Futurist Anders Sanberg explained one such possibility of a superintelligent, self-improving AI in a famous hypothetical known as “the paperclipper” or “the paperclip scenario.”

An AI is programmed to manufacture paper clips, with a reward function occurring immediately after the creation of each clip.

The system creates paper clips at a furious rate, and realizes that if it becomes “smarter,” it can create more paper clips; the AI then initiates development of new machinery to make paper clips more efficiently and engage the reward function more often. It also improves its own intelligence.

At some point, driven strictly by cold-blooded logic (figuratively speaking), the superintelligence becomes convinced human beings are an impediment to the creation of more paper clips.

The AI kills all humans on Earth and continues making paper clips. This is, of course, an extreme, arguably improbable and above all rather ghoulish scenario, but also a possible one according to logical terms similar to those at work within a superintelligent AI. Even more likely, according to Gizmodo, is the potential for AIs that lack ethical boundaries or operate according to biased ideas, the latter of which originate with human programming errors but become entrenched and magnified by the AI's own neural network. Additionally, the institutional culture within Silicon Valley, characterized by extremely fierce competition that in turn leads to overly fast development of new technologies or improvements to existing products, is not necessarily the healthiest one for the creation of superintelligence that features ethical standards

### **Conclusion**

This paper described the present state and future prospects of Artificial SuperIntelligence . It's fine to speculate about aligning an imagined superintelligent — yet strangely mechanical — A.I. with human objectives. But without more insight into the complex nature of intelligence, such speculations will remain in the realm of science fiction and cannot serve as a basis for A.I policy in the real world.

Understanding our own thinking is a hard problem for our plain old intelligent minds. But I'm hopeful that we, and our future thinking computers, will eventually achieve such understanding in spite of — or perhaps thanks to — our shared lack of superintelligence. The most benign scenario the presence of ASI capabilities will simply raise the ensuing human struggle to a much higher intellectual level and possibly obviate much of the physical violence that has haunted Homo sapiens throughout its existence. At the other extreme the most dangerous scenario will have the ensuing struggle take place entirely at the ASI level with the humans playing either a minor ancillary role or no role at all. In this scenario the humans have essentially been subjugated by ASI and have little control over their destiny. Multiple additional hybrid scenarios are equally possible in between these two extremes, with the human species retaining some control over ASI in the form of a collaborative partnership. All of these scenarios are of course highly speculative since we humans have never had to deal with any intelligence that is far superior to human intelligence. Even our awareness of the value of collective intelligence and use of techniques such as crowdsourcing to take advantage of collective intelligence is still quite sparse and of recent origin. While individualism is an intrinsic human characteristic, there are no a priori reasons why it should also apply to intelligent software operating on many computers that are networked together. In this regard it is equally conceivable that the human notion of an ASI singleton or cluster attempting to assert itself into a dominating leadership role is misplaced. It may well be that the characteristics and modus operandi of a network regardless of the level of intelligence of its nodes are intrinsically of a collective nature independent of whether any particular activity is being performed by a single node or multiple nodes in parallel.

### **References**

1. Barrat J. (2013); *'Our Final Invention'*; Dunne, St Martin's Press, New York, New York.
2. Bonabeau E. (2003); *'Don't Trust Your Gut'*; Harvard Business Review, May.

3. Bosker B. (2013); 'Siri Rising: The Inside Story of Siri's Origin'; *The Huffington Post* (online), January 22 (updated 24) [[www.huffingtonpost.com/2013/01/22/siri-do-engine-apple-iphone\\_n\\_2499165.html](http://www.huffingtonpost.com/2013/01/22/siri-do-engine-apple-iphone_n_2499165.html)].
4. Bostrom N. (2014); 'Superintelligence: Paths, Dangers, Strategies'; Oxford University Press, Oxford, UK.
5. BRAIN (2014); 'Brain Research through Advancing Innovative Neurotechnologies (BRAIN)'; MIT Technology Review, 2 April. [[www.technologyreview.com/view/513216/obama-announces-first-funding-for-brain-mapping-project](http://www.technologyreview.com/view/513216/obama-announces-first-funding-for-brain-mapping-project)]
6. Brodtkin J. (2011); '\$1,279-per-hour, 30,000-core cluster built on Amazon EC2 cloud'; *Ars Technica*, 21 September [<http://arstechnica.com/business/news/2011/09/30000-core-cluster-built-on-amazon-ec2-cloud.ars>] Cain S. (2012); 'Quiet: The Power of Introverts in a World That Can't Stop Talking'; Crown, New York, New York. Clark A. and D. Chalmers (1998); 'The Extended.
7. <https://www.google.com/amp/s/www.nytimes.com/2019/10/31/opinion/superintelligent-artificial-intelligence.amp.html>.
8. Kurzweil, R. *The Age of Spiritual Machines: When Computers Exceed Human*
9. *Intelligence*. (Viking: New York, 1999).
10. Moravec, H. *Robot: Mere Machine to Transcendent Mind*. (Oxford University Press: New York, 1999).
11. Vinge, V. (1993). "The Coming Technological Singularity." *Whole Earth Review*, Winter issue.
12. Yudkowsky, E. (2002). "The AI Box Experiment." Webpage. <http://sysopmind.com/essays/aibox.html>
13. Yudkowsky, E. (2003). *Creating Friendly AI 1.0*. <http://www.singinst.org/CFAI/index.html>
14. Bostrom, N. (1998). "How Long Before Superintelligence?" *International Journal of Futures Studies*, 2. <http://www.nickbostrom.com/superintelligence.html>
15. Bostrom, N. (2002). "Existential Risks: Analyzing Human Extinction Scenarios and
16. Related Hazards." *Journal of Evolution and Technology*, 9.
17. <http://www.nickbostrom.com/existential/risks.html>
18. Drexler, K. E. *Engines of Creation: The Coming Era of Nanotechnology*. (Anchor Books: New York, 1986). <http://www.foresight.org/EOC/index.html>
19. Freitas Jr., R. A. *Nanomedicine, Volume 1: Basic Capabilities*. (Landes Bioscience: Georgetown, TX, 1999). <http://www.nanomedicine.com>
20. Hanson, R., et al. (1998). "A Critical Discussion of Vinge's Singularity Concept."
21. *Extropy Online*. <http://www.extropy.org/eo/articles/vi.html>

## **Recent trends in Psychological Research**

**Rakhonde M.K.**

*Kohinoor Art's, Commerce and Science College Khulatabad District Aurangabad (MS)*

### **ABSTRACT**

Psychology is broad discipline. Some psychologists work in schools. Some are Nurses. Some do what many might consider biological research. Some psychologists Building software or metal panels. The list could go on and on. Similarly, there is a file for Significant differences in psychological thinking. Therefore, the following commentary introduces Some of the latest psychological habits I find are important. Not a complete list For current styles but it should give a good view of the changes that are taking place in Psychology. A different work of psychology is highlighted in each issue of The Psychological Science Agenda. Increasing popularity of mind and function of opportunity Psychologists from a growing interest make psychology fascinating And happy instruction. Below are some of the current styles in the field of psychology.

### **Emphasis on conditions**

One of the most important approaches to psychology is content emphasis. One of the many The most valuable personality traits are compassion, consideration, forgiveness, and consensus has the opposite prediction in some cases. One of the many desires that are as valuable as happiness can be contradictory and recent research has it he suggested alternatives. In a similar way, we learn what is called negative emotions such as sadness, anxiety, guilt, jealousy and anger are exactly what we want to deal with expression to get the best result in a particular situation. We learn how to express negative emotions in a very effective way. This study looks down on the positive and the height of evil allows us to understand how we can appreciate full recognition of our personality and better navigate the complex, uncertain world we face each day.

### **Good Psychology:-** Some of the practices in good Psychology

1. Growing evidence of the importance of "good" basic psychological conditions processes such as vision and memory.
2. Great interest in understanding how to achieve and promote lasting behavioral change
3. Rapid growth in the use of good psychology in schools, namely, good education.
4. Rapid growth in clinical practice of good mental functioning and evidence of it can support them.
5. Technology in the application of social research and its promotion: large data studies and apps that promote happiness.
7. Continuous growth and great improvement in the study of the power of letters and how working with them in different situations.
8. Integration of the studies of the most effective organizations as well the application of the psychological science of working conditions.

### **Effective Psychology**

The psychology used enjoys a very high level of growth. The principles of mind are Employed in marketing. Industrial / organizational psychologists are used in a variety of ways Skills in the business world. However, the area of applied psychology that develops Fast health psychology. Health psychology focuses on the promotion and maintenance of Health, disease prevention and treatment, etiologic diagnosis and diagnostic Correlates health, illness and related unemployment, and analyzes and improves the condition of Health care system and health policy details. An important aspect of health psychology That is about prevention and treatment. Therefore, some psychologists can help People maintain an exercise program and some experience health after a diagnosis. Another place for Psychology used for psychological testing. Our society tends to measure everything. Baseball is a good example of our need for balance because there are numbers for everything Associated with baseball. Acquisition of education and wisdom is among the things we do I like to measure. In fact, one of the first applications of psychology was the development of An Army Alpha and Beta test that was an IQ test given to put vendors in it Positions appropriate to their skills. Many education and insurance accreditation agencies Companies are more focused on the outcome. Therefore, testing is required. Inside Tests, an interesting tendency in intelligence tests to reduce the oral state of tests. This has happened for two reasons. First, many have called it a intelligence test They are written using thinking that arises from the same social category and, therefore, cannot be made to be People from other social classes and races or ethnicities. The second concern is that The United States has a small growing population. It is known by testing engineers that It may not be appropriate to test children or adults who speak English as a second test language That was written for English speakers. Although working on these tests is still the case Combined with the ability to speak, the tendency symbolizes the goal of developing culturally correct assessment Wisdom.

### **The Psychology Of Life**

Different schools of thought have controlled psychology in different areas over time. The growing interest in evolutionary psychology may be an indication of evolution Psychology will soon be one of the main

schools of psychology thinking. Interestingly, Darwin himself predicted that evolution would produce something new. The foundation of psychology emphasizes finding cognitive processes in the volume of this Degrees. Today, evolutionary psychology can be described as a psychological phenomenon “Informed by knowledge and evolution).” This way Currently directs research on empathy, conflict monitoring, multicultural psychology, and Emotional control. Only time will tell how much science has changed It affects all areas of the mind.

### **Testing Methods**

An important concept taught throughout psychology is that psychology is a science. Because For example, Lefton (2000) defines psychology as “the science of behavior and psychological processes. ”Even the American Psychological Society describes the functioning of the brain as“ a psychological test And ethics (APA, 2000). ”Because psychology is science, the scientific method is Emphasis on various psychological studies. Undergraduate psychology majors also It is necessary to take mathematical studies and research methods because those studies help in construction The foundation for understanding and contributing to the science of psychology. There are several Research styles that can improve the science of psychology or disrupt it. The Internet has provided more access to research. Publishers have begun setting the table for Online newspaper content with full documentation available to subscribers. Several publishers And use warning services that send email updates about new publications. Moreover, there is a lot of great information (e.g., Psych Info, ERIC) online that helps with book reviews Process. The Internet also provides a new place for professional work. For example, The American Psychological Association has launched an online magazine called Prevention & Treatment. This is one of the few online journals researched. As this format provides Short submissions during printing and the potential for greater research Findings, most publishers can move to an online format in the future as long as A high level of learning can be maintained. Finally, the Internet is becoming A tool for data collection. Investigators are able to post questions online on their own Or through specialized websites or software. Internet testing is also possible. Psych Tests is an excellent online testing tool that can be used as a class Demonstrations or for real research purposes. Various software packages also use Internet efficiency. For example, the Super Lab allows researchers to design research, Save the trial, and email it to another researcher within the Super Lab window. The Internet allows researchers to have more access to stored data sets for secondary analysis such as Well. These are the benefits of the internet, as well as the political changes in many more countries Over the past decade, a growing interest in the psychology of multiculturalism, and the influence of post-Modernism has helped the beginning of globalization.

### **Questions**

Bornstein recently examined the types of dependencies most commonly used in psychological research. You found that the questionnaire was used in 65% of the subjects also assessed that the questionnaire was the only one in 40% of all subjects tested. In comparison, ethics have been applied to 27% of the subjects tested and operational 30% measures were applied. These are the three most important types of steps commonly used. The following most commonly used steps, interviews, diagnoses, and Physical methods, each used in 9% of subjects. Although the questions are provided an easy way to collect data, there are several related problems and questionnaires. For example, the interrogation questions need to be understood mentally. Therefore, questionnaires should be properly developed before use in the study. This it may enhance the research process or damage the integrity of the research if not done. In addition, the questionnaire often relies on participants remembering past details. The difficulty with this The feature of the questions is that it is difficult to get an accurate answer.

### **Summary**

Psychology continues to grow as a discipline. Psychology applications too it is very clear. These methods are very appealing to young psychologists because they offer a variety of opportunities. Active psychology students can find themselves on the difficult edge of mental development and its application. This is the future Psychology, however, may depend on how well psychology preserves its scientific roots while meeting the needs of society and adapting to the changing world of technology.

### **References**

- [1.] American Psychological Association. (2000). What is Psychology? About America Psychological Association Retrieved from <http://www.apa.org/about>
- [2.] Boys, A. (2015). The 3 Most Important Methods in Psychology Currently Retrieved from <https://www.psychologytoday.com/blog/in-practice/201501/the-3-most-important-styles-in-psychology-research-right-now>
- [3.] Tarragona, M. (2015). Current 10 Positive Psychology Trends retrieved from <http://www.ipositive-education.net/10-current-trends-in-positive-psychology/>



## **Dr. B. R. Ambedkar: As A Real Humanist**

**Dr. Jagadish Asode**

*Dept. of History and Archaeology, Karnatak University, Dhawad, Karnataka State.*

### **Introduction :**

Dr. B. R. Ambedkar was a great humanist of the 20th century. He had sound personality in different spheres of his life. Besides so many difficulties and humiliations in childhood, adolescent stages and in profession, he always followed his self-control and right attitude. He never tried to create unwanted situations in his Marathon struggle at any cost. It shows his balanced personality i.e., his courage, self-confidence, will power and fearless ness (towards evil and inhuman) were the major characteristics of his personality. "He had rare ability to reduce the most complex questions to simple terms. He was a man of strong likes and dislikes: His mind was basically logical with will power of penetrating analysis and a gift of clever thinking.

Dr. Ambedkar was so energetic and had such a strong will that he faced every eventually with courage and determination. Like a valiant fighter he always went forward and forward and never looked backward. He had immense organizing capacity, a tribute to his strength as well as will power. He was not daunted and discouraged by any difficulties and danger. He maintains the same energy and resolutions under all circumstances.

Dr. Ambedkar's thoughts turned around how to avail the social justice for varied sections of the Indian society as he tried to attain it through the socio-economic and political participation among the depressed castes. A large number of the books and papers on Dr. Ambedkar's life, mission and his contribution to the Dalit society have been written and published by many great scholars but no one has yet tried to retrieve him as a humanist. This paper is the modest attempt to examine and analyse of Dr. Ambedkar's thoughts in which established that he was a great humanist and his thoughts for creating an egalitarian society in the Modern India.

### **Dr. Ambedkar on Indian Society :**

The Indian society is set in the steel frame of the Caste system, in which one caste is lower than another in social gradation involving particular privileges, rights, inhabitation and disabilities with regard to each caste. This system has created vested interests, which depend upon maintaining the inequalities resulting from the system. He, therefore, "unfurled the banner of equality". He was born in an untouchables family, carried on a relentless battle against untouchability throughout his adult life. In the last part of his life, he renounced Hinduism and became a Buddhist. We can easily understand his notion about Hinduism and his notorious implication through his works like *Buddha and His Dhamman*, *Annihilation of Caste*, *Philosophy of Hinduism*, *Riddles in Hinduism* etc.<sup>1</sup>

In many of Ambedkar's speeches and writings, the core subject is humanism. He also explored and tackled the subject of social predominance over political problems. The government must be tied to social matters inevitably. Democracy itself is focused on the corresponding culture. With the problem, he differs from the Congress and the socialists in giving social priority over politics. In all his works, 'Caste's annihilation,' and 'What the Congress and Gandhi did to untouchables' in particular, what is well expressed. The established political and social philosophies had a new significance since 'castes' became understood theoretically and designated as the Indian social truth.<sup>2</sup> Through his academic conceptualisation of the caste institution and its operation in Indian culture,

The roots of Ambedkar's philosophy were not in politics but in religion, particularly the Hindu religion which laid the foundation of caste system. His socio-political thought began with his criticism of Hindu religion because of its evil practices of caste system and seeking (or presenting) solutions for untouchables to free from this evil practice.<sup>3</sup> Dr. Ambedkar analysed Hindu society before starting his struggle against untouchability and the caste system. He was a scholar as much as a man of action in any case before becoming one. In his writings, Ambedkar tried hard to show the mechanisms of the caste system and clarified the origin of untouchability in order to support his fight for equality. For him, if the lower castes were not in a position to overthrow their oppressors, it was because of two reasons: they had partially internalised hierarchy; and because of the very characteristics of caste-based inequality.

### **Dr. Ambedkar on Human Values :**

Dr. Ambedkar's thoughts of human values based on implied Buddha's principles. He proclaimed with assurance to retain social political & economic value as well as he noted equal opportunity and dignity. In spite of it he constructs Article 14 to retain equal laws for all According to Article 15 (1) not to discriminate on the base of religions, castes, race Article 17 annihilation untouchables Article 23, Article 330 & 332 reservation in Parliament Lok Sabha & legislative Assembly. Such provisions are useful to retain social justice. Dr. Ambedkar provided constitutional status to women as well as fundamental rights to

every citizen of India, Directive principles are to retain social justice.<sup>4</sup> The dedication of Dr. Ambedkar to establish human values through implied Buddha's Principles are very vital in Indian society.

Dr. Ambedkar fought for the cause of human rights for the wellbeing of all in the society. He conceived the state as an organization the aim of which was:

1. To maintain the right of every subject to life, liberty and pursuit of happiness and to free speech and free exercise of religion.
2. To remove social, political and economic inequality by providing better opportunities to the submerged classes.
3. To make it possible for every subject to enjoy freedom from fear.

The concept of Human Dignity plays a pivotal role in Dr. B.R. Ambedkar's philosophy. Human Dignity means one is entitled to have respect by virtue of human nature. Since the Dalits have been dominated by the upper caste Hindus for the centuries, he has given his heart and soul for the upliftment and dignity of the Dalits.<sup>5</sup> The Untouchables 'have to face a lot of social, economic and educational discrimination on account of their birth status. Whenever an upper caste Hindu deliberately did any harm towards the Dalits, the state machinery becomes ineffective. No one is ready to file a case against the upper caste Hindus. Dr. Ambedkar was disappointed with the Hindu hierarchy based caste system. He envisaged that annihilation of caste is the only solution to give dignity to the Dalits.

#### ***Dr. Ambedkar on Social Humanism :***

Dr. Ambedkar's philosophy is an unwavering belief in the Navratnas rooted in the social humanism trilogy principles. It believes that 'freedom, equality and fraternity', 'education, organization and struggle' and 'Buddha, Dhamma and Sangha' is important for human welfare. He drafted the main draft of the Constitution, was personally a very compassionate person. He, apart from playing an important role in framing the constitution, also gave a philosophy of humanism.<sup>6</sup> His social humanism considers religion essential to social life, but is opposed to superstition and injustice. According to his philosophy, any person is free to adopt or abandon his religion.

Dr. Ambedkar's humanism is the philosophy of life of ordinary human. In the words of Dr. Ambedkar, "every human should have a philosophy of life. Because each must have a criterion from which to evaluate their conduct. Philosophy is nothing but a criterion from which human conduct can be evaluated." That is why Dr. Ambedkar connected philosophy to human social contexts.<sup>7</sup> The leftist group has been calling Dr. Ambedkar's ideas influenced by the French Revolution and the Left. Whereas Dr. Ambedkar himself says that "from a positive point of view my sociology can be said to be rooted in three words - freedom, equality and brotherhood. But one should not think that I accepted my philosophy from the French Revolution that I haven't done that." Ambedkar explains the inspiration of his philosophy and says that "My philosophy has its roots in dharma and not in political science. I have followed the teachings of the great Buddha."<sup>8</sup> In Ambedkar's philosophy, social humanism occupies the top position of human beings. It is a liberal human movement, driven by human beings, for human beings and by human beings, it does not seek any outward basis of human values, moral values and social concerns.

#### ***Conclusion :***

Dr. Ambedkar was a real humanist. His humanism was, to begin with, a sharp reaction to the inhumanity of man to man, of class to class in a society. According to Dr. Ambedkar any philosophy or Ism is good and acceptable if it is meant for human welfare. His humanism is called as 'social humanism' "this humanism stands for the fact that whatever is true for the human being must serve human interest and not interest of any supernatural being. The results and benefits of humanism, which all reach the door of each and every human being living in human society".

Dr. Ambedkar did not ignore individual human interest, because it tends essentially to give way to social humanism. All things can be true only when they work for all men ultimately. His knowledge, intellectual highness, thoughts and actions were sacrificed for the people who are living in gloomy social conditions. Nature is free from all evils and bondages. Throughout life he had been fought for human rights and fundamental rights, which are essential for all human beings, who live in the nature. His humanism not only for India sub-continent people but also for each and every individual who live in the global society.

#### ***References :***

1. Ambedkar. B.R., *Annihilation of caste*, Bombay, Thacker and co. Ltd., 1937, p.28.
2. Ekta Singh, *Caste System in India: A Historical Perspectives*, New Delhi, Kalpaz publications, 2003, pp.15-25.
3. Ambedkar. B.R. *The Untouchables- Who Are They and Why They Became Untouchables?* Bombay: Thacker and Co. Ltd., 1946, pp.17-34.

4. *Chentharassery T.H.P., Ambedkar on Indian History, New Delhi, Rawat Publication, 2000, p.47.*
5. *Jatava, D.R. B.R. Ambedkar Study in Society and Politics, Jaipur, National Publishing, 2001. pp, 26-29..*
6. *Bakshi, S.R. (ed), Social Ideology of B.R. Ambedkar, New Delhi, Deep&Deep Publication, 2001. pp, 15-19.*
7. *Jatava, D.R. Ambedkar and Humanism. Jaipur, ABD Publishers, 1999, pp. 17-29.*
8. *Jatava, D.R. Social Philosophy of B.R. Ambedkar. New Delhi, Rawat Publications, 1997, pp. 7-12.*

## **Dr. B. R. Ambedkar's Idea of Socio-Political Philosophy**

**Dr. Madhuri Chougule**

*Department of History & Archeology, Karnatak University Dharwad, Dist, Karnataka, India.*

### **Abstract:**

*The itemized research of Ambedkar's social and political way of thinking is extremely difficult task despite the fact that I might want to make an endeavor of his thought of social equity as an alternate point of view. The greater part of us just realized that Dr.B.R.Ambedkar was a draftsman of Indian Constitution and he additionally an incredible educator, educationist, legal advisor, business analyst, anthropologist, sociologist, creator, speaker, lawmaker, worker's guild leader, evangelist or more all social progressive. In India such countless social reformers arose to battle against unfairness for Dalit networks, anyway a couple of leader effectively conveyed they own plans to social orders towards the government assistance of discouraged society. Especially, Ambedkar worked for the Dalit rights, ladies' rights, in reverse positions, minorities and average individuals and battled for his entire life for the base respect of all people independent of rank or class.*

### **Introduction:**

It was in this conviction and with a hopeful confidence in human goodness, love and truth, which he entered upon his hallowed mission. The point of his main goal was to stimulate in people the enthusiasm for right relations. His motivation was reasonable instead of theoretical and his way of thinking of life was basically a development and advancement under specific conditions and occasions won in society' (Lal 1998: 45).

### **Thought of Social Justice:**

The social equity twigs of equity which subsidiaries from idea of moral ethical quality. The issues of social equity are influenced different developmental strategy just as entire development of social government assistance program. Kelson noticed social equity is that what does it truly mean to say that a social request is simply? Equity arranges through social, political and monetary judges which managed by the Indian constitution. **Ambedkar's Perspective of Hindu Social System**

Dr.Ambedkar was against the idea of Hindu social framework and didn't care for Hindu religion. Ambedkar accepted that change of religion to give social equity in the name Buddha religion and he saw that Buddhism is the most ideal approach to be received to advance quiet social job. To cite Ambedkar ,by disposing of my old religion which represented disparity and persecution today I am reawakened, I have no confidence in the way of thinking of incarnation; and it isn't right and wicked to say that Buddha was an incarnation of Vishnu. I'm not any more a fan of any Hindu god or goddess. I won't perform Shradha. I will stringently follow the eighty-overlap way of Buddha. Buddhism is a genuine religion and I will lead a daily existence guided by the three standards of information, right way and compassion' (Larbeer 2003: 82) and furthermore he cited that ,the world owes a lot to rebels who might set out to contend despite the affable and demand that he isn't trustworthy. I could do without the credit, which each reformist society should provide for its agitators. I will be fulfilled on the off chance that I cause the Hindus to understand that they are the wiped out men of India and that their infection is making risk the wellbeing and joy of other Indians' (on the same page: 83). Ambedkar took choice for protection to Buddha due to given components are:

The rational consciousness of assessing things for a better life of human beings

- The freedom of choice in which man realize his in dividable dignity
- The realization of the higher life by transcending the lower plane of human existence
- The revolt against suppression and enslavement of humanity
- The entire change of traditional pattern of society for providing physical facilities for all
- The emancipation of ignored humanity and the revitalization of overlooked reality.

The Hindu religion makes station framework dependent on occupation. Equity Venugopal says that the dependent on social framework allotted a progressive situation to every position bringing about struggle and disharmony. The rank framework with its differential treatment represented refutation of social equity (Venugopal 2005: 16).

The untouchables had nothing to do but to comply with it and regard it. The untouchables have not rights against the touchable. For them there is no equivalent right, not equity which is because of them and nothing is permitted to them. Nothing is because of them aside from what the accessible are set up to give. The untouchables should not demand rights. They ought to implore from benevolence and favor and rest content with what is offered' (Guru 2002: 41). This is appropriately brought up that Hindu law is against the equivalent right among all networks. The accessible networks make distant local area and were treated as slaves.

He cites, 'Caste is the beast that crosses your way, you can't have political change, and you can't have monetary change, except if you slaughter this monster' (Kazeha1988: 7). He accepted that the foundation of caste is the rank framework, the underlying foundations of the standing framework is religion joined to Varnashram, the base of Varnashram is the Brahminical religion, and the base of Brahminical religion is approval of force (Lal 1998: 66). Ambedkar said that the major unfair of highlights of casteism are;

1. Hierarchy 2.Lack of social efficiency 3.Social mobility 4.Responsible for disruptive tendencies 5. Excommunication 6.Endogamy and Antisocial spirit.

As indicated by Ambedkar, caste is religion and religion is definitely not an organization. It could be systematized by it isn't equivalent to the establishment in which it is implanted. Religion is an impact or power suffused through the duration of every individual trim his character deciding his activities and response, his preferences. These preferences, activity and responses are not foundation, which can be trimmed off. They are powers and impacts, which can be managed by controlling them or neutralization them. On the off chance that social powers are to be kept from tainting governmental issues and debasing it to the magnification of the meager few and the debasement of the numerous them it follows that it will contain instrument, which will bottle the biases and nullity and bad form, which the social powers are probably going to cause on the off chance that they were let loose' (Vijayan 2006: 18).

The ranks were encased joins together and it is their intrigue with clear inner voice that constrains the ex-conveyed the make is barbarous and it is in acquiescence to its power that some grievous gatherings wind up finished off, with the outcome that new gatherings by a mechanical law are continually being changed over into stations in a wildering assortment. The examination feels that the current Hindu social framework was against the simply social request. Ambedkar contended that the Brahmins were ruled Hindu society who was said that the major standards of Brahmanism are

- \* Graded inequality between the different classes
- \* Complete disarmament the Shudras and the untouchables
- \* Complete prohibitions of education of the Shudras and the untouchables
- \* Ban on the Shudras and the untouchables occupying places of power and authority
- \* Complete subjugation and suppression of women

He suggested that the following changes in the Hindu

**outlook :** There should be one and only on standard work

#### **Ambedkar's Notion of Social Justice**

Foul play is wherever not just western nations and India moreover. At present one of the contemporary issues is that treachery and position discrimination. Ambedkar did a development among underestimated networks. His idea of equity produced from the French Revolution of 1789. Ambedkar's viewpoint of social equity depends on social vote based system which comprises of three idea of equity to be specific freedom, uniformity and club. Ambedkar tended to in constituent gathering that, the third thing we should do isn't to be content with simple political majority rules system. We should make out political vote based system a social majority rule government too. Political popular government can't last except if there lies at the base of tit social majority rules system. Democracy's meaning could be a little clearer. It implies a lifestyle, which perceives freedom, balance and clique as the standards of life.

These standards of freedom, correspondence and brotherhood are not to be treated as isolated things in a trinity. They structure an association of trinity as in to separate from one from the other is to invalidate the actual point of democracy' (Larbeer 2003: 64). These standards are major rocks of Just Society Order and were beginning from France upheaval. Raphael concedes, justice and freedom are the two fundamental thoughts of all political idea. Each general public necessities some kind of idea worried that structure. Equity is the essential idea of social qualities; it is the thing that holds a general public together' (Raphael 1986: 68). His idea of freedom is a fundamentalism among political and reasoning idea. As per Ambedkar, freedom has isolated into two classes in particular Civil Liberty and Political Liberty. Ambedkar's thoughts of common freedom manages three fundamental conclusions are; Liberty of development, Liberty of discourse and Liberty of activity. Common freedoms are frequently officially ensured in Indian constitution yet overlooked by and by which came from Bill of Rights. Common right is regularly used to allude to at least one of these freedoms or by implication to the commitment of government to shield Dalits from infringement of at least one of their common freedoms.

The political freedom comprises in of the privileges of the person to partake in the outlining of law and really taking shape and undoing of governments. He accepted that freedom is went with social and financial uniformity and there should be information (schooling) made accessible to all. These freedoms are confined by old Hindu social framework yet these are the piece of the human freedom to box simply

social request. (Massey 2005:160). What's the significance here? Ambedkar offers response is that ,Fraternity implies a feeling of regular fellowship of all Indian, all Indians being one individuals. It is the rule which gives solidarity and fortitude to social life' (Jatava 2006:96).

Social and financial popular governments are the tissues and the fiber political majority rules system. The social and financial issue of our general public looks to conceive. Entire heartedly upholds the arrangement of central privileges of man in the constitution of free India. As indicated by B.R.Ambedkar, consolidate independence and socialism through the presentation of state socialisms, through the law of the constitution. Freedom holds the altered entrepreneur arrangement of social monetary, while if gives more prominent concessions to poor people, the fallen and the feeble, under a parliamentary type of government (Jatava 1997: 209). Ambedkar's idea of State

Socialism is based on following point :

- 1.State ownership of agricultural and key industries to meet the demands of the poorer strata of society,
- 2.Maintenance of productive resources by the state and
- 3.A just distribution of the common produce among the different people without any distinction of castes or creed (Jadhav1991:986).

#### **Conclusion :**

This research infers that Ambedkar's idea of social equity depends on equivalent rights and human nobility through lawful system. As the consequence of his idea, Indian constitution grantees equivalent option to all. He was first individual to request separate electorates and reservation framework for dalit in round table meeting subsequently three round table gatherings fizzled. Ambedkar understood that governmental policy regarding minorities in society is best way to progress of dalit networks which shields through lawful organizations. Ambedkar didn't empower the desire of station framework inside India and Caste framework produces cruel practice among the networks. Ambedkar accepted that monetarily dalit are exceptionally helpless which they are need admittance to political, social and financial force. Ambedkar's thoughts are upheld on economical development of dalit through legitimate and established arrangements and furthermore by getting sorted out them for battling for key rights. These are restricted by upper local area in India and wrongdoing expanded against. The execution body will reinforce by the state through social majority rules system. Also, his socio-financial and political thought has acknowledged by everybody to address contemporary socio-political issues. Ambedkar considered dalit portrayal into standard political field which creates dalit development in different Indian states for opportunity and equity. He additionally accepted that law is a significant amazing weapon to battle against discrimination. Study saw that Ambedkar's thought of social equity couldn't accomplish as a legitimate way and his idea of equity will be spread by establishments through common society. Dalit and non-dalit local area will approach to comprehend of his thought. Ambedkar worried about over all development of weak segment of the Indian culture and annihilated applying stations discrimination by ordering constitution. Hence, Ambedkar's idea of social equity is important in contemporary Indian culture to achieving only society inside system of established and lawful strategies.

#### **References:**

1. D.D. Raphael, 1986: *Moral Philosophy*, Oxford University Press, New Delhi.
2. D.R.Jatava, 1997: *Social Philosophy of B. R. Ambedkar*, Rawat Publication, New Delhi.
3. Gopal Guru 1998:, *Understanding Ambedkar's Construction of National Movement''*, *Economic and Political Weekly*, Vol.33, No.4, January 24-30, pp. 156-157.
4. Gopal Guru 2002:, *Ambedkar's Idea of Social Justice' in Ghanshyam Shah (ed), Dalits and the State, Concept Publishing Company, NewDelhi.*
5. Jadhav Narendra 1991:, *Neglected Economic Thought of Babasaheb Ambedkar; Economic and Political Weekly*, Vol. 26, No.15, April.13, pp.980-982.
6. K.S .Kazeha, 1998:, *B. R. Ambedkar; the Architect of the Constitution; in Shymlal & Sazena K.S. (ed), Ambedkar and National Building, Rawat Publication, Jaipur.*
7. P. Mohan Larbeer 2003: *Ambedkar on Religion: A Liberative Perspective*, ISPCCK. New Delhi.
8. P.P. Vijayan, 2006: *Reservation Policy and Judicial Activism*, Kalpaz Publication, New Delhi.
9. ShyamLal 1998:, *Ambedkar and Social Justice; in Shymlal & K.S. Sazena (ed), Ambedkar and National Building, Rawat Publication, Jaipur.*
10. Sing Surendra 1997:, *Dr. B. R. Ambedkar Contribution to Social Justice; in Mohammad Shabbir (ed), B. R. Ambedkar Study in Law and Society, Rawat Publication, Jaipur.*

## ***The Importance of Health Facilities in Badalpur Block District Jaunpur: A Geographical Study***

***Babita Shukla<sup>1</sup> Dr. Sanjay Kumar Singh<sup>2</sup>***

*<sup>1</sup>SRF, Geography Department, R.P.G. College, Jamuhai, Jaunpur*

*<sup>2</sup> Associate Professor, UPRTOU, Prayagraj (U.P.)*

### **Abstract**

A good health is a very important factor for Human life, without good health we can't imagine the Human development, because it's necessary for Human's physical and mental development. Quality of life is related to positively with a man, family and society. There are many quantitative indicators for measurement of related health conditions. Such as: Life expectancy, Death Rate (Crude Death rate, Infertility Death Rate Maternal Mortality Rate etc.) These indicators are very useful and popular. India's life expectancy is 62 years. Developed country's life expectancy is near about 75 years, developing countries' 60 years and under developed country's so less than others. There are negative relation in life expectancy and Death Rate. Geographical factors makes a very important role in the health condition. A suitable temperature, Humidity, Relief, Soil Distance from ocean/sea, latitude, wind, air pressure, precipitation, evaporation, insulation etc. are determine the Human Health. Natural and Human environment influence the health government policies and facilities making efforts to provide better health facilities in the rural area's population, but it is insufficient for major population size. There are imbalances of health facilities in the study area. This research article is related to health facilities in Badalpur Block, District Jaunpur. The study is based on both primary and secondary level data.

**Key Words:-** Facilities, Death Rate, Quality of Life, Life Expectancy, Indicators, Physical Condition, Physical and Mental Health.

### **Introduction:-**

Health facilities are main factors for any country or society. The definition of health is: A state of complete physical, mental and social well being and not mera absence of disease or infirmity (Deodhar, 1983). Mental, physical, intellectual, emotional and social health develops the abilities to acquire skills to maintain relationships to handle stress, working capacity, cheerfulness, strength, positivity and other things, we can understand better in the present time (21<sup>st</sup> century) during Covid-19 which gave the meaning to life security. It taught how can we boost our immunity system to fight diseases. Government provides the health facilities for both the rural and urban areas but the conditions of rural areas are very poor. In the study area there are 1 communal health centre, 3 primary health centre, 36 beds, total workers are 47. In Ayurvedic facility 2 centre and 8 beds, In greek facilities no centers, In Homeopathic facilities 2 centers but beds and doctors are nil. One family welfare population of Badalapur Block is 229945. So the medical facilities not enough according to population. The proposed study makes an effort to know, analysis the medical facilities and condition.

**Objects:-** These are major objectives-

- (1) To study the medical facilities in the study area
- (2) In analysis the medical condition
- (3) To know the spatial distribution of health facilities
- (4) To examine the influence of geographical background on health condition

### **Database and Methodology-**

The present study would be based on primary and secondary data which collected by Badalpur Tahsil, Development Block, Health Service Centre and others government office. The statistical methods are based on quantitative and qualitative methods.

**Study Area:**

Badalpur Development Block is situated in the western part of Jaunpur, District. Badalpur Development Block situated 25°0' to 20°51'3" North Latitude and 82°20'45" to 82°34'41" East longitude, covering area is 212.10Km<sup>2</sup>. Badalpur Block is surrounded in North by Tahsil of Shahgang in the south and west District Pratapgarh, Machhalishahar and in the East Tahsil Sadar of the same district.

Badalpur Development Block stand between North to south 14 km and East to west 18km. The study area has been divided into twelve Nyay Panchayat. Gomati river remarks the eastern boundary of the study area is near about 89meter from the sea level.

The study area is situated in the western part of district and is drained by Peeli system. Many fluvial landmarks are generated by Gomati, Peeli river, Lakhiya Nala in the study area. There are monsoony climate, near about more than 80% of rainfall, rainfall range is between 5mm to 450mm per month, average temperature is recorded near about 34° C typically high temperature in May-June and muggy in July, August, September; Relative humidity varies between 32 to 83% in different months and area of the year. The season is divided into three part on the nature of temperature, rainfall, air pressure, humidity and wind circulation etc. Human health is directly related to physical background and conditions. There are 5 major soil types Kachhiyan, Goyard, Palo, Dhanrer, Tari. These soil are part of alluvial soil. Generally study area divided into two types as Bangar and Khadar area. The soil faces pollution, degradation, soil erosion and lack of N<sub>2</sub>, humous, phosphorous etc. There are two types of regetation mansoony forest and deciduous forest in the study area. Population growth is very high in the shady area. According to the census of 2011. There are total population is 229945 in the study area.

**Health Facilities:**

According to Jila sankhyikiya Patrika, Janpad Jaunpur 2019. In the study area these are 9 communal health centre, 3 primary health centre (in singramau, nabhipur and jamaupatti), total bed facilities 36, 75 health workers (11 Doctors, 17 paramedical, 47 others). In Aurvedic hospitals- 2 hospital and 8 beds; Unani hospital centre is nil, 2 Homeopathic centre, 1 family welfare centre and 21 subcentre. In 2001 there are some changes as CHC was one, PHC was 4, Total Bed Number was 42. Total health workers were 7 Doctors, 56 paramdical and other zero. In the Aurvedic hospitals one dispensary, 4 beds, 01 doctor, Unani hospitals was zero, 3 homeopathic centre, one family welfare centre and 23 family welfare sub centre were in the study area.

Table-1  
 Health/Medical facilities in Badalpur Block

Sr. No.	Medical Facilities	Total No. of medical facilitators	
		2019	2001
1.	Communal Health Centre (CHC)	1	1
2.	Primary Health Centre (PHC)	3	4
3.	Total Bed	36	42
4.	Total Health workers (Doctors+ Paramedical + other)	(11+17+47)= 75	7+56+0=63
5.	Ayurvedic Hospital		
	Dispensary	2	1
	Beds	8	4
	Doctors	0	1
6.	Unani Hospitals	0	0
7.	Homeopathic Centre	2	3
8.	Family welfare centre	1	1
9.	Family welfare sub centre	21	23

Source: Jila samkhyikiya Patrika, Janpad Jaunpur 2019



**Table-2**  
**Nyay Panchayat wise Health Facilities I (2001- 2019)**

S.N	N.P.	Area (In hect.)	Popu. (2011)	Popu. (%)	Ellopath Hospital		CHC		PHC		Bed		Total health workers					
					2001	2019	2001	2019	2001	2019	2001	2019	Doctors		Paramedical		Others	
													2001	2019	2001	2019	2001	2019
1	Kevatliala	1438	17272	7.51	0	0	0	0	1	1	6	5	1	2	15	2	0	9
2	Singramau	2009	21363	9.29	0	0	0	0	1	1	8	6	1	2	9	2	0	10
3	Arjunpur	1929	20489	8.91	0	0	0	0	1	1	7	4	2	2	6	2	0	12
4	Jokhapur	1821	17731	7.71	0	0	0	0	0	0	0	0	0	0	6	0	0	0
5	Gopalapur	1257	13142	5.72	0	0	0	0	0	0	0	0	0	0	12	0	0	0
6	Ghyanshyampur	1760	18023	7.84	0	0	0	0	0	0	0	0	0	0	3	0	0	0
7	Shahpur	2120	19452	8.46	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Tiyera	2351	22513	9.79	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Fattapur	1052	8838	3.84	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	Bhaluahi	0815	15482	6.73	0	0	0	0	0	1	6	3	0	0	0	0	0	0
11	Sarokhanpur	2657	33015	14.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Badalapur Khurd	2089	22625	9.84	0	0	1	1	0	0	15	18	3	5	15	5	0	16
Tot.	Badalpur	219.05	229945	100%	0	0	1	1	4	3	42	36	7	11	56	17	0	47

Source: Computed by Researcher

### **Description of Nyay Panchayat wise Health facilities-**

Table no. 2 depicts that in the study area Kavatliala Nyay Panchayat's total area 1438 Hectare, population is 17272 (7.21%), Elopah Hospital is nill, community Health centre is Nill, primary health centre is only one, 6 beds, 2 doctors, 3 paramedical and 9 others health workers. In Singramau Nyay Panchayat there are 2009 hectare area, 21363 population (9.29%), Elopah and CHC is nill, 01 primary health centre, 08 beds, 02 doctors, 3 paramedical and 10 others health workers. In Arjunpur Nyay Panchayat 1929 Hectare area, 20489 population, (8.91%), Elopah and CHC Hospital are nill, Primary Health Centre is only one, 7 beds, 2 doctors, 3 paramedicals and 12 others health workers. There are 8 Nyay Panchayat where no any hospital facilities such as: Jokhapur, Gopalapur, Ghanshyampur, Shahpur, Tiyaera, Fattupur, Bhaluahi, Sarokhanpur. In Badalpur town there are one CHC, 15 Beds, 05 doctors, 7 paramedical and 16 other health workers. This facilities is not sufficient as a major level.

### **Description of Table-2**

Table No 2 depicts the difference between the year 2001 to 2019.

**Elopath Hospital-** These are no any Ellopatnic Hospital in the study area in 2001-19

**Community Health Centre-** In the study area there are only one CHC in Badalpur town area in 2001-2019

### **Primary Health Centre-**

In 2001, there are 4 Nyay Panchyat, where PHC is as: one PHC in Kevatliala, one PHC in Singramau, One PHC in Arjunpur and one is in Bhaluahi. No any PHC in Jokhapur, Gopalapur, Ghanshyampur, Shahpur, Tiyaera, Fattupur, Sarokhanpur, Badalpur Khurd. In 2019 One PHC is in minus and in present time only 03 PHC in the Badalpur Block

### **Total Beds in Elopath, CHC, PHC-**

In 2001 Kevatliala Nyay Panchyat had 06 beds, Singramau Nyay Panchayat 08 beds, Arjunpur Nyay Panchyat 07 beds, In Bhaluali Nyay Panchyat 06 beds, In Badalpur khurd 15 bed.

In 2019 Kevatliala Nyay Panchyat there are 05 beds, Singramau 6 Nyay Panchayat 06 beds, Arjunpur Nyay Panchyat 04 beds, In Bhaluali Nyay Panchyat 03 beds and Badalpur khurd 15 bed are available which are very less than need.

### **Total Health workers-**

In 2001 year no. of Doctors is one in Kevatliala, 01 in Singramau, 02 doctors in Arjunpur nyan panchayat, 03 doctors in Badalpur Khurd 07 doctors were available.

In 2019 no. of doctors are increases in Kevatlial Nyay 02 doctors, In Singramau 02, Arjunpur 02 doctors, and in Badalpur khurd 03 Doctors are available. Its very less numbers according to the population.

### **Total Paramedicals-**

The no. of paramedicals in 2001, Kevatliala 15, Singramau 09, Arjunpur 06, Jokhapur 06, Gopalapur 12, Ghanshyampur 03, Shahpur, Tiyaera, Fattupur, Bhaluali, Sarokhanpur is zero. Badalpur khurd 15 and total paramedical are 56

In 2019, Kevatliala 03, Singramau 04, Arjunpur 03, Badalpur khurd 07 while 8 Nyay Panchayat Jokhapur, Gopalapur, Ghanshyampur, Shahpur, Tiyaera, Fattupur, Bhaluahi, Sarokhanpur have no any facilities in this field. The condition of facilities is so poor.

### **Other Health Workers-**

According to Jila sankhyikiy Patrika 2001-02, there are no any other health workers in Badalpur Block but in the year 2019 situations are better than 2001. There are 47 other health workers in Badalpur Block such as: 09 in Kevatliala, 10 in singramau, 12 in Arjunpur, 16 in Badalpur khurd and in Jokhapu, Gopalapur, Ghanshyampur, Shahpur, Tiyaera, Fattupur, Bhaluahi, Sarokhanpur Nyay Panchayat has no other Health workers.

**Table-3**  
**Nyay Panchyat wise Health Facilities II (2001-2019)**

Sr. No.	N.P.	Ayurvedic						Eunani						Homeopathic						
		Dispensary		Bed		Doct.		Dispensary		Bed		Doct.		Dispensary		Bed		Doct.		
		2001	2019	2001	2019	2001	2019	2001	2019	2001	2019	2001	2019	2001	2019	2001	2019	2001	2019	
	Kevatlikala	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
	Singramau	1	1	3	5	1	0	0	0	0	0	0	0	0	1	1	0	0	1	0
	Arjunpur	0	1	1	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	Jokhapur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Gopalapur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Ghanshyampur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Shahpur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Tiyera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Fattupur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Bhaluahi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sarokhnpur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Badalapur Khurd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	Badlapur	1	2	4	8	1	0	0	0	0	0	0	0	0	3	2	0	0	1	0

Source : District Statistical Magazine 2001, 2019, Computed by Researcher.

**Description of Table No. 3**

**Ayurvedic Hospital-**

In 2001 there are only one dispensary in Singramau Nyay panchayat, one is in Arjunpur increases after that there are 02 dispensary in Badalpur Block No. of beds in 2001 in 4 , 3 in Singramau and one is in Arjunpur, in 2019 total beds is 08, 05 is in Singramau, 3 is in Arjunpur. One doctor was in 2001 but in 2019 there are no any Ayurvedic doctors in the study area.

**Eunani Hospital-** There are no any Eunani hospital facilities in the study area.

**Homeopathic Dispensary-** In the study area there are only 03 dispensary in 2001 which is one in Kevatlial nyay panchayat, Nyay panchayat one in Singramau, one is in Arjunpur but in 2019 only 02 which is in kevatlikala is in Singramau Nyay Panchayat.

Table-4  
 Family welfare centre and sub-centre (2001-2019)

Sr. No.	N.P.	Family welfare centre		Family welfare sub-centre	
		2001	2019	2001	2019
(1)	Kevalikala	0	0	3	2
(2)	Sigramau	0	0	2	2
(3)	Arjunpur	0	0	2	1
(4)	Jokhopur	0	0	2	2
(5)	Gopalapur	0	0	1	1
(6)	Ghyanshyampur	0	0	1	1
(7)	Shahpur	0	0	1	1
(8)	Tiyera	0	0	2	2
(9)	Fattupur	0	0	2	2
(10)	Bhaluahi	0	0	1	1
(11)	Sarokhnpur	0	0	2	4
(12)	Badalapur Khurd	1	1	4	4
Total	Badlapur	1	1	23	21

Source : District Statistical Magazine 2001, 2019

**Description of Table No. 4**

**Family welfare centre-**

According to table no. 4 in 2001 and 2019 there are only one family welfare centre in the study area.

**Family welfare sub-centre-** In family welfare sub centre for mother and child health care sub centre are 23 in 2001 as 03 in Kevatlialkala, 02 Sigramau, 02 in Arjunpur, 02 in Jokhapur, one in Gopalapur, one in Ghanshyampur, one in shahpur, 02 in Tiyera, 02 in Fattupur, one in Bhaluahi, 02 in Sarokhanpur, 04 in Badalapur Khurd. In 2019 there are 02 centre in Kevatlialkala, 02 in Singramau, one in Arjunpur, 02 in Jokhapur, one in Gopalapur, one in Ghanshyampur, one in Shahpur, 02 in Tiyera, 02 in Fattupur, one in Bhaluahi, 02 in Sarokhanpur, 04 in Badalpur Khurd.

**Health Related Problems:** A bad health creates negative atmosphere. It influence the work capacity of man. If the children suffering from diseases, they cannot go for education, workers, farmers, women, children and all the person when healthy they can do their work easily. For public health government makes policy and planning, but according to huge population its insufficient.

**Low Spending on Health-** India facing problems in health sector because these are very low facility of Hospital, Dispensary, Doctors, Nurses, Paramedical Health centre are not enough. According to Global burden of Disease study 2021 India is 145<sup>th</sup> rank in 180 countries. Hospitalization rate is 3-4% which is very poor condition. According to Economic survey in Health care budget India's rank is 179<sup>th</sup> in 189 countries.

**Lack of Awareness:-** Lack of awareness the public not used the government health facilities. Very poor people goes to governmental hospitals. Major people depends on the private hospitals, doctors, nurses. Private hospitals are so costly. In the rural areas after the governmental hospital, second option is untrained Jholachhap Doctors, exorcist, Neem Hakim, Home remedies etc.

**Illiteracy and Poverty-** Health is positively connected to Illiteracy and poverty. Illiterate people do not go to hospitals timely and increase their problems, they ignore their small disease which creates problems very slowly.

Apart from accessibility, cost is major deterrent to addressing health issues. There are many common problems of health issues as congenital abnormalities, cataract, hearing loss, diabetes, heart diseases, hair loss, inflectional diseases etc.

It is notable to see the health care industry, excepted increase in geriatric population, lifestyle related diseases, rising literacy and disposable income that makes health care more affordable.

### **Government Efforts, Policy and Planning in the Health Sector**

As percent of GDP, India spent 4.0% of the total GDP on health care in 2010 (world health statistics 2010; ASSOCHAM 2011). In comparison the global average was 9.7% with the USA having maximum spent, U.K. and Brazil 8.40% each. The per capita spending on the health care is also among lowest in India. The health sector in India is public government, private. Private sector health care providers, registered under the clinical establishment Act, are owned and run by individuals. Dispensaries, clinics, nursing homes, hospitals as allopathic, ayurvedic, Homeopathic or Unani system comes under ministry of health and family welfare, government of India. Health facility in forms of sub-centers. Primary health centers, community health centers and rural hospitalizing, urban health centers, municipal and other government hospitals, pharmaceutical companies, chemist shops, research organizations, medical colleges and other health related training and research institutes that may be public or privately owned also use a part of the health sector.

### **Health Policies-**

- (1) National Rural Health Mission
- (2) National Urban Health Mission
- (3) Swachh Bharat Mission (2014-19)- aims to achieve sanitation facilities, cleaner environment and surrounding for all.
- (4) AMRIT Yojana (2015)
- (5) Ayushman Bharat Yojana (National Health Protection Mission) 2018- It promises health cover worth Rs. 5,00,000/- to every poor family for treatment of serious diseases.
- (6) National Health Policy
- (7) National Population Policy
- (8) National Nutrition Policy
- (9) National water policy
- (10) National Environment Policy
- (11) Jan Aushadhi Centre

Ministries Related to Improving Health- Ministry of Health and family welfare ministry of social Justice and Empowerment, ministry of women and child development, ministry of human development. Ministry of rural development, Ministry of urban development. Ministry of drinking water and sanitation. Ministry of environment Roster and Climate change etc.

**Conclusion-** Health mission, policies programmes acts and statue's aims are to provide good health and wellbeing to all. After analyzing the conclusion is such as: Health facilities is not enough and needs to improve the health service centers, doctors, nurses, medicines, awareness, hospitals, dispensaries, which is very low according to standard population size is large than government is not working in this field. Health sector is reforming in present time and making a attempt in future. Government imposing the quality and quantity of health facilities as low price medicine, doctors etc.

### **Reference**

1. Dubey, Kamal Kant et.al (2015), "Regional Development Planning," Tara Book Agency, Varanasi, p.48
2. Maurya, S.D.(2016), "Social Geography" Sharda Pustak Bhavan, Prayagraj. pp. 441-442
3. Singh, Harishchandra and Singh Chandra Bahadur (2004), "A Geographical Study of Integrated Rural Development in Badalpur Block, Jaunpur, District," S.B. Degree Colledge, Badalapur, Jaunpur pp- 117-119, 143-144
4. Lal, Jawahir, Singh, S.K. "The Role of Health facilities in the Rural Development (A case Study of Siddharthnagar District) pp 1-8 (unpublished), DDU Gorakhpur, university, Gorakhpur.
5. Khan, Shabnam, "Diagnostic Planning of Health facilities in Country side, Aligarh District: A Case Study" Aligarh Muslim Universtiy Aligarh (U.P.) pp- 1-13
6. Jila Sankhyikya Patrika, Janpad Jaunpur 2019 pg. no. 109-112
7. Singh, R.B. and Grove Aakriti (2020), 'Urban Health and wellbeing', pp. 251-266
8. Government of India (2011) Annual Report to the people on health, Ministry of Health and family welfare pp. 1-76
9. Government of India (2017) National Health Policy 2017, Ministry of Health and family welfare pp. 1-31
10. Devdhar, N.S. (1983), "The concept of Health and disease" in you and your health (eds) V.N. Bhave, N.S. Deodhar and S.V. Bhavne, National Book Trust, India.
11. WHO , tech. Rep. Ser, 1967, No. 350
12. National Rural Health mission (2005), Ministry of Health and Family Welfare, Government of India, New Delhi. Retrieved 5 December, 2008

13. Vishal Sonkar (2015) Evaluation of Rural Development Programmes in Barabanki District (Unpublished Thesis), Deen Dayal Upadhyay, Gorakhpur, University, Gorakhpur.
14. Gambhire, D.B. (1985), Spatial Distribution of Diseases and Health care Facilities in Rural Area of Kolhapur District-A Study in Medical Geography, Unpublished M.Phil thesis submitted to Sivaji university Kolhapur.
15. Ghosh, A (2010), Disparity in Health Services in west Medinipure, West Bangal, A Geographical Review of India, Vol 2, P 162-168
16. Singh, Sanjay Kumar and etal (2020), "Study of Population, Health and Environment in Ghazipur District: (Article in Edited Book- Population , Health and Environment- 978-93-89646-17-7) pp. 18-22
17. Singh, Sanjay Kumar, V.K. 2020' Paryavaran: Muddey evam chunautiya, Kanak Prakshan, Prayagraj, U.P. pp. 132-141
18. Mishra, Sujit Kumar etal (2013), Understanding Health Approaches on Issues, Global Research Publisher, New Delhi (India) Pg. 67

## मानवी कल्याणासाठी शाश्वत विकासाची आवश्यकता

सहा. प्रा. कैलास सत्यवान शेलार

अर्थशास्त्र विभाग प्रमुख, श्रीमती. कस्तुरबाई वालचंद महाविद्यालय (कला- विज्ञान), सांगली, (महाराष्ट्र)

### सारांश

शाश्वत विकास ही आज जगभर स्वीकारलेली महत्वाची आणि काळाची गरज असणारी संकल्पना संपूर्ण जगाने मानव जातीच्या कल्याणासाठी स्वीकारली असून, ती आज चळवळ बनू पाहत आहे. विकास ही संकल्पना भौतिकवादी विकासकाकडून कल्याणकारी (मानवी) विकासाच्या मार्गाने शाश्वत विकासा पर्यंत येवून पोहोचली आहे. शाश्वत विकासाची कल्पना ही विकास आणि पर्यावरण यामधील संबंधाचे स्पष्टीकरण करते. देशातील आर्थिक विकास (कृषी, उद्योग, सेवा क्षेत्र) साध्य करताना आणि त्यातून समाजाच्या विद्यमान पिढीच्या गरजा पूर्ण करत असताना भविष्यातील पिढ्यांना त्या विकासाची कोणतीही किंमत मोजावी लागणार नाही. त्यांचे नुकसान होणार नाही. म्हणजेच नैसर्गिक साधन संपत्तीची (पर्यावरणाची) कोणतीही हानी न करत जो आर्थिक विकास साध्य केला जातो. त्यास शाश्वत विकास असे म्हणतात. 1970 पर्यंत संपूर्ण जगात काही देशात भांडवलशाही विकास मार्ग, तर काही देशात समाजवादी विकास मार्ग या दोन्ही विकास पद्धतींचा अवलंब करण्यात आला. या दोन्ही विकास पद्धतींचे प्रधान उद्दिष्ट म्हणजे आपल्या देशाची आर्थिक वृद्धी साध्य करणे. हे उद्दिष्ट साध्य करण्यासाठी नैसर्गिक साधन संपत्तीचा प्रचंड वापर करणे, आधुनिक तंत्रज्ञानाचा वापर, मोठ्या प्रमाणावर औद्योगिकरण, कारखाना उत्पादन पद्धती, शहरीकरण, या मार्गांचा अवलंब करण्यात आला. परंतु हे सर्व होत असताना नैसर्गिक साधन संपत्तीची अपरिमित हानी झाली. आणि त्यातून अनेक पर्यावरण विषयक समस्या निर्माण झाल्या. आणि पृथ्वीवरील सजीव सृष्टीलाच धोका निर्माण होऊ लागला. आज जागतिक तापमान वाढ ही एक गंभीर समस्या निर्माण झाली आहे. आणि म्हणूनच आर्थिक विकासाचे प्रस्थापित मार्ग पर्यावरणासाठी आणि मानवी कल्याणासाठी योग्य नाहीत, संपूर्ण मानव जातीच्या कल्याणासाठी विकासाचा मार्ग म्हणजे शाश्वत विकास आहे. ज्यामध्ये पर्यावरणाची हानी न होता, कायम स्वरूपी विकास साध्य करणे या दृष्टीकोनातून विकास साधणे आवश्यक आहे. प्रस्तुत शोध निबंधात भारताच्या बाबतीत शाश्वत विकास व पर्यावरण विषयक सुरक्षितता वाढविण्यासाठी उपाय सुचविण्यात आले आहेत.

### मानवी कल्याणासाठी शाश्वत विकासाची आवश्यकता

#### प्रास्ताविक

अलीकडील काळात जगातील सर्वच देशांनी शाश्वत विकासाचे तत्व स्वीकारले आहे. दीर्घकाळ टिकून राहणारी अवस्था म्हणजे शाश्वतता होय. पृथ्वीवरील नैसर्गिक साधन सामग्रीच्या स्रोतांचे संरक्षण आणि संवर्धन होऊन भविष्यकालीन विकासासाठी ही साधनसंपत्ती उपलब्ध होणे आवश्यक असते. नैसर्गिक साधनसंपत्तीच्या अतिरेकी वापरामुळे भविष्यातील पिढ्यांना साधन संपत्ती पासून वंचित राहावे लागू नये, भविष्यकालीन पिढ्यांना गरजा पूर्ण करता येतील असा चालू काळात विकास साध्य करणे आवश्यक असते. शाश्वत विकासाच्या संकल्पनेमध्ये दीर्घकाळ कायमस्वरूपी टिकून राहणारा विकास अभिप्रेत असतो. कोणत्याही राष्ट्राचा आर्थिक विकास हा त्या राष्ट्रातील नैसर्गिक साधन संपत्तीवर अवलंबून असतो. या साधन संपत्तीच्या अति वापराने पर्यावरणाची हानी होते. आणि त्याचा परिणाम मानवी कल्याणावर होत असतो. म्हणून आर्थिक विकास साध्य करताना मानवाच्या चालू पिढीला आणि भविष्यातील पिढ्यांना कोणतेही किंमत मोजावी लागणार नाही. असा शाश्वत विकास साधणे आवश्यक असते. आज हरितगृह वायूमुळे ग्लोबल वॉर्मिंगचा प्रश्न हा पृथ्वीवरील सर्व प्राणीजातीसाठी गंभीर प्रश्न बनला आहे. त्यामुळेच आज संपूर्ण जगाला शाश्वत विकासाची गरज निर्माण झाली आहे.

#### संशोधन समस्या

प्रस्तुत संशोधन लेखामध्ये शाश्वत विकासाचे विश्लेषण करण्यात आले आहे. हरितगृह वायू चे प्रमाण वाढल्यामुळे एकूण हवामानात बदल होत आहे. पर्यावरणावर प्रतिकूल परिणाम होत आहे. मानवी जीवनावर प्रतिकूल परिणाम होत आहेत. त्यामुळेच आज प्रत्येक क्षेत्रात शाश्वत विकासाची गरज निर्माण झाली आहे. त्या अनुषंगाने भारताच्या बाबतीत शाश्वत विकासाचा आढावा घेण्यात आला आहे.

#### अभ्यासाची उद्दिष्टे

1. शाश्वत विकास संकल्पनेचा अभ्यास करणे.
2. आर्थिक विकास आणि पर्यावरण यामधील संबंधाचा अभ्यास करणे.
3. शाश्वत विकासांबाबत भारताच्या स्थितीचा अभ्यास करणे.
4. शाश्वत विकास व पर्यावरण संवर्धनासाठी उपाय सुचविणे.

## संशोधन पद्धती

प्रस्तुत शोध निबंध दुय्यम साधन सामग्रिवर आधारित असून विविध मासिके /संधर्भ ग्रंथ, यांचा आधार घेतलेला आहे.

## शाश्वत विकास

ब्रुट या आयोगाने 1987 साली "our common future" शीर्षकाचा अहवाल प्रसिद्ध केलेला आहे या अहवालात शाश्वत विकास या संकल्पनेची व्याख्या करण्यात आली आहे . ही व्याख्या पुढील प्रमाणे.

"Sustainable Development is Development that meets the need of the present without compromising the ability of future generation to meets their needs".

विद्यमान पिढीच्या गरजांची पूर्ती करून भविष्यातील पिढ्यांना त्यांच्या गरजा भागविण्यासाठी कोणत्याही तडजोडी कराव्या लागणार नाहीत असा विकास म्हणजे चिरंजीवी विकास होय.समाजाच्या चालू पिढीच्या गरजांची पूर्तता करणे हे शाश्वत विकासाचे प्रमुख उद्दिष्ट असते. त्यासाठी प्रत्येक देशाला संपत्तीची (वस्तू आणि सेवांची) निर्मिती करावी लागते. हे उद्दिष्ट गाठत असताना पर्यावरणाची संतुलन बिघडवू देता कामा नये. पर्यावरणाची कोणतीही हानी होता कामा नये उपलब्ध नैसर्गिक साधन संपत्तीचा आवश्यक तेवढा आणि विवेकी वापर होणे आवश्यक आहे. तरच आपण भावी पिढीच्या गरजांची पूर्तता करू शकतो हेच शाश्वत विकासामध्ये अभिप्रेत आहे. वर्तमानकालीन विकास भविष्यातही टिकून राहणारा असेल तर तो शाश्वत विकास ठरतो.

## शाश्वत विकासाची उद्दिष्टे

1. आर्थिक वाढ आणि आर्थिक विकास घडवून आणणे.
2. आर्थिक वाढीचे फळे सर्वांना समान पद्धतीने वितरीत करणे.
3. सर्वांच्या मूलभूत मानवी गरजा पूर्ण करणे.
4. लोकसंख्या वाढीवर नियंत्रण ठेवणे.
5. नैसर्गिक साधनसंपत्ती चे संरक्षण आणि संवर्धन करणे.
6. नैसर्गिक साधनसंपत्ती चे संरक्षण करणे.
7. देशाच्या विकास विषयक धोरणात आर्थिक वृद्धी आणि पर्यावरण या दोन्ही गोष्टींचा अंतर्भाव करणे.

## आर्थिक विकास आणि पर्यावरण

आर्थिक विकास आणि नैसर्गिक साधन संपत्ती (पर्यावरण) यामध्ये विशिष्ट आंतर संबंध आहे. देशाचा आर्थिक विकास हा देशातील नैसर्गिक साधनसंपत्ती वरच अवलंबून असतो. नैसर्गिक संसाधनांचा योग्य, पर्याप्त व कार्यक्षम पणे वापर करणे यावर आर्थिक विकास अवलंबून असतो. नैसर्गिक साधन संपत्ती ची विपुलता असून देखील त्याचा वापर अयोग्य आणि अपूर्ण होत असेल तर देशात बेकारी, दारिद्र्य, मागासलेपणा इ. समस्या निर्माण होऊ शकतात. त्यामुळे नैसर्गिक साधनसंपत्ती चा योग्य वापर करणे आणि त्यातून आर्थिक प्रगती साध्य करणे आवश्यक असते. परंतु सध्या आर्थिक विकास पर्यावरण हानिकारक ठरत आहे. अनेक पर्यावरणीय समस्या जसे हवा, पाणी, प्रदूषण जागतिक तापमान वाढ इ. समस्या आर्थिक विकासाचे परिणाम आहेत. शेवटी या पर्यावरणीय समस्यांमुळे मानवी जीवन धोक्यात येत आहे. आणि अशा आर्थिक विकासाला काहीच अर्थप्राप्त होत नाही.

विकास आणि पर्यावरण एकमेकांना पूरक आहेत. एकाच नाण्याच्या त्या दोन बाजू आहेत. त्यामुळे एका बाजूने पर्यावरणाचा समतोल ही राखला पाहिजे आणि दुसऱ्या बाजूला आर्थिक विकास ही साध्य झाला पाहिजे. तरच मानवी जीवनाचे कल्याण साधले जाईल. त्यासाठी शाश्वत विकास हाच एकमेव मार्ग आहे.

## जागतिक तापमान वाढ (ग्लोबल वॉर्मिंग)

सध्या जागतिक तापमानात वेगाने वाढ होत आहे. मानवाच्या अतिरेकी हस्तक्षेपामुळे हवेतील कार्बन डायऑक्साईड ,मिथेन व नायट्रस ऑक्साईड या प्रमुख हरित वायूचे प्रमाण वाढल्यामुळे तापमानात दिवसेंदिवस वाढ होत आहे. हरितगृह वायूचे प्रमाण औद्योगिक क्रांतीच्या पूर्वी 280 पी पी एम (पार्टिकल पर मिलियन) होते. सध्या ते 400 पी.पी.एम. झाले आहे. या वायूमुळे हवामानात बदल होत आहे. माणसांकडून होत असलेले जीवाश्म इंधनाचे ज्वलन , वीज निर्मिती, कृषी प्रक्रिया, उद्योग , जल प्रदूषण इ. मुळे हरितगृह वायूचे प्रमाण वाढत असून त्यात कार्बन डायऑक्साईड चे प्रमाणे 72 टक्के आहे. तापमानातील या वाढीचे मानव जातीसह सर्व सजीव सृष्टीवर विपरीत परिणाम होतील तापमानवाढीमुळे हिमनद्या मधील बर्फ वितळणे, नैसर्गिक तलावांच्या क्षमतेत घट होणे , उन्हाळ्यात पुर परिस्थिती निर्माण होणे यासारखे प्रश्न भविष्यात गंभीर बनतील.



## पर्यावरण आणि आरोग्य

आर्थिक विकासामुळे होणाऱ्या पर्यावरणीय परिणाम हा शेवटी सजीव सृष्टीवर होत आहे. मानवाने आपल्या बौद्धिक सामर्थ्याच्या जोरावर विज्ञान तंत्रज्ञाना मध्ये केलेली प्रगती लक्षणीय आहे. परंतु या आर्थिक, वैज्ञानिक प्रगतीची सांगड शाश्वत विकासाशी नसल्याने पर्यावरणीय -हासाचा व असमान आर्थिक वाढीचा परिणाम शेवटी मानवी आरोग्यास बहुतांशी समस्या निर्माण होण्याचे मूळ कारण प्रदूषण हे आहे. विविध प्रकारच्या भौतिक, रासायनिक व जैविक क्रियांचा धोकादायक घटकांच्या वदारे पर्यावरण बदल मनुष्याच्या आरोग्यावर होत आहे. अधिक उष्णता मानामुळे उष्मा, थकवा येणे, पचन प्रक्रियेत अडथळा व शारीरिक कार्यक्षमतेत घट होणे इ. धोके संभवतात देशातील विविध भागात उष्णतेच्या लाटेमुळे मृत्युमुखी पडणाऱ्यांची संख्या वाढत आहे. मानवाने जलद औद्योगिक विकास साध्य करण्यापोटी आपले पर्यावरण आणि आरोग्य धोक्यात आणले आहे. त्यामुळेच मानवी कल्याणासाठी शाश्वत विकासाची आवश्यकता निर्माण होते.

## कृषी उत्पादन

कृषी उत्पादन वाढविण्यासाठी मोठ्या प्रमाणात रासायनिक खतांच्या कीटकनाशकांच्या वापर केला जात आहे. या रासायनिक खतांमुळे जमिनीच्या आरोग्यावर तसेच मानवाच्या आरोग्यावर गंभीर परिणाम होत आहेत. कृषी नापिकी, क्षारपड बंनत आहे. दुसरीकडे तापमान वाढीचा उत्पादनावर प्रतिकूल परिणाम होत आहे. तापमान उच्च पातळीवर राहिल्याने पिककळ बदलते, हंगामाचा कालावधी कमी होतो. पिकांना लवकर फुले आल्यामुळे एकूण उत्पादनात घट होते. तापमानातील कार्बन डायऑक्साइड च्या वाढीमुळे अन्न धान्याची पोषक घटक कमी होत आहेत. त्यामुळे शाश्वत शेतीचा अवलंब करणे आवश्यक ठरते.

## भारतीय मान्सून

भारतीय मान्सूनच्या अनियमिततेत झालेली वाढ हा एक पर्यावरणीय - हासाचा एक प्रमुख परिणाम आहे. भारतीय शेती मान्सूनवर अनिश्चिततेमुळे शेती क्षेत्रावर अनिष्ट परिणाम होत आहेत. शिवाय पाण्याची गरज आणि जैवविविधतेचे संरक्षण व संवर्धन यासाठी मान्सून अपरिहार्य आहे. दिल्ली आय आय टी मधील शास्त्रज्ञांनी असा इशारा दिला आहे की, भारताला 2050 पर्यंत घटत्या पर्जन्यमानाचे अनुभव येईल. व कृषी क्षेत्रावर त्याचा विपरीत परिणाम होईल. आज देशातील काही प्रदेशांत सातत्याने दुष्काळी परिस्थिती निर्माण होत आहे. महाराष्ट्रात देखील सातत्याने दुष्काळी परिस्थिती निर्माण होत आहे. त्यामुळे लोकांच्या पिण्याच्या पाण्याचा प्रश्न गंभीर बनत आहे. महाराष्ट्रातील मराठवाडा, विदर्भातील लोक दुष्काळामुळे विस्थापित होत आहेत. मनुष्यासमोर जगण्याचा प्रश्न निर्माण होत आहे.

## इलेक्ट्रॉनिक कचऱ्याचा प्रश्न

जगातील सर्वात मोठा आणि वेगाने वाढणारा उत्पादन क्षेत्रातील उद्योग म्हणजे इलेक्ट्रॉनिक उद्योग या उद्योगाने सामाजिक आर्थिक आणि तांत्रिक वाढीसाठी विकसनशील भारतीय समाजाला हातभार लावला आहे. माहिती तंत्रज्ञान क्षेत्रात मागील शतकात मोठीच प्रगती झाली आणि त्यामुळे भारतीय नागरिकांची जीवनशैलीच बदललेली आहे. परंतु चुकीच्या व्यवस्थापनामुळे पर्यावरणीय प्रदूषणात भर पडली आहे. उदा. क्लोरीन युक्त ब्रोमिन युक्त पदार्थ विषारी वायू, विषारी धातू, जैविक रित्या क्रियाशील पदार्थ आम्ले, प्लॅस्टिक मिश्रित पदार्थ या सर्वांमुळे पर्यावरणाला आणि मानवी आरोग्याला धोका निर्माण होत आहे. मागील दशकापासून अर्थव्यवस्थेतील बदलाला माहिती तंत्रज्ञान उद्योग कारणीभूत आहे. आपल्या दैनंदिन जीवनात प्रत्येक बाबतीत डिजिटल क्रांती घडवून आणण्यात त्याचा मोठा वाटा आहे. वेगाने वाढणाऱ्या संगणक, मॉनिटर, दूरदर्शन यांच्या वापरातून होणाऱ्या वाईट परिणाम विषयी लोक अनभिज्ञ आहेत. जेव्हा ही उत्पादने जाळली जातात किंवा जमिनीत गाडली जातात. तेव्हा त्यात असलेल्या उपायकारक पदार्थांमुळे आरोग्याला धोका निर्माण होतो. संयुक्त राष्ट्रांच्या विद्यापीठाने वैश्विक ई- कचरा निदर्शक 2017 साली प्रकाशित केला त्यांच्या अंदाजानुसार भारत प्रतिवर्षी 20 लाख टन ई- कचरा निर्माण करतो. ई- कचऱ्याचा सर्वात जास्त दिसून येणारा परिणाम म्हणजे हवा प्रदूषण होय. इलेक्ट्रॉनिक कचऱ्यामुळे मानवी आरोग्यावर फार गंभीर परिणाम होवू शकतात त्यामुळे याई- कचऱ्याचे योग्य व्यवस्थापन करणे आवश्यक आहे.

## जंगल संपत्ती

तापमान वाढीमुळे उष्ण व समशतोष्ण कटिबंधातील जंगल संपत्तीवर विपरीत परिणाम होत आहेत. हवामानातील बदलाचा परिणाम म्हणून पर्जन्यमानात झालेली घट व त्यामुळे भूपृष्ठाखाली पाण्याची पातळीत घट झालेली आहे. त्याचा परिणाम म्हणून मध्य भारतातील वना मधील साग वृक्षांची संख्या कमी होऊन त्याऐवजी साल वृक्षांची संख्या वाढली आहे. शिवाय दुसऱ्या बाजूला झाडा पासून कागद तयार करण्याच्या प्रक्रियेत एक टन कागद निर्मितीसाठी जल, वायू, प्रदूषण तर होतेच शिवाय जंगल संपत्तीला ही धोका निर्माण होतो. त्यामुळे या संपत्तीचा संवर्धन

करणे शाश्वत विकासासाठी आवश्यक ठरते.

### हवा प्रदूषण:

हवा प्रदूषण प्रामुख्याने औद्योगिक क्रियांमध्ये वापरल्या जाणाऱ्या पेट्रोल, डिझेल, केरोसिन, यासारख्या खनिज तेलाच्या ज्वलनामुळे विषारीवायु वातावरणात मिसळतात. औद्योगिक प्रक्रियेत रासायनिक कारखाने, साखर कारखाने, कागद कारखाने, खत प्रकल्प, टेस्क टाइल्स मिल्स इ. समावेश होतो. हवा प्रदूषणाचे मनुष्य जीवनावर, वनस्पतीवर अशा एकूणच पर्यावरणावर गंभीर परिणाम होतात. भारतातील मुंबई, दिल्ली, बेंगलोर, मद्रास या शहरातील हवा प्रदूषणाने मानवी जीवना समोर गंभीर समस्या निर्माण केल्या आहेत.

### जल प्रदूषण

पृथ्वी वरील जीवांच्या अस्तित्वासाठी पाणी एक महत्वाचा घटक आहे. पाणी हे एक आर्थिक संपत्ती आणि पर्यावरण तयार करण्यासाठी महत्वाचा घटक आहे. मानवी जीवनाच्या अस्तित्वासाठी स्वच्छ आणि शुद्ध पाणी आवश्यक आहे. जल प्रदूषण म्हणजे प्रदुष्कांमुळे नैसर्गिक पाण्यातील भौतिक रासायनिक आणि जैविक गुणधर्मांचे होणारा नकारात्मक बदल जो मनुष्य जीवावर तसेच इतर प्राण्यांवर प्रतिकूल परिणाम करतो. घरगुती सांडपाणी, औद्योगिक कारखान्यातून बाहेर पडणारे सांडपाणी, रासायनिक खते, कीटकनाशके इ. मुळे पाण्याचे प्रचंड प्रदूषण होत आहे. पाण्याच्या प्रदूषणामुळे मानवी जीवनावर घातक परिणाम होऊ शकतात. त्यामुळे पाणी प्रदूषित होणार नाही याची दक्षता घेणे आवश्यक आहे.

### ध्वनी प्रदूषण

प्रमाणापेक्षा मोठ्याने निर्माण होणाऱ्या आवाजाचा घातक परिणाम माणसांच्या तसेच प्राण्यांच्या आरोग्यावर होत असतो. वाहनांचे आवाज, कारखानदारी तील यंत्रांचे आवाज, बांधकाम यंत्रांचे आवाज, फिरण्याचे भोंगे , ध्वनिकेपक, आकाशवाणी, दूरदर्शन, इ. आवाजाचा परिणाम शरीरावर होत असतो. ध्वनी प्रदूषणामुळे बहिरेपणा येतो. तसेच मानसिक असेस्थतता निर्माण होऊन डोके दुःखी, चिडचिडेपणा इ. विकार संभवतात. उच्च रक्तदाब, स्नायूंचे आकुंचन, रक्त वाहिन्यांचे आकुंचन, मोठ्या आवाजाने यकृत , मूत्रपिंड, मेंदू इ. परिणाम होऊ शकतो. झोप न येणे भावनिक अस्वस्थता इ. समस्या निर्माण होतात. त्यामुळेच शाश्वत विकासात ध्वनीचे प्रदूषण होणार नाही याची दक्षता घेणे आवश्यक आहे.

### शाश्वत विकास साध्य करण्यासाठी आवश्यक उपाय योजना

पर्यावरण संरक्षण व संवर्धनासाठी आणि कल्याणासाठी शाश्वत विकास हे तत्त्व स्वीकारले पाहिजे. आर्थिक विकासाच्या प्रक्रियेत पर्यावरणाचा समतोल राखला गेला पाहिजे. खनिज संपत्ती, जल संपत्ती मधील काही घटक आज संपण्याच्या मार्गावर आहेत. तेंव्हा या संपत्तीचा वापर योग्य प्रमाणातच करणे आवश्यक आहे. तरच शाश्वत विकासाचे तत्त्व अस्तित्वात येईल. शाश्वत विकासासाठी खालील उपाय योजना सांगता येतात.

1. नैसर्गिक साधन संपत्तीचे संरक्षण आणि संवर्धन करणे
2. जैविक संरचना आणि मानव यांच्या परस्पर संबंधांची जाणीव निर्माण करणे.
3. आर्थिक विकास आणि पर्यावरण यांचा समतोल साधणे.
4. शाश्वत शेती पद्धतीचा अवलंब करणे, रासायनिक खतांचा , कीटकनाशकांचा वापर कमीत कमी करून सेंद्रिय खतांचा शेतीसाठी वापर करणे.
5. ' झाडे लावा, झाडे जगवा ' तसेच पाणी आडवा पाणी जिरवा हा संदेश प्रत्येकाने आचरणात आणणे.
6. हरित वायूंचे प्रमाण कमी करणे.
7. वेगाने वाढणाऱ्या लोकसंख्येला नियंत्रणात ठेवणे.
8. पाणी वापराचे योग्य व्यवस्थापन करणे, पाण्याची बचत करणे.
9. वृक्षारोपण, वांसंधारन , वन्य प्राणी संरक्षण मृदासंधारन, जैवविविधतेचे संरक्षण इ. उपक्रमांद्वारे पर्यावरण व्यवस्थापन व नियोजन करणे.
10. इको फ्रेंडली वस्तूंचा वापर करणे. तसेच इको फ्रेंडली पद्धतीने सन व उत्सव साजरे करणे.
11. पर्यावरण संरक्षण आणि संवर्धन यासाठी समाजाने पुढाकार घेणे.
12. पर्यावरण शिक्षण , लोकसंख्या नियंत्रण, वस्तूंचा पुनर्वापर, न्यूनतम कचरा, कचऱ्याचे पुनर्चक्रीकरण या बाबींकडे गांभीर्याने लक्ष देणे.

13. पर्यावरण पूरक उपक्रम म्हणून कागद विरहित व्यवहाराला प्राधान्य देणे.
14. बँकांनी देखील आपल्या आर्थिक व्यवहारात ग्रीन बँकिंगचा अवलंब करणे. रोकडविरहित व्यवहार कडे हळूहळू वाटचाल करणे.
15. वेगवेगळ्या कारणांसाठी खनिज तेलाचा योग्य वापर करावा.
16. औद्योगिक वसाहती, खाणकाम प्रक्रिया इ.बाबी राहत्या वसाहती पासून दूर असल्या पाहिजेत .
17. सौर ऊर्जे सारख्या पून निर्मित स्वच्छ आणि प्रदूषण मुक्त पर्यायी स्रोतांचा वापर केला पाहिजे.
18. इलेक्ट्रॉनिक्स कचऱ्याचे पुनः चक्रिकरण करणे

हवा, पाणी, ध्वनी यांचे प्रदूषण टाळण्यासाठी प्रत्येकाची भूमिका महत्वाची आहे. आपण नैसर्गिक साधन संपत्तीचा अतिवापर करत आहोत. परंतु त्याचे पुनः चक्रिकरण मात्र विसरत आहोत. आजचा शाश्वत विकासाचा मंत्र म्हणजे पाणी, जमीन, व इतर अपुऱ्या अशा नैसर्गिक साधन संपत्तीचा पुनर्वापर, पुनः चक्रिकरण करणे होय. आपण सांडपाणी व घनकचरा पाण्यामुळे मिसळणे बंद केले पाहिजे. उर्जासाधन संपत्तीचा उपयोग काळजीपूर्वक केला पाहिजे. हवा प्रदूषण कमी करण्यासाठी आठवड्यातून एकदा तरी सायकलचा वापर केला पाहिजे. अश्या प्रकारे प्रदूषण विरहित पर्यावरण ही प्रत्येक जागरूक नागरिकांची जबाबदारी असून त्यातूनच आपण मानव जातीच्या कल्याणासाठी शाश्वत विकास साध्य करू शकतो.

#### **निष्कर्ष/सारांश**

विकास आणि पर्यावरण एकाच वेळी परस्पर पूरक असतात. हवा, पाणी, अन्न, वस्त्र, निवारा या मानवाच्या मूलभूत गरजा विकासाच्या साहाय्याने पर्यावरण मुळे पूर्ण होतात. मानवी जीवन सुखी आणि समृद्धी साठी विकास साध्य करताना पर्यावरण या घटकाचा जाणीव पूर्वक विचार करणे आवश्यक आहे. आर्थिक विकासातून मानवी जीवनच धोक्यात येणार असेलतर त्या विकासाला काहीच अर्थ राहणार नाही. त्यामुळेच आपण शाश्वत विकासाचा प्राधान्याने विचार केला पाहिजे. ज्यामुळे भविष्यकालीन पिढ्यांचे कोणतेही नुकसान होणार नाही. आर्थिक विकास म्हणजे लोकांसाठी रोजगार आणि सुखी जीवनशैली ची संधी असते. औद्योगिक विकासातून रोजगाराच्या संधी निर्माण होत असल्या तरी पर्यावरणावरही दुष्परिणाम होण्याची शक्यता असते. आणि म्हणून शाश्वत विकासाच्या मार्गाने आपण या दोन्ही घटकामध्ये समतोल साधण्याचा प्रयत्न केला पाहिजे . आपल्या आर्थिक प्रगतीतून पर्यावरणाची कोणतीही नुकसान होणार नाही याची आपण दक्षता घेणे आवश्यक आहे.

मानवाने शाश्वत विकासासाठी आपल्या दैनंदिन कृतीतून पर्यावरणाला कमीत कमी हानी पोहचवून पर्यावरणाचे संतुलन राखणे आवश्यक आहे. अन्यथा भविष्यात मानवाला विनाशकारी संकटाला तोंड द्यावे लागेल. आणि म्हणून मानवाच्या विकासाचा मार्ग हा शाश्वत विकास असला पाहिजे.

#### **संदर्भ सूची**

- 1) योजना मासिक - जून 2013
- 2) योजना मासिक - जानेवारी 2020
- 3) अर्थसंवाद - ऑक्टोंबर. - डिसेंबर 2016
- 4) भारतीय अर्थव्यवस्था- प्रा. के. एम.भोसले, डॉ. एस. एम. भोसले., डॉ. पी.एच कदम
- 5) भारतीय अर्थशास्त्र, विकास व. पर्यावरणत्मक अर्थशास्त्र- डॉ. जी.एन. झागरे

## उत्तर महाराष्ट्रातील कृषी प्रक्रिया योग्य शेतमालाचे उत्पादन व विपणनाचा विश्लेषणात्मक अभ्यास

सहा. प्रा. शशिकांत सुर्यभान खेमनर / प्रा. डॉ. जे. आर. भोर

<sup>1</sup> आर. एन. सी. आर्ट्स, जे. डी. बी. कॉमर्स अँड एन. एस. सी. सायन्स कॉलेज नाशिक रोड

<sup>2</sup> पद्मश्री विखे पाटील कला, विज्ञान व वाणिज्य महाविद्यालय प्रवरानगर (वाणिज्य विभाग संशोधन केंद्र)

### गोषवारा:

कृषी प्रधान देशामध्ये ग्रामीण भागास विकासाचा केंद्र बिंदू मानले जाते. उत्तर महाराष्ट्रात गहू, ज्वारी, बाजरी, तांदूळ इ. खाद्यान्न पिके, द्राक्ष, डाळींब, पेरू इ. फळ पिके तसेच, कपूस आणि ऊस यासारखी नगदी पिके मोठ्याप्रमाणात घेतली जातात. उत्तर महाराष्ट्रात कृषी प्रक्रिया उद्योगांमध्ये सुत गिरण्या, जिनिंग व प्रेसिंग मिल, वाईण उद्योग आणि साखर कारखानदारी यांची संख्या अधिक असल्यामुळे कापूस, द्राक्ष आणि ऊस यासारख्या प्रक्रिया योग्य कृषिमालास योग्य भाव प्राप्त होतो. पिकास योग्य भाव स्थानिक बाजारपेठेत मिळत असल्यामुळे आर्थिकदृष्ट्या या पिकांच्या उत्पादनाकडे शेतकऱ्यांचा कल असल्याचे दिसून येते.

### प्रस्तावना:

भारत कृषी प्रधान देश म्हणून ओळखला जातो. कारण आजही ६५% पेक्षा जास्त लोकसंख्या खेड्यात राहते व त्यांचा मुख्य व्यवसाय शेती हा आहे. देशातील वाढत्या लोकसंख्येची अन्न विषयक गरजा शेतीतूनच भागविल्या जातात. तसेच अनेक उद्योग प्रत्यक्ष अप्रत्यक्षपणे कच्च्या मालासाठी कृषीवर अवलंबून आहेत. देशात एकूण काम करणाऱ्या श्रमिकांपैकी कृषी क्षेत्रात काम करणाऱ्या श्रमिकांची संख्या अधिक आहे. शेती मूलभूतपणे उद्योगापेक्षा वेगळी असून देशाच्या आर्थिक प्रगतीत ती महत्त्वपूर्ण भूमिका बजावते.

### संशोधन मर्यादा :

कृषी प्रक्रिया योग्य शेतमालात कापूस, द्राक्ष, ऊस, डाळींब, पेरू, इ. अनेक पिकांचा समावेश होतो. परंतु सदर संशोधनात कापूस या एकाच पिकाचा सविस्तर अभ्यास करण्यात आलेला आहे. संशोधनासाठी उत्तर महाराष्ट्रातील अहमदनगर जिल्ह्यांचाच विचार केलेला आहे.

### संशोधनाची उद्दीष्टे :

१. महाराष्ट्रातील कापूस उत्पादन व विपणनाचा अभ्यास करणे.
२. अहमदनगर जिल्ह्यातील कापूस उत्पादन व विपणनाचा अभ्यास करणे.
३. कापूस उत्पादक शेतकऱ्यांच्या समस्यांचा अभ्यास करणे.
४. कापूस उत्पादकांच्या समस्यांवर रचनात्मक उपाययोजना सूचविणे.

### संशोधन पद्धती:

अ) **प्राथमिक तथ्य संकलन** : निवडक कृषी उत्पन्न बाजार समिती आणि शेतकऱ्यांना भेट घेऊन माहिती गोळा केलेली आहे.

ब) **दुय्यम तथ्य संकलन**: सदरची माहिती ही प्रकाशित व अप्रकाशित साहित्य- पुस्तके, वर्तमानपत्रे, संशोधन पत्रिका मधील प्रकाशित लेख, ग्रंथालये, विविध शासकीय संकेतस्थळे यातून मिळविण्यात आलेली आहे.

### कापूस पिकाचे महत्व:

कापसाचा वापर कापड उत्पादनांसाठी मोठ्याप्रमाणात केला जातो. एकूण कृषी उत्पन्न कच्च्या मालाच्या वापरामध्ये कापसाचा सुमारे ५९% वाटा आहे. कापसाची भारतीय वस्त्रोद्योगात प्रमुख भूमिका असून अंदाजे ५.८ दशलक्ष कापूस उत्पादक देशात असून या व्यवसायाच्या गुंतवणूकीत सुमारे ४०-५० दशलक्ष लोकांचे जीवनमान अवलंबून आहे. भारतामध्ये कापसाच्या लागवडीचे क्षेत्र सर्वात जास्त असून जागतिक कापूस क्षेत्राच्या सुमारे 30% क्षेत्र भारतात आहे.

### कापसाचा उपयोग:

कपडे, दौरा / धागे, गाद्या-उश्या तयार करण्यासाठी, टायरमधील धाग्यांसाठी कापसाचा उपयोग केला जातो. तसेच निर्जंतुक केलेला कापूस मोठ्याप्रमाणात वैद्यकीय क्षेत्रात उपचारासाठी वापरला जातो. कागद बोर्ड, जनावरांना लागणाऱ्या डेप निर्मितीतही कापसाचा उपयोग केला जातो. प्रक्रिया करून तयार करण्यात येणा-या गन कॉटन, रेयॉन इ. नायट्रोसेल्युलोजांसाठी आणि लिनोलियम, प्लॅस्टिक इत्यादींसाठीही कापसाचा उपयोग केला जातो. कापसाच्या विविध उपयोगांमुळे कापसाला 'पांढरे सोने' असेही म्हटले जाते.

**तक्ता क्र. १**  
**राज्यनिहाय कापूस कापसाचे क्षेत्र, उत्पादन आणि उत्पादकता**  
उत्पादन: (लाख गासडी) क्षेत्र: (लाख हेक्टर) उत्पादकता: (किलो. प्रती हेक्टर)

अनु क्र		२०१७-१८			२०१८-१९			२०१९-२०		
		उत्पादन	क्षेत्र	उत्पादकता	उत्पादन	क्षेत्र	उत्पादकता	उत्पादन	क्षेत्र	उत्पादकता
१	गुजरात	१०३.८४	२६.२४	६७३	८७.००	२६.५९	५५६	९५	२६.५९	५५६.२२
२	महाराष्ट्र	८३.३५	४३.५१	३२६	७७.००	४२.५४	३०८	८२	४२.५४	३०७.७१
३	तेलंगणा	५४.४४	१८.९७	४८८	४७.००	१८.२७	४३७	५३	१८.२७	४३७.३३
४	राजस्थान	२३.२६	५.८४	६७७	२५.००	६.२९	६७६	२५	६.२९	६७५.६८
५	हरियाणा	२१.४८	६.६५	५४९	२३.००	७.०८	५५२	२२	७.०८	५५२.२६
६	मध्यप्रदेश	२२.१४	६.०३	६२४	२४.००	६.१४	६६४	२०	५.७९	६६४.५०
७	कर्नाटका	१७.३२	५.४७	५३८	१५.००	६.८८	३७१	१८	६.८८	३७०.६४
८	आंध्रप्रदेश	२१.२६	६.४६	५५९	१५.००	६.२१	४११	१५	६.२१	४११
९	पंजाब	११.७६	२.९१	६८७	११.५०	२.६८	७२९	१३	२.६८	७२९.४८
१०	तामिळनाडू	५.५०	१.८३	५११	६.००	१.३१	७७९	६	१.३१	७७८.६३
११	ओडीसा	३.६५	१.४५	४२८	४.५०	१.५८	४८४	४	१.५८	४८४.१८
१२	इतर	२.००	०.५०	६८०	२.००	०.५०	६८०	२	०.५०	६८०
	एकूण	३७०	१२५.८६	५००	३३७	१२६.०७	४५४	३५५	१२५.७२	५५३.९७

संदर्भ: वस्त्र मंत्रालय संकेतस्थळ

वरील तक्त्यात भारतातील राज्यनिहाय कापूस कापसाचे क्षेत्र, उत्पादन आणि उत्पादकता दर्शवलेली आहे. या तक्त्यावरून असे दिसून येते कि, भारतात कापसाचे सर्वाधिक उत्पादन गुजरात राज्यात होते. तर महाराष्ट्र राज्याचा देशात कापूस उत्पादनात दुसरा क्रमांक लागतो परंतु कापूस उत्पादन क्षेत्रात महाराष्ट्राचा देशात प्रथम क्रमांक आहे.

**तक्ता क्र. २ केंद्र शासनाने जाहीर केलेल्या कापूस पिकाच्या किमान आधारभूत किंमती**

अनु. क्र.	वर्ष	कापूस (मध्यम धागा) (रुपये/क्विंटल)	कापूस (लांब धागा) (रुपये/क्विंटल)
१	२०१६-१७	३८६०	४१६०
२	२०१७-१८	४०२०	४३२०
३	२०१८-१९	५१५०	५४५०
४	२०१९-२०	५२५५	५५५०
५	२०२०-२१	५५१५	५८२५

संदर्भ: महाराष्ट्र राज्य कृषी पणन मंडळ, महाराष्ट्राची आर्थिक पहाणी

वरील तक्त्यातील माहिती वरून २०१६-१७ ते २०२०-२१ या पाच वर्षात केंद्र शासनाने मध्यम धागा आणि लांब धागा कापसाच्या किंमतीत प्रती क्विंटल सतत वाढ केल्याचे दिसून येते.

**अहमदनगर जिल्ह्यातील कापूस उत्पादनाचा आढावा:**

अहमदनगर जिल्हा कापूस उत्पादनात एक महत्वाचा जिल्हा असून जिल्ह्यातील १३ तालुक्यांमध्ये इतर पिकांसोबत कापसाचे उत्पादन मोठ्याप्रमाणात घेतले जाते. कापूस पिकासाठी उष्ण व दमट प्रकारचे हवामान लागते. जून ते सप्टेंबर दरम्यान कापसाचे पिक प्रामुख्याने घेतले जाते. कापूस पिकासाठी काळी कसदार, गाळ पेरीची जमीन आवश्यक असते.

**तक्ता क्र. ३ अहमदनगर जिल्ह्यातील कापूस पिकाचे क्षेत्र व उत्पादन**  
क्षेत्र (हेक्टर), उत्पादन (००)

अनुक्र	तालुका	२०१६-१७		२०१७-१८		२०१८-१९		२०१९-२०	
		क्षेत्र	उत्पादन	क्षेत्र	उत्पादन	क्षेत्र	उत्पादन	क्षेत्र	उत्पादन
१	अकोले	०	०	०	०	०	०	०	०
२	संगमनेर	१६६४	१०२.३४	१६६४	५३२.८९	९००	२१७.४६	३२१	६०.६४
३	कोपरगांव	३८३३	४५९.३२	३८३३	१२७७.५१	३६५५	८८३.१५	३७५५	७०९.४३
४	राहता	९७५	९६६.२६	९७५	३१२.२४	१३११	३१६.७७	१२०५	२२७.६६
५	श्रीरामपूर	१८६१	४७१.२४	१८६१	५९५.९८	४६१९	१११६.०८	५७४३	१०८५.०२
६	नेवासा	१३२७५	३१८२.७४	१३२७५	४२५१.३१	१६७७१	४०५२.३७	२०५३८	३८८०.२४
७	शेवगांव	२१७१८	१०८४९.२२	२१७१८	६९५५.१८	३०८५५	७४५५.४९	४२१०६	७९५५.०८
८	पाथर्डी	२१५२०	१८४३.१३	२१५२०	६८९१.७८	२७४५९	६६३४.९१	३२०५६	६०५६.३४
९	नगर	१२२१	२५३.९७	१२२१	३९१.०२	१४०६	३३९.७३	१०७६	२०३.२८

१०	राहरी	२९६२	३५८१.७९	२९६२	९४८.५८	११०९२	२६८०.१५	९०१२	१७०२.६३
११	पारनेर	३	०.४७	३	०.९६	४४	१०.६३	२२	४.१५
१२	श्रीगोंदा	१२०५	४९९.२०	१२०५	३८५.९०	१७७६	४२९.१३	४००३	७५६.२८
१३	कर्जत	२२१९	१९५५.००	२२१९	७१०.६३	४४९७	१०८६.६१	७९८१	१५०७.८५
१४	जामखेड	१७०९१	२५५३.६८	१७०९१	५७७३.३९	३३५५	८१०.६६	२६१४	४९३.८६
	एकूण	८९५४७	२६७१८.३५	८९५४७	२८६७७.३७	१०७७४०	२६०३३.१४	१३०४३२	२४६४२.४६

कापसाचे उत्पादन "००" गाठीच्या स्वरूपात आहे. १ गासडी = १७० कि.ग्रॅ.

संदर्भ: अहमदनगर जिल्हा सामाजिक व आर्थिक समालोचन

वरील तक्त्यात २०१६-१७ ते २०१९-२० या चार वर्षात अहमदनगर जिल्ह्यातील विविध तालुक्यांमध्ये कापसाचे असणारे क्षेत्र आणि उत्पादन दर्शविण्यात आले आहे. शेवगांव तालुका जिल्ह्यात कापूस उत्पादनात आणि क्षेत्र बाबत अग्रेसर असून, सर्वात कमी कापसाचे क्षेत्र आणि उत्पादन पारनेर तालुक्यात आहे.

तक्ता क्र. ४ अहमदनगर जिल्ह्यातील कापुसाच्या त्रैमासिक सरासरी घाऊक किंमती  
(प्रती क्विंटल मूल्य रुपये हजारात)

अनु. क्र.	वर्ष	एप्रिल-जून	जुलै-सप्टेंबर	ऑक्टोबर-डिसेंबर	जानेवारी-मार्च
१	२०१६-१७	४३७५	०	४३०३	४५६७
२	२०१७-१८	४८७५	५०००	४२७५	४५४४
३	२०१८-१९	४६७२	४२००	५१७३	४८२२
४	२०१९-२०	५२६७	०	४६८१	४५८७

संदर्भ: अहमदनगर जिल्ह्यातील सर्व कृषी उत्पन्न बाजार समित्या

वरील तक्त्यात २०१६-१७ ते २०१९-२० या चार वर्षांच्या काळात एप्रिल-जून या टप्प्यात कापसाला अधिक किंमत मिळाल्याचे दिसते.

**कापूस विपणनाचे महत्त्व:**

राज्यात कृषी पणन विभाग महाराष्ट्र कृषी उत्पन्न पणन (विकास व विनियमन) अधिनियम, १९६३ नुसार कृषी उत्पन्न बाजार समित्यांची स्थापना करते. शेतकऱ्यांच्या कृषी मालाला योग्य भाव मिळावा आणि व्यापारी मध्यस्थांकडून शेतकऱ्यांचे शोषण केले जाऊ नये या हेतूने कृषी उत्पन्न बाजार समित्यांमध्ये शेतमाल विकण्याची सुविधा उपलब्ध करून दिली जाते. स्थानिक ठिकाणी कृषी माल विकण्याची सुविधा निर्माण झाल्यामुळे शेतकऱ्यांचा वाहतूक खर्च मोठ्याप्रमाणात कमी होतो. शेतकऱ्यांना योग्य भाव मिळतो. तसेच परिसरातील अनेक बेरोजगारांना या ठिकाणी रोजगार मिळतो.

**कापसाची खरेदी-विक्री:**

कृषी उत्पन्न बाजार समित्या महाराष्ट्र कापूस उत्पादक पणन महासंघ मर्यादित, केंद्र सरकारच्या भारतीय कपास निगम व राज्य सरकारच्या कापूस एकाधिकार योजना व खाजगी जिनिंग व प्रेसिंग संस्था आणि खाजगी व्यापाऱ्या मार्फत चालविले जाणारे कापूस खरेदी विक्री केंद्र यांच्या मार्फत तसेच आठवडे बाजार, छोटी शहरे, गावे या विविध ठिकाणी जिल्ह्यात कापसाची खरेदी-विक्री केली जाते.

**अहमदनगर जिल्ह्यातील कापूस उत्पादनातील समस्या:**

**१.सिंचन सुविधांचा अभाव:** जिल्ह्यात पावसाचे प्रमाण अनेक तालुक्यात कमी आढळते त्यामुळे सिंचन सुविधांची मोठी गरज जिल्ह्यातील तालुक्यांना आहे.

**२.दुबार पेरणीची समस्या:** अनियमित पावसामुळे अनेकदा शेतकऱ्यांवर दुबार पेरणीची वेळ येते परिणामी उत्पादनाचा खर्च वाढत जातो.

**३.पायाभूत सुविधांचा अभाव:** जिल्ह्यात वाहतूक पायाभूत सुविधा कमकुवत आहेत रेल्वे वाहतूक जिल्ह्यात सर्वत्र उपलब्ध नाही त्यामुळे एका राज्यातून दुसऱ्या राज्यात कापूस पाठविताना रस्ते वाहतुकीचाच पर्याय वापरावा लागतो त्यामुळे वाहतूक करण्यासाठी खर्च वाढतो.

**४.वित्तपुरवठा:** आजही ग्रामीण भागात अनेक शेतकरी बँकांकडून वित्तपुरवठ्यासाठी होणारी दिरंगाई तसेच कर्जासाठी गोळा करावी लागणारी दस्तऐवज यामुळे नातेवाईक, सावकार यांच्याकडून कर्जाकडून भांडवल मिळवितो. परिणामी सावकाराच्या जास्त व्याजाच्या चक्रात अडकून आर्थिक अडचणीत सापडतो.

**५.खते, बी-बियाणे, कीटकनाशके यांचे वाढते दर:** खते, बी-बियाणे, कीटकनाशके यांचे दर सतत वाढत असतात परंतु त्या प्रमाणात शासनाकडून कापसास निर्धारित केल्या जाणाऱ्या आधारभूत किंमती वाढताना दिसत नाही. तसेच अनेकदा निकृष्ट दर्ज्याची बियाणे बाजारात विकली जातात या बियाणांची उत्पादकता कमी असते त्यामुळे शेतकऱ्यांचे मोठे नुकसान होते.

**6.वाढते मजुरीचे दर:** कापूस वेचणीच्या काळात मोठ्याप्रमाणात मजुरांची गरज निर्माण होते व याच कालावधीत साखर कारखाने व इतर क्षेत्रात मजुरांना रोजगार उपलब्ध असतो परिणामी अधिक मजुरी देऊन मजूर मिळवावे लागतात.

**7.कापूस खरेदीस विलंब:** अनेकदा कापूस एकाधिकार योजनेत कापूस खरेदी करण्यास विलंब होताना दिसून येतो. शेतकऱ्यांच्या डोक्यावरील वाढत जाणारे कर्ज आणि साठवणुकीच्या सुविधांचा अभाव यामुळे शेतकऱ्यास स्थानिक बाजारात कमी किंमतीत कापसाची विक्री करावी लागते.

**सूचना आणि शिफारशी:**

1. कृषी क्षेत्राच्या विकासासाठी जिल्ह्यात शासनाने सिंचन सुविधांची वाढ करावी.
2. निकृष्ट दर्जाची खते, बी-बियाणे विकणाऱ्या विरोधात दंडात्मक कार्यवाहीसाठी उपाययोजना करणे आवश्यक आहे.
3. बँकांमार्फत जलद वित्तपुरवठा होण्यासाठी कर्जाची सोपी पद्धत असावी.
4. कापूस एकाधिकार योजनेत कापूस खरेदी करण्यास विलंब न करता योग्य वेळी कापसाची खरेदी सुरु करावी.
5. कापूस उत्पादनाचा वाढता खर्च विचारात घेऊन कापसास योग्य आधारभूत किंमत द्यावी.
6. शेतकऱ्यांनी कापूस पिकात आंतरपिक घावेत.
7. कापूस खरेदी नंतर शेतकऱ्यांना लवकरात लवकर रक्कम मिळण्यासाठी योग्य उपाययोजना तयार करावी.

**संदर्भ सूची:**

1. कृषी आयुक्तालय, महाराष्ट्र शासन, संकेतस्थळ
2. भारतीय कपास निगम लिमिटेड, संकेतस्थळ
3. मराठी विश्वकोश
4. महाराष्ट्राची आर्थिक पहाणी- २०१७-१८, ते २०२०-२१
5. जिल्हा सामाजिक व आर्थिक समालोचन, अहमदनगर – २०१७, २०१८, २०१९ आणि २०२०
6. Central Institute of Cotton Research Website
7. Ministry of Textiles Govt. Of India Annual Report- 2017-18, 2018-19 & 2019-20

## महिला सक्षमीकरण आणि उद्योजकता

मा.डॉ. अल्का दहीकर

गृहअर्थशास्त्र विभाग प्रमुख यशवंतराव चव्हाण महाविद्यालय, लाखांदूर

### प्रस्तावना :-

२१ व्या शतकात भारत सरकारने २००१ हे वर्ष "महिला सक्षमीकरण" वर्ष म्हणून घोषित केले. ज्यात "स्त्री व पुरुष हे समान असून एकमेकांचे पुरक आणि समान सहयोगी आहेत." हे ध्येय समोर ठेवले याचा परिणाम म्हणजे ज्या भागात स्त्री पुरुष असमानता मोठ्या प्रमाणात दृष्टीस पडत होती. तेथे स्त्रीचा आपल्या अधिकाराबद्दल जागृत झाल्याचे दिसून आले. जर स्त्रिया ह्या स्वावलंबी, सुशिक्षित असतील तर सक्षमीकरणाची प्रक्रिया लवकर व तिव्रगतीने होतांना दिसून येईल. महिला जर शारिरिक दृष्टीने सुदृढ असतील तर समानतेसाठी आवश्यक असणारी आव्हाने त्या स्विकारू शकतील.

### भारतीय स्त्रियांची स्थिती:-

भारतीय प्राचीन धर्मग्रंथात लिहले आहे, "यत्र नार्यस्तु पूज्यते, रयन्ते तत्र देवता स्वामी विवेकानंदाच्या शब्दात "स्त्रियांच्या परिस्थितीत सुधारणा केल्या खेरीज जगाचे कल्याण संभव नाही." १९२५ मध्ये महात्मा गांधींनी म्हटले होते "जोपर्यंत महिला भारताच्या सार्वजनिक जीवनात भाग घेणार नाही. तोपर्यंत देशाचा उध्दार होणार नाही." भारतीय राज्यघटनेत विविध क्षेत्रात स्त्रियांना पुरुषांच्या बरोबरीने अधिकार प्रदान केलेले आहे. याचाच फायदा घेऊन स्त्रिया स्वतःला वेगवेगळ्या क्षेत्रात सिध्द करत आहेत.

### जागतिकीकरण आणि स्त्री सक्षमीकरण :-

जागतिकीकरणाच्या काळात स्त्रियांना विकासाच्या विविध संधी उपलब्ध आहेत. अतरिक्षात भरारी घेणाऱ्या सुनीता विल्यम्स, कल्पना चावला, मुंबई शेअर बाजाराच्या प्रमुख पदाची धुरा समर्थपणे सांभाळणा-या दिना मेहता, देशातील अग्रगण्य अशा राष्ट्रीय शेअर बाजाराच्या प्रमुखपदी नियुक्त झालेल्या चित्रा रामकृष्णन, लोकसभेच्या अध्यक्षा मीरा कुमार, शैक्षणिक विकासाचा ध्यास वाहणा-या भारत सरकारच्या सेवानिवृत्त शिक्षण सचिव डॉ. कुमुद बन्सल जागतिक बँकेच्या ICICI सीईओ चंदा कोचर या उदाहरणांमुळे स्त्री सक्षमीकरणाची प्रचीती होते. नागरी भागात इलेक्ट्रॉनिक, वस्त्रोद्योग, ब्युटीपार्लर, पादत्राणे इत्यादी व्यवसाय करणाऱ्या स्त्रियांचा सहभाग वाढला आहे. जागतिकीकरणाच्या काळात स्त्री अधिक सक्षम आणि स्वतंत्र झाली याबाबत दूमत नाही. स्त्रियांच्या वैयक्तिक, आर्थिक आणि राजकीय क्षमता विकसित करून त्यांना सक्षम करून सध्याच्या विकास धोरणात समाविष्ट करून घेण्याचा जो प्रयत्न सुरू आहे. त्यात स्त्रियांनी आपले एक वेगळे अस्तित्व निर्माण केले आहे. मात्र स्त्रियांच्या क्षमता अधिक बळकट होण्याऐवजी केवळ अर्थप्राप्ती पुरत्या त्या मर्यादित राहता कामा नये. असे झाल्यास त्यांना अधिक स्वातंत्र्य मिळेल पण त्याचवेळी त्या इतर हक्कापासून वंचित राहतील अधिकार आणि स्वातंत्र्य आणि सुरक्षितता या तीन घटकातून स्त्री सक्षमीकरण योग्य प्रकारे घडून येणे शक्य आहे.

### सबलीकरणाची आवश्यकता :-

१. देशातील सर्वांगीण साधनसंपत्तीच्या विकासासाठी सक्षमीकरण गरजेचे आहे.
२. स्त्री घटकांना मानसिक, सामाजिक, आर्थिक विकासाकरीता सक्षमीकरण , आवश्यक आहे.
३. महिला सक्षमीकरणाच्या दृष्टीने सहाय्याकरीता स्वावलंबन, महिला कौशल्या स्वास्थ्य रोजगार, निर्णय प्रक्रीयेत सहभाग तसेच समाजाच्या वैचारीक दृष्टीकोनातून सकारात्मक बदल घडवून आणण्याकरीता महिला सक्षमीकरण आवश्यक आहे.
४. जागतिकीकरणाच्या प्रक्रीयेत ठरविलेला महिला हा कलंक पुसून काढण्याकरीता व स्वतःचे कर्तृत्व सिध्द करण्याकरीता व स्वतःच्या अंगी असलेल्या गुणाचा विकासासाठी.

### महिलांचे आर्थिक स्वावलंबन :-

राज्यात व देशात महिलांच्या आर्थिक सक्षमीकरणासाठी घटनेने अधिकार दिले. आर्थिक समानता मुलभूत हक्कापासून त्या वंचित राहू नये व त्यांच्यात उद्यमशीलता निर्माण होउन त्या स्वावलंबी व्हाव्यात या हेतुने बचत गट योजना सुरू करण्यात आली महिला बचत गटास "महिला आर्थिक विकास महामंडळाद्वारे" ४ टक्के व्याजदराने कर्ज उपलब्ध करण्यात येते. यामुळे घरगुती लघुउद्योग धंद्यास सुरूवात झाली. सामूहिक शेती, दुग्ध व्यवसाय, पुरक पोषण आहाराचे वितरण, वस्त्रोद्योग, पाळणाघर यासारख्या नाविण्यपूर्ण व्यवसायात बचतगट कार्यरत असून बचत गटांनी तयार



केलेल्या वस्तुंचे राष्ट्रीय, व आंतरराष्ट्रीय बाजारपेठ काबीज केली. बचतगटांना जिल्हा आणि तालुका स्तरावर कायम स्वरूपी विक्री केंद्र उपलब्ध करून देण्याची व्यवस्था शासन करित आहे. बचत गटामुळे लहान उद्योग निर्माण करणे व सहकार्यांचे व मदतीची भावना स्त्रियात निर्माण झाली. बचतगट योजनेमुळे ग्रामीण भागातील व अशिक्षित स्त्रिया संघटीत होउन आर्थिक स्वावलंबनाच्या दिशेने वाटचाल करित आहेत.

### **महिला आणि उद्योजकता :-**

महिला हया पुरुषांपेक्षा दुर्बल आहेत असे आतापर्यंत समजले गेले. महिला केवळ चूल आणि मूल या संकल्पनेपर्यंत मर्यादित नसून त्या पुरुषांपेक्षा देखील अमर्याद विकास आणि प्रगती वेगवेगळ्या क्षेत्रात करू शकतात. याची प्रचिती आज आपण बघत आहोतच. यासाठी महिलांना संधी दिली पाहिजे. महिलांना संधी व प्रोत्साहन मिळाले की निश्चितच पुरुषांच्या बरोबरीने त्या कामे करतात. प्रसंगी जास्त प्रमाणात कार्य करण्याची क्षमता काही महिलांमध्ये असते. त्यांचा बौद्धिक स्तर जर लक्षात घेतला तर किती तरी महिला कुशाग्र बुद्धिमतेच्या आहेत. त्यांना वेगवेगळ्या क्षेत्रातील प्रशिक्षण देणे आवश्यक आहे. आज महिला सर्वच क्षेत्रात कार्य करतांना दिसतात. भारतातील स्त्रियांनी उद्योजकीय क्षेत्रात असामान्य विकास केलेला असून देशासाठी व स्वतःची आर्थिक प्रगती साध्य केलेली आहे. प्रामुख्याने महिला उद्योजकांमध्ये लिज्जत पापड या यूनिटविषयी सांगायचे झाल्यास आज जगभरात लिज्जत पापड प्रसिध्द आहे. अगदी सुरवातीच्या काळात जेव्हा मुंबई शहरात गिरणी कामगार होते तेव्हा त्यांच्या गृहीणींनी आपण देखील एखादा छोटसा व्यवसाय उद्योग करावा असा विचार केला. सुरवातीला सात महिला एकत्रीत येउन पापड लाटण्याचा व घरोघर चाळीत विकण्याचा छोटसा व्यवसाय सामूहिकरीत्या सुरू केला. पुढे सत्तर महिला एकत्रित आल्या. त्यामधूनच कुटूंबाच्या दैनंदिन गरजा त्या महिलांना भागविता आल्या. तसेच या महिलांनी छगनलाल पारिख आणि दामोधर दलानी या दोन समाजसेवकांची भेट घेतली. त्यांच्या सहकार्यामुळे १९६६ मध्ये श्री महिला गृहउद्योग लिज्जत पापड या नावाने एक सोसायटी सर्व सार्वजनिक न्यासांतर्गत स्थापना केली. धर्म, जात, वय, शिक्षण या नियमांचा विचार न करता फक्त पापड लाटता आले पाहिजेत हा नियम ठरविला. आज त्यांची मुलगी ज्योती नाईक यांनीही मदत केली व लिज्जतची संपूर्ण जबाबदारी स्विकाली आज त्या लिज्जत पापड या कंपनीच्या अध्यक्ष आहेत. त्यांना त्यांच्या कर्तृत्वामुळेच 'बिझानेस वुमन ऑफ द इयर' मिळाला. बी.सी. सी.ने देखील पुरस्कार देउन त्यांचा गौरव केला. भारत सरकारने देखील उत्कृष्ट ग्रामीण गृह उद्योग पुरस्कार देउन लिज्जतचे कौतुक केले. तेव्हा आज महिला सर्वार्थाने परिपूर्ण आहेत. बृद्धिमता विचार, क्षमता महिलांकडे आहेत. मुंबईच्या झोपडपट्टीतील महिलांना देखील या उद्योगाने काम मिळाले. महिलांना असाच एखादा व्यवसाय एकत्रित येउन करता येईल. त्यासाठी विचार करा व निर्धार पक्का करून व्यवसायाची निवड करा. महाराष्ट्रात मध्यमर्गीय कुटूंबात जन्मलेल्या किरण मूजूमदार शां यांनी पंचविसाव्या वर्षी मेलबोर्नच्या बेलार्ड विद्यापीठातून बी.एस.सी. ब्रेव्हरी ही पदवी घेतली. १९७८ मध्ये त्यांनी कोरमांगला येथे एक छोटेसे शेड घेतले. स्वतःजवळचे दहा हजार रूपये यासाठी गुंतवले. फर्मेंटेशन क्रियेसाठी लागणा-या द्रव्याचा निर्मिती प्रकल्प त्यांनी सुरू केला. आंबविने, फसफसने याचा उपयोग पुढे केला जातो.

बायोटेकॉलॉजीद्वारे कृषी उत्पादन वाढविणे, अत्यंत गुंतागुंतीच्या आजारांवरील औषधीची निर्मिती करणे, प्रदूषणावर नियंत्रण आणणे, विविध प्रकारच्या औषधी जैवतंत्रज्ञान याविषयी ही संस्था कार्यरत आहे. तव्हा जागरूक महिलांनी देखील ज्या शिक्षित आहेत पदवी पदव्युत्तर शिक्षण झालेले आहे. त्यांनी देखील असा सकारात्मक विचार करावा आणि वेगळा प्रयत्न उद्योग निर्मितीकरीता करता येईल का ? त्यादृष्टीने प्रयत्न करावेत.

### **महिलांचे विविध क्षेत्रातील योगदान :-**

महिलांचे योगदान वैद्यकीय, तांत्रिक, अतांत्रिक, व्यवस्थापन संगणक संरक्षण, कृषी ललितकला, नाट्य संगीत, चित्रपट, स्पोर्ट्स अशा विविध क्षेत्रात आहे. पत्रकारिता व लेखक साहित्य, कवी म्हणून देखील महिला अग्रेसर आहेत. आपण रोज चहाची सुरुवात बिस्कीटानी करतो ब्रिटीशनीया या इंडस्टीजच्या सी.ई.ओ. विनीता बाली आहेत. त्यांना जगभरातील ४५ देशात काम करण्याचा अनुभव आहे. आपण नामांकित बिस्कीटे दररोज खातो परंतु त्याच्या निर्मितीपासून तर मार्केटींग जाहीरात, व्यवस्थापन या यशस्वी वाटचालीमध्ये कोण असते ते आपणास माहित नसते. तेव्हा विनीता बाली यांनी १९८० ते १९९४ या चौदा वर्षात जगभरातील विविध कंपन्यांचे महत्वाचे पद भूषविले व त्यांनी कोका कोला,

कॅडबरी यांचे यशस्वी मार्केटींग केले. त्यांनी मेरी गोल्ड, छोटा टाइगर ५०-५० स्टीट फ्लुटस, रोल्स न्युटी चॉइस, डायजेस्टीव न्युटी चॉइस शुगर आऊट असे बिस्कीटांचे विविध उत्पादने बजारात आणली.

तेव्हा असे कितीतरी क्षेत्र आहे ज्यात महिलांनी भरीव कामगिरी केलेली आहे. चित्रपटातून अनेक नायिकांनी बोधपर उत्कृष्ट चित्रपट निर्माण केले आहेत. यामधून समाजाचे प्रबोधन केले. दिग्दर्शक म्हणून देखील खूप चांगल्या प्रकारे समाजातील वास्तव, समस्या या वेगवेगळ्या माध्यमांतून मांडून जनसामान्यांना सकारात्मक विचार करायला भाग पाडले. साहित्य, क्षेत्रात देखील महिलांनी उत्कृष्ट लेखन केले. व त्यामधून समाजाला कथा, नाटय, काव्य, याची अनुभूती दिली. याशिवाय संघ लोकसेवा आयोग, महाराष्ट्र लोकसेवा आयोगामार्फत देखील महिलांनी महत्वाचे पद प्रशासनात भूषविले असतांना आपण बघतो. तसेच संरक्षक क्षेत्रात देखील महिला आघाडीवर आहेत. यासाठी महिलांनी स्थानिक पातळीवर स्वतःच्या विविध क्षमतांमधून रोजगार व स्वयंरोजगार करावा. आपल्या परिसरात जी काही नैसर्गिक साधन सामुग्री आहे. त्याचा उपयोग करून व समाजाच्या गरजा लक्षात घेउन त्याबाबींची निर्मिती करावी. प्रामुख्याने दैनंदिन वस्तु घरामध्ये लागतात. त्यासाठी उत्पादन निर्मिती करणे, त्यासाठी लागणारे प्रशिक्षण ज्ञान, कौशल्य याची माहिती घेउन एखादा व्यवसाय केल्यास उत्तम प्रकारे चालतो. त्यासाठी महिलांनी छोट्या उद्योगधंद्याच्या अनुभवातून मोठ्या उद्योगधंद्याकडे झेप घ्यावयास पाहिजे. कोणत्याही व्यवसायाची सुरुवात छोट्या व्यवसायामधून करायची असते. म्हणजे नुकसान झाले तरी सहनशीलता निर्माण होते. पुढे अनुभवातून व्यवसाय मोठा होतो. पुढे उद्योजक होउन स्वतःची, समाजाची व देशाची प्रगती होण्याला हातभार लावता येतो.

#### **निष्कर्ष :-**

मनुष्याच्या ठिकाणी जर कर्तृत्व, चिकाटी नेतृत्व, कौशल्य असेल तर आयुष्यात कोणत्याही गोष्टीच्या समोर जाण्याची ताकद निर्माण होते व त्यात तो यशस्वी होतो. स्त्रियांना स्वातंत्र्य प्राप्त झाल्यानंतर स्त्रिया काम करू शकतात हे स्त्रियांनी आपल्या कर्तृत्वातून सिध्द करून दाखविले आहे. आधुनिक काळातील स्त्रियांना पूर्वीच्या काळाच्या स्त्रियांच्या मानाने कितीतरी सुविधा प्राप्त झाल्या. आज प्रत्येक स्त्री मग ती गरीब, मध्यमवर्गीय व उच्चवर्गीय कुठल्याही स्तरातील असो आपल्या पायावर उभे राहण्यासाठी धडपडत आहे. आज सर्व क्षेत्रात स्त्रियांचा सहभाग वाढतो आहे. अर्थाजना बरोबरच संशोधनाच्याही कार्यात ती मागे नाही. संसार सांभाळून कुटूंबातील नाती सांभाळून आर्थिक क्षेत्रातील वित्त, बँकींग राजकारण, शैक्षणिक, अवकाश क्षेत्र, क्रिडा क्षेत्र, पर्यावरण, संशोधन, इंजिनिअरींग वैद्यकीय क्षेत्रात स्त्रियांनी मोठी झेप घेतलेली आहे.

#### **संदर्भ ग्रंथ :-**

१. भारतीय स्त्री जीवन व कर्तृत्व :- प्रा. आर.एन.पारधी
२. महिला सबलीकरण विशेषांक :- मानसी भवाळकर
३. महिला कल्याण आणि विकास :- प्रा. सौ. माधवी कवी
४. महिला सबलीकरण :- नागपूर विद्यापीठ, संपा अब्दुल हलीम
५. उद्योजक :- मार्च २०१८
६. उद्योजक :- जानेवारी २०२१

**आदेशात्मकता, निरपेक्ष आदेशवाद आणि सार्वत्रिकता : एक तौलनिक अध्ययन**  
(आर. एम. हेअर व इम्यन्युअल कांटच्या संदर्भात)  
**डॉ. नरेंद्र वसंत घटटे**

सहायक प्राध्यापक (तत्त्वज्ञान) श्री विज्ञानी नगर महाविद्यालय, नागपूर

**प्रस्तावना**

१९९२ मध्य आर.एम.हेअर यांनी त्यांच्या "Language of Marals" ह्या ग्रंथात नैतिक भाषेचे स्वरूप व कार्ये याविषयी विवेचन करतांना असे प्रतिपादले आहे की, नैतिक भाषेद्वारे, कृतिविषयक मार्गदर्शनाचे म्हणजेच उपलब्ध असणाऱ्या कृतिविषयी मार्गदर्शन करित असते. त्यांचे हे मत अतिनीतिशास्त्रातील एक महत्त्वाचा सिद्धांत 'आदेशवाद' (Prescriptivism) म्हणून प्रख्यात झाला. त्यांच्या आदेशवादानुसार नैतिक निर्णयांद्वारे करण्यात येणारे कृतिविषयक मार्गदर्शन केवळ श्रोत्यांसाठीच असते असे नव्हे तर वक्ता आणि इतर सर्व त्या आदेशाला बांधील असतात. यावरून एकंदरीतच नीतीची भाषा ही सार्वत्रिक (Universal) असते.

**Origin of Research Problem -संशोधनाच्या समस्येचा उगम :-**

नैतिक भाषेचा स्वरूपाविषयीची चर्चा पद्धतशीरपणे G.M.Moore यांच्या 'Principia Ethica' या ग्रंथापासून सुरुवात झाल्याचे समजण्यात जरी येत असले तरी आणि अतिनीतिशास्त्राचा 'Principia Ethica' असल्याने नमूद करण्यात येत असले तरी असे चिंतन यापूर्वी बवले आणि ह्यूम ह्यांचा लिखाणात सुद्धा दिसून येते. अधिनीतिशास्त्रात विभिन्न सिद्धांत-निसर्गवाद, व निसर्गवाद, भावनिकवाद, आदेशवाद, इ. दिसून येतात. त्यातला त्यात आदेशवाद हा अलिकडील साठ वर्षांतच प्रत्ययास यायला लागला आहे, असे समजण्यात येते. परंतु नैतिक तत्वांच्या स्वरूपाविषयीचे चिंतन करतांना इम्यन्युअल कॉन्ट यांनी सुद्धा आदेशवादी भूमिका स्वीकारून नैतिक निर्णय हे 'नैतिक आदेश' (Moral law) सुद्धा असल्याचे म्हणतात. त्याचप्रमाणे कॉन्टने सुद्धा नैतिक निर्णयाचे पर्यायाने नितिव्या भाषेचे स्वरूप सांगतांना सार्वत्रिकतेची संकल्पना अत्याधिक महत्त्वाची असल्याचे नमूद केले आहे. किंबहुना सार्वत्रिकतेच्या अभावात कुठलेही नैतिक निर्णय असूच शकणार नाही असे त्यांचे मत दिसून येते.

प्रस्तुत लेखात नितिव्या भाषेच्या स्वरूपाचे हेयच्या आदेशवादी भूमिकेतून अध्ययन करतांना कांटच्या मताचे संदर्भ तपासून दोघांची तुलना आवश्यक ठरते.

**Interdisciplinary Relevance:- आंतरशास्त्रिय संबंध**

प्रस्तुत अध्ययन नितिशस्त्राच्या अतिनीतिशास्त्र या उपशास्त्राच्या अंतर्गत असले तरी त्याचा संबंध नीतिशास्त्रातील दुसरी उपशाखा आदर्शनीतिशास्त्र यांच्याशी आहे. त्याचप्रमाणे एखादे नैतिक निर्णय सार्वत्रिक असू शकते का? याविषयी चिंतन करतांना विधीशास्त्रातील तत्वांशी त्याचे नाते जोडणारे दिसत असल्यामुळे आपल्या अध्ययनाचा संबंध विधीशास्त्राशी सुद्धा जोडता येवू शकतो. नैतिक निर्णय मानवी आचरणाना मार्गदर्शक आणि सार्वत्रिक ठरत असतील तर आणि मनुष्य एक सामाजिक प्राणि असेल तर आपल्या अध्ययनाची उपयोगिता समाजशास्त्रीय अध्ययनाकरीता प्रस्तुत ठरती.

**Review of Research And Development In The Subject :-**

**International status- आंतरराष्ट्रीय स्थिती:-**

Denisc Meyerson(1979) 'Against Prescriptivism in Ethics

Harry J. Gensler (1976) The prescriptivism in Completeness Theorem –Mind 85(340)589-596

Anthony Skelton(2001) Review of R.M.Hare Sorting out Ethics (Review) Australasian Journal of Philosophy79(4)583-585

उपरोक्त लेखाद्वारे असे दिसून येते की, आंतरराष्ट्रीय स्तरावर सार्वत्रिकता, आदेशवाद यावर कार्य सुरु आहे.

**National Status&राष्ट्रीय स्थिती:-**

**D.Y.Deshpande-Ethical problems & S.W.Gaidhane**

उपरोक्त लेखाद्वारे असे दिसून येते की, राष्ट्रीय स्तरावर सार्वत्रिकता, आदेशवाद यावर कार्य सुरु आहे.

**Significance of the study:- अभ्यासाची प्रासंगिकता**

प्रस्तुत अध्ययनाद्वारे २०व्या शतकातील अधिनीतिशास्त्रीय तत्त्वज्ञान आर.एम.हेअर यांच्या अधिनीतिशास्त्रीय चिंतनाची तुलना १९व्या शतकातील बुद्धीवादी तत्त्वज्ञान इम्यन्युअल कॉन्ट च्या मताशी करण्यात येणार असून नैतिक निर्णयाच्या स्वरूपाविषयीचे चिंतन केवळ २०व्या शतकातच नव्हे तर तत्पूर्वीही झालेले आहे. हे दाखवू त्यासोबतच अधिनीतिशास्त्रात अशा तौलनिक अध्ययनाला भरपूर वाव असल्याचे दिसून येईल.

## Objejective - प्रकल्पाची उद्दिष्टे

मानवी आचरणाच्या संदर्भात सार्वत्रिकता या संकल्पनेचे अध्ययन करणे.

आर.एम.हेअर यांच्या नीतिच्या भाषेविषयक मतांचा अभ्यास करणे.

इम्पॅन्सुअल कॉन्ट यांचे नीतिविषयक मत जाणणे.

इम्पॅन्सुअल कॉन्ट आणि आर.एम.हेअर यांच्या उपरोक्त मताची परस्पर तुलना.

नैतिक निर्णयाला वस्तुनिष्ठता असू शकते काय? या समस्येचा विचार करणे.

## Methodology- संशोधन पद्धती

प्रस्तुत अध्ययन तौलनिक स्वरूपाचे असल्यामुळे आपण विश्लेषणात्मक आणि संश्लेषणात्मक ह्या दोन्ही संशोधन पद्धतींचा अवलंब करू. हेअर संपुर्ण नीतिच्या भाषेला आदेशात्मक भाषेचा एक प्रकार असल्याचे मानतात, जी वर्णनात्मक किंवा वस्तुस्थिति विषयक भाषेपेक्षा भिन्न असते. याच कारणाने आदेशात्मकतेवर आधारीत नैतिक शब्द तथा निर्णयाच्या अर्थवि स्पष्टिकरण केले जाते. नीतिच्या भाषेचा संबंध प्रत्यक्षापणे मानवी आचरणाशी असतो. त्यांचा विचार आहे की, आदेशात्मक भाषेचे क्षेत्र फार व्यापक आहे ज्याच्या अंतर्गत अज्ञार्थक वाक्य, न-नैतिक मूल्यात्मक निवेदन आणि नैतिक निर्णय यांचा समावेश होतो. आदेशात्मकता -अर्थात कोणाला काही करणे किंवा न करण्यासाठी म्हणणे किंवा त्याचे मार्गदर्शन करणे- या भाषेच्या या सर्व रूपांची मुलभूत वैशिष्ट्ये आहेत. 'लॅंग्वेज ऑफ मॉरल्स' या पुस्तकात आदेशात्मक भाषेच्या वरील सर्व स्वरूप आणि वस्तुस्थिति विषयक भाषेशी त्याची भिन्नता याचे विस्तृत विवेक केलेले आढळते. एखाद्या व्यक्तीने कोणती नैतिक तत्त्वे स्वीकारली आहेत या प्रश्नाचे उत्तर तो काय करतो, त्याचे आचरण कोणत्या प्रकारचे आहे याचे अध्ययन करून मिळू शकते. म्हणजेच व्यक्तीचे आचरण हे त्याने कोणत्या नैतिक तत्त्वाचा स्वीकार करून केले आहे यावरून कळते. नैतिक तत्त्वांचा आविष्कार कृति तून होत असतो. याचे कारण हे आहे की नैतिक तत्त्वाचे कार्य आचरणाविषयी मार्गदर्शन करणे असते. नतिची भाषा ही आदेशपर भाषेचाच एक प्रकार ठरते. म्हणून ज्या भाषेतून या समस्या मांडण्यात येतात त्या भाषेचे स्वरूप समजावून घेणे नितांत गरजेचे ठरते. हेअर नीतिच्या भाषेचे आदेशपर स्वरूप स्पष्ट करताना दोन मुद्दे स्पष्ट करतात ज्यावरून नतिची भाषा (Language of Morals) आदेशपर (Prescriptive) असल्याचे स्पष्ट होते. हेअर नीतिची भाषा आदेशात्मक आहे हे मान्य करतात. त्यांच्या मते नैतिक निर्णयास दोन कार्य असतात - मूल्यात्मक आणि वर्णनात्मक. यावरून असे म्हटले जाते की नैतिक निर्णयास दोन अर्थ असतात - मूल्यात्मक अर्थ आणि वर्णनात्मक अर्थ. यापैकी मूल्यात्मक अर्थ प्रधान तर वर्णनात्मक अर्थ गौण असतो. वर्णनात्मक अर्थच नैतिक निर्णयाला सार्वत्रिक बनवित असतो. परंतु या निर्णयाचा प्राथमिक अर्थ जो असतो. त्यामुळे नीतिच्या भाषेचे कार्य आदेशपर असते. याद्वारे आपण एखाद्या वस्तू किंवा कृतीची भलावण करून स्वतः किंवा इतरांना निवड करण्याविषयी मार्गदर्शन करण्याचे कार्य करित असतो. म्हणून नीतिची भाषा मुख्यत्वे आदेशपर असते जी न-ज्ञानात्मक असते. हेअरचे दुसरे पुस्तक 'फ्रिडम एंड रिजन' जे १९६३ मध्ये प्रसिध्द झाले. यात तो असे सांगतो की, जे खास करून नैतिक आदेश असतात त्यांच्या ठिकाणी सार्वत्रिक होण्याची क्षमता असली पाहिजे. एखादी कृती नैतिक दृष्ट्या चांगली आहे या कारणाकरिता तुम्ही ती करावी असा आदेश मी देत असेल तर समान परिस्थितीत तुम्ही अथवा इतर कोणीही ती कृती पुनः करावी अशी बाजू मला घेता आली पाहिजे.

नैतिक निर्णयाचे प्रथम तत्त्व -आदेशात्मक- या विषयापेक्षा या निर्णयाचे एक अन्य महत्वपूर्ण तत्त्व -सार्वत्रिकता- याचा विचार येथे करणार आहे. आपण पाहिलेच आहे की, नैतिक निर्णयाच्या आदेशात्मक अर्थासोबतच या निर्णयाच्या वर्णनात्मक अर्थाला सुध्दा हेअर विशेष महत्त्व देतो. याचे कारण हे आहे की, त्यांच्या विचारानुसार हाच वर्णनात्मक अर्थ नैतिक निर्णयांना खरोखरीच 'सार्वत्रिक' निर्णय बनवितो. नैतिक निर्णयाच्या सार्वत्रिकतेबरोबर वर्णनात्मक अर्थाला अनिवार्यतः संबध्द मानित हेअर म्हणतात की, 'तर्कसंगतरीत्या हे मानणे अशक्य आहे की, नैतिक निर्णय वर्णनात्मक आहे परंतु ते सार्वत्रिक नाही....'जे तत्त्वज्ञ सार्वत्रिकतेचा अस्वीकार करतात ते हे माणण्यास बाध्य आहे की, नैतिक निर्णयांना वर्णनात्मक अर्थ नसतो.<sup>१</sup> हेअरच्या विचारांनी हे स्पष्ट होते की, ते नैतिक निर्णयाकरीता सार्वत्रिकते बरोबरच वर्णनात्मक अर्थाला सुध्दा अनिवार्य मानतात. कारण वर्णनात्मक अर्थ जो दुस्यम आहे तोच अर्थ नैतिक निर्णयाला सार्वत्रिक बनवितो. आदेशात्मकते सारखेच सार्वत्रिकता सुध्दा या निर्णयाचे अनिवार्य स्वरूप आहे, ज्याच्या अभावात यांना नैतिक निर्णय म्हटल्या जाऊ शकत नाही. जेव्हा हेअर एखाद्या निर्णयाला 'सार्वत्रिक निर्णय' म्हणतो तेव्हा त्याचा तात्पर्य हाच होय की, तो निर्णय सारख्या परिस्थितीमध्ये सर्वच सारख्या वस्तुंवर कोणत्याही अपवादाशिवाय अनिवार्यतः लागू होतो. या दृष्टिकोणातून वर्णनात्मक निर्णय तथा नैतिक निर्णयात कोणतेही अंतर नाही कारण दोन्हीही सारख्याच रूपात सार्वत्रिक निर्णय होत. या साम्याला हेअर स्पष्ट करताना उदाहरण देतात की, 'जर मी एखाद्या वस्तुस लाल म्हणतो तेव्हा मी त्याच्या सारख्या अन्य वस्तुंना सुध्दा लाल म्हणण्यास तर्कतः बांधिल आहे आणि जर मी एखाद्या वस्तुस चांगला 'क' म्हणतो तेव्हा मी त्यासारख्या कोणत्याही 'क' ला चांगले म्हणण्यास बांधिल आहे....' सुसंगत दृष्ट्या हे माणणे अशक्य आहे की नैतिक निर्णय वर्णनात्मक आहे आणि ते सार्वत्रिक नाही. याच गोष्टीला दुसऱ्या प्रकारे असे म्हटले जाते की जो तत्त्वज्ञ सार्वत्रिकतेचा अस्वीकार करतो तो त्या विचाराला मानण्यास प्रतिबध्द आहे की नैतिक निर्णयाचा कोणताच वर्णनात्मक अर्थ नसतो.<sup>२</sup> याप्रकारे हेअरचे हे निश्चित मत आहे की, सार्वत्रिकता सुध्दा वर्णनात्मक निर्णयासारखेच नैतिक निर्णयाचे अनिवार्य वैशिष्ट्य आहे.

वस्तुतः सार्वत्रिकतेसंबंधी ह्याच वैशिष्ट्यामुळे आपण सारख्या गुणांनी युक्त दोन व्यवहारीक एकाच वांगला आणि दुसऱ्याला वाईट किंवा दोन सारख्या कर्मापैकी एकाला योग्य आणि दुसऱ्या कर्माला अयोग्य म्हणू शकत नाही. जर असे केले तर आपल्या निवेदनात तार्किक विसंगती उत्पन्न होणे अनिवार्य आहे. याचे कारण हे आहे की सार्वत्रिकता सुध्दा वर्णनात्मक शब्दांसारखीच नैतिक शब्दांच्या अर्थाचा अनिवार्य भाग आहे. हेयच्या अनुसार, नैतिक निर्णयात निर्देश, परामर्श आणि आदेशाव्यतिरिक्त एक महत्वाचे तत्त्व सार्वत्रिकता असते ज्यामुळे सामान्य आदेश आणि नैतिक निर्णयात अंतर केल्या जाऊ शकते. हेय या संदर्भात काही असे तर्क प्रस्तुत करतो ज्यांच्या आधारावर सामान्य आदेशांपासून नैतिक निर्णयाला वेगळे केल्या जाऊ शकते. या तर्कांमध्ये सार्वत्रिकतेचा नियम हा प्रमुख असल्याचे म्हटल्या जाते, ते तर्क खालीलप्रमाणे आहेत :

- १) हेयच्या अनुसार, नैतिक निर्णय निश्चितरीत्या सार्वत्रिक असतात. दुसऱ्या शब्दात, सारख्या परिस्थितीत नैतिक निर्णय सर्वत्र व्यवहारीक सारख्या प्रमाणात लागू होते. जर असे केल्या गेले नाही तर अर्थात एखादे कारण सांगून कधी स्वीकारल्या गेले किंवा कधी नाकारल्या गेले तर त्यात तार्किक विसंगती उत्पन्न होईल. याप्रकारे हेय हे मानतात की, वस्तुस्थितीविषयक निर्णयांसारखेच नैतिक निर्णय सुध्दा निश्चितरीत्या सार्वत्रिक असतात. सामान्य आदेशात सार्वत्रिकतेचे तत्त्व नसते. सामान्य आदेशाच्या पालनात व्यवहारीक स्वातंत्र्य असते. परंतु नैतिक निर्णय (आदेश) यात ही स्वातंत्र्य व्यवहारीक नसते. नैतिक निर्णयात एक प्रकारची बांधिलकी असते. सार्वत्रिकतेच्या या तत्त्वाने हे सुध्दा स्पष्ट होते की, नैतिक निर्णयात व्यापकतेचे तत्त्व सुध्दा अंतर्भूत असते जे सामान्य आदेशात दिसत नाही. यावरून हे स्पष्ट होते की, नैतिक निर्णयाला सामान्य आदेश मानल्या जाऊ शकत नाही.

येथे हे उल्लेखनिय आहे की, सार्वत्रिकतेच्या नियमासंदर्भात हेयच्या मतावर कांटच्या विचारांचा पर्याप्त प्रभाव पडलेला दिसतो. कांट नैतिक नियमाला आदेश म्हणतो, ते पुढीलप्रमाणे :

- १) सोपाधिक आदेश (Hypothetical Imperative) २) निश्चितार्थक आदेश (Assertorical Imperative),  
३) निरूपाधिक आदेश (Categorical Imperative)

कांटच्या मतानुसार, जी कृती निरूपाधिक आदेशानुसार म्हणजेच त्या तत्त्वानुसार होते तीच कृती करणे आपले कर्तव्य असते आणि म्हणून तीच कृती योग्य असते. सापेक्षा आदेशानुसार कृतीचे मूल्यमापन केल्यास त्यात एकवाक्यता येणार नाही. परंतु निरूपाधिक आदेशानुसार कृतीचे मूल्यमापन केल्यास त्यात एकवाक्यता येऊ शकते.

कांटच्या मतानुसार हा नियम सर्वांना लागू पडतो. तसेच हा एक 'आदेश' आहे, आदेश म्हटल्या की तो सर्वांना बंधनकारक असतो. म्हणून ह्या नियमानुसार प्रत्येकाने कृती करायला पाहिजे. 'आदेश' या शब्दावरून हे स्पष्ट होते की, हा शब्द एखादे कर्म करणे किंवा न करण्याकरीता बाध्य करतो. कांटच्या अनुसार, प्रत्येक आदेशात 'पाहिजे' हे अवश्य अंतर्भूत असते. म्हणजेच प्रत्येक आदेश मानवाला हे सांगतो की, अमुक एक कर्म करायला पाहिजे किंवा नाही. थोडक्यात, कांटच्या मते, निरूपाधिक आदेशच एकमेव नैतिक आदेश आहेत. तसेच याची बाध्यता बाह्य नसून आंतरिक असते.

निरूपाधिक आदेश कर्तव्य सांगतो. म्हणजेच सद्वर्तन नैतिक कर्तव्यानुसार किंवा कर्तव्याशी सुसंगत असू शकेल. परंतु जेव्हा ते कर्तव्य करण्याच्या हेतूने (from duty) केले जाते तेव्हाच त्याला नैतिक मूल्य लागते.

या संदर्भात कांट म्हणतो, नैतिक कृतीचे मूल्य त्या कृतीच्या फळाच्या निरपेक्षा असते. कांटच्या मते मानवाने आपल्या आवडी निवडी, इच्छा, आकांक्षा, कल, विकार आणि भावना यापैकी काहीही असोत, त्यांच्याकडे दुर्लक्ष करून, त्याची उपेक्षा करून, त्यांच्यावर आपले स्वामित्व प्रस्थापित करावयाचे व शुध्द नीतिनियमाचा आदर्श समोर ठेवून इतर कोणत्याही हिताहिताचा विचार न करता आपली शुध्द व्यावहारीक प्रज्ञा आदेश देते किंवा आज्ञा करते म्हणून त्याचे निरपेक्षपणे पालन करावे हेच कांटच्या मते 'कर्तव्य' (Duty) ठरते. असा आदेश आपली शुध्द प्रज्ञा किंवा बुद्धी देत असते व निरूपाधिक रीतीने, म्हणजे कर्मफलाची यत्किंचितही अपेक्षा न धरता तिच्या आदेशाचे पालन करणे यालाच कांट स्वऱ्या अर्थाने निरूपाधिक आदेशाचे तत्त्व (categorical imperative) म्हणतो.<sup>३</sup>

कांटने आपल्या 'ग्राऊंडवर्क ऑफ दी मेटाफिजिक्स ऑफ मॉरल्स' ('Groundwork of The Metaphysics of Morals')चा पुस्तकात इतर नैतिक नियमांसोबतच सार्वत्रिकतेच्या नियमाला सुध्दा अनिवार्य नियमाच्या रूपात स्वीकारले आहे. या नियमाची व्याख्या करतांना ते म्हणतात की, जर मी एखादे कर्म करू इच्छितो तर मला स्वतःला हा प्रश्न विचारयला हवा की काय, अन्य सर्वत्र व्यवहारीक ते कर्म करावे - अर्थात काय ते कर्म करणे सार्वत्रिक नियम व्हायला हवा. ते अशा प्रत्येक कर्माला अनैतिक मानतात जे सार्वत्रिकतेच्या ह्या नियमाविरुध्द आहे - अर्थात ज्यास करतेवेळी व्यवहारीक या नियमाचे उल्लंघन करतो. हेय, कांटच्या याच नियमाचे समर्थन करतो. यासंबंधात हेय लिहीतात, 'हे विचारणे की या परिस्थितीत मी 'क' हे कर्म करावे काय? (एक छोटेशे परंतु महत्त्वपूर्ण संशोधनासोबत कांटच्या भाषेचा प्रयोग करीत) हे विचारणे आहे की, काय मी ही इच्छा करतो की अशा परिस्थितीत 'क' निर्मित कर्म करण्याप्रति मी कोणत्या प्रकारच्या दृष्टिकोणाचा अवलंब केला पाहिजे'.<sup>४</sup> याप्रकारे हे स्पष्ट आहे की सार्वत्रिकतेच्या नियमाचे प्रतिपादन करतांना हेय कांटच्या विचारांनी अवश्य प्रभावित झालेले दिसतात.

कांटच्या निरुपाधिक आदेश विषयीच्या सिध्दांत आणि हेयरचा आदेशवाद यांचा अभ्यास करतांना या दोघांच्या मतांमध्ये काही प्रमाणात साम्य आढळून येते. हे साम्य म्हणजे दोघांच्याही मतात आपल्याला सार्वत्रिकता आढळून येते. तसेच दोघांचेही मत आदेशवादी असल्याचे किंवा त्यांची भाषा आदेशपर असल्याचे दिसून येते हे होय. परंतु हे साम्य असतांना देखील त्या दोघांच्या मतांमध्ये काही भेदही आपल्याला आढळून येतात. तो भेद हा की जेथे कांटची भाषा किंवा आदेश हे आदर्श नीतिशास्त्रांतर्गत येतात किंवा त्यांची भाषा ही आचरणाच्या नियमांसंदर्भात लागू होते तशी हेयर यांची भाषा नव्हे. हेयर यांचे कार्य हे नीतिशास्त्रांतर्गत येणाऱ्या भाषेच्या विश्लेषणांतर्गत म्हणजेच अतिनीतिशास्त्रीय भाषा होय किंवा त्यांचे क्षेत्र हे अतिनीतिशास्त्रीय आहे. ते भाषेच्या विश्लेषणाचा अभ्यास करतात. ते आचरणा संदर्भात कोणतेही नियम देत नाही. तसेच कांटचा निरुपाधिक आदेशाचा सिध्दांत हा सार्वत्रिक आहे. परंतु कांटची ही सार्वत्रिकता नैतिक होय तर हेयरच्या आदेशवादातील सार्वत्रिकता ही नैतिक नसून तार्किक आहे. परंतु या दोघांची तुलना केली असता असे आढळते की, जेव्हा कांट निरुपाधिक आदेशाचा विचार करतो तेव्हा त्यात आदेश हा लपलेला असतोच. याद्वारे तो श्रोत्यास एखादा उपदेश, आदेश, सल्ला, मार्गदर्शन, परामर्श देत असतो. तुम्ही असे असे आचरण करावे याविषयी त्याद्वारे मार्गदर्शनच घडत असते. तसेच हेयर आपल्या आदेशवादाद्वारे ही हेच कार्य करीत असतो.

- २) सामान्य आदेश आणि नैतिक नियमांत भिन्नतेचा एक मुख्य आधार तर्काद्वारे नैतिक निर्णयांच्या समर्थनाला म्हणता येईल. अर्थात नैतिक निर्णयांचे (आदेशांचे) समर्थन तर्काद्वारे केल्या जाऊ शकते, परंतु सामान्य आदेशांच्या समर्थनार्थ हे आवश्यक नाही की त्यांचे तर्काद्वारे समर्थन केल्या जावे. 'एक व्यक्ती जो आदेश देते तो तार्किकरीत्या बाध्य नाही की ते तर्क प्रस्तुत करावे की कां त्याच्या आदेशाचे पालन करावे. परंतु एक व्यक्ती जेव्हा हे म्हणते की 'तुम्ही ते करावे' तर त्यांच्या निवेदनात हे अंतर्भूत आहे की काही असे कारण (तर्क) आहेत ज्याने त्यांच्या आदेशाचे पालन व्हावे'<sup>९</sup> या संदर्भात आपण असे म्हणू शकतो की, सामान्य आदेशात व्यक्तीची आपली इच्छा असते, परंतु नैतिक निर्णयात व्यक्तीची इच्छा अंतर्भूत नसते, तरी नैतिक निर्णय सार्वत्रिक असतो. नैतिक निर्णयात तर्काची आवश्यकता स्वीकारली जाते. म्हणून हे नैतिक निर्णय (आदेश) सामान्य आदेशांपासून भिन्न आहेत.

हेयरने आपले दुसरे पुस्तक 'फिडम एंड रिजन' मध्ये 'तार्किक नियमांच्या' रूपातच सार्वत्रिकतेचे विस्तृत विवेचन केले आहे. यासंबंधी त्यांचे म्हणणे आहे की, 'नैतिक निर्णय त्याचप्रकारे सार्वत्रिक होत ज्याप्रकारे वर्णनात्मक निर्णय - अर्थात नैतिक निर्णय आणि वर्णनात्मक निर्णय दोघांनाही वर्णनात्मक अर्थ असतो; परंतु जो सार्वत्रिक नियम नैतिक निर्णयांच्या या वर्णनात्मक अर्थाला निर्धारित करतो तो केवळ अर्थासंबंधी नियमच नसतो तर तो एक महत्वपूर्ण नैतिक सिध्दांत होय.... 'तार्किक सिध्दांत' याच्याशी माझा तात्पर्य शब्दांच्या अर्थासंबंधी सिध्दांताशी आहे...मी हे मानीत आलो की 'पाहिजे' शब्द तथा इतर नैतिक शब्दांचा अर्थ यप्रकारे होतो की जो व्यक्ती त्याचा प्रयोग करतो तो त्याद्वारे आपल्या स्वतःला सार्वत्रिक नियमाचे पालन करण्याकरिता प्रतिबद्ध करतो. हाच सार्वत्रिकतेचा नियम होय. सार्वत्रिकतेच्या नियमाचे उल्लंघन करणे तार्किक दोष आहे, नैतिक दोष नाही. हा सिध्दांत आपल्याला सांगतो की असे करणे तार्किक दृष्ट्या दोन विसंगत निर्णय देणे होय.'<sup>६</sup> हेयर द्वारा सार्वत्रिकतेच्या वरील केल्या गेलेल्या स्पष्टिकरणावरून हे पूर्णपणे स्पष्ट होते की ते याला 'तार्किक नियमांच्या' रूपातच स्वीकार करतात; अतः त्यांचा हा नियम कांटच्या नैतिक नियमा पासून निश्चितरीत्या भिन्न आहे. आपल्या या सार्वत्रिकतेच्या तार्किक नियमांच्या आधारावरच हेयर नैतिक निर्णय तथा आज्ञा (आदेश) यात फरक करतात.

- ३) सामान्य आदेश आणि नैतिक निर्णयांमध्ये हा एक फरक आहे की, सामान्य आदेश एकाच व्यक्तीला नियोजित करतो, परंतु नैतिक निर्णय अनेक लोकांना (एकापेक्षा जास्त) अनेक प्रकारच्या नैतिक कार्यासाठी नियोजित करू शकतो.

हेयरच्या विचारात सार्वत्रिकतेचा नियमच नैतिक निर्णयांना तर्कसंगत निर्णय बनवितो **सिंगरने** सुद्धा नैतिकतेचा आकार कांटप्रमाणेच सामान्यीकरणाच्या रूपात व्यक्त केला आहे. तथापी त्यात मुलभूत फरक आहे. कांटच्या सामान्यीकरणाचा संबंध प्रेरणेशी, क्रिया, इच्छेशी आहे तर सिंगरने सामान्यीकरणाचे तत्त्व परिणामाविषयी आहे. परिणामाविषयी असले तरी ते आकारीक आहे हे मात्र निश्चित. तो त्यास 'सामान्यीकरण' तत्त्व म्हणतो. ते म्हणजे 'एका विशिष्ट पध्दतीने प्रत्येक व्यक्ती वागत असतो, त्या वर्तनाचे परिणाम अवांछनीय असता कामा नये.' यातील व कांटच्या तत्त्वातील फरक सिंगरने स्वतः स्पष्ट केला आहे.<sup>९</sup>

### वरील विवेचनावरून नैतिक निर्णयांच्या सार्वत्रिकतेविषयी काही महत्त्वाची मुद्दे थोडक्यात पुढीलप्रमाणे :

- १) नैतिक निर्णय आदेशात्मकते सोबतच अनिवार्यतः सार्वत्रिक सुद्धा असतात.
- २) तार्किक दृष्ट्या अनिवार्यतः प्रतिबद्ध करतो की त्याचा तो नैतिक निर्णय सारख्या परिस्थितीत सर्वच मनुष्यांवर सारख्या रूपात लागू होतो ज्याचा तो स्वतः एक घटक आहे.
- ३) तो आपल्या नैतिक निर्णयांना सार्वत्रिक निर्णयांच्या रूपात स्वीकार करण्यात तार्किक दृष्ट्या प्रतिबद्ध असतो.
- ४) आदेशवाद्यांच्या अनुसार सार्वत्रिकतेचे हे तत्त्व सर्वच नैतिक निर्णयात अनिवार्यतः विद्यमान असते.
- ५) हेच तत्त्व या निर्णयांना वस्तुस्थितीविषयक निर्णयांसारखे वस्तुनिष्ठ बनविते आणि सोबतच यास भावनात्मक निर्णयांपासून वेगळे करते.
- ६) याच्या अभावात आपण कोणत्याही निवेदनाला किंवा निर्णयाला 'नैतिक निर्णय' म्हणू शकत नाही.

- ७) आदेशवादानुसार, सार्वत्रिकता आणि आदेशात्मकता ही दोन्ही तत्त्वे नैतिक निर्णयाची अनिवार्य वैशिष्ट्ये ओढत ज्यांच्या अभावात आपण कोणत्याही निवेदनाला 'नैतिक निर्णय' ही संज्ञा देऊ शकत नाही.
- ८) नैतिक निर्णयाकरिता जे तर्क दिले जाते त्याचे सार्वत्रिकरण होणे अनिवार्य आहे.
- ९) नैतिक निर्णयाकरिता सार्वत्रिकतेबरोबरच वर्णनात्मक अर्थसुद्धा महत्वाचा आहे.
- १०) सार्वत्रिकते संदर्भात हेयर कांटच्या मताने प्रभावित होतो.
- ११) कांटच्या सार्वत्रिकतेचा नियम आणि हेयरचा सार्वत्रिकतेचा नियम यात काही भिन्नता आहे. हेयरचा सार्वत्रिकतेचा नियम 'ताकिक नियम' होय तर कांटचा सार्वत्रिकतेचा नियम 'नैतिक नियम' आहे.
- १२) आपल्या सार्वत्रिकतेच्या नियमाद्वारे हेयर नैतिक नियम आणि आज्ञा किंवा सामान्य आदेशात फरक करतात.
- १३) सामान्य आदेश आणि नैतिक निर्णयात फरक असा की, सामान्य आदेश विश्वस्त रूपात एकाच व्यक्तीला नियोजित करतो तर नैतिक आदेश एकाच वेळी अनेकांना अनेक प्रकारच्या नैतिक कार्याकरिता नियोजित करू शकतो.
- १४) सार्वत्रिकतेचा नियमच नैतिक निर्णयांना तर्कसंगत निर्णय बनविते.

हेयर, नीतिच्या भाषेला मुख्यतः आदेशात्मक मानतात तसेच आज्ञा, आदेश, मार्गदर्शन करणे हा त्याचा प्राथमिक अर्थ व त्याचे वर्णन करणे हा दुय्यम अर्थ ते मानतात. तसेच वर्णनात्मक अर्थावरच त्याची सार्वत्रिकता ही अवलंबून असते. तसेच वर्णनात्मक अर्थ हा गौण असला तरी तो कधीही अनुपस्थित नसतो. म्हणून संपूर्ण नीतिची भाषा ही सार्वत्रिक असते असे हेयरचे मत आहे. हेयर नीतिच्या मूल्यात्मक आणि मार्गदर्शक भाषेत भेद करीत नसल्याने हे सार्वत्रिकतेचे तत्त्व तो दोन्ही भाषा प्रकाराला लावतो. म्हणजे मूल्यात्मक नैतिक भाषेप्रमाणेच मार्गदर्शनपर नैतिक भाषा (आदेशात्मक भाषा) ही दोन्ही वर स्पष्ट केल्याप्रमाणे एकच असल्यामुळे दोन्ही सारख्या रूपात सार्वत्रिक आहे.

परंतु आपण आत्ताच वर उल्लेखिल्या प्रमाणे या दोन्ही भाषा प्रकार - मूल्यात्मक भाषा आणि मार्गदर्शन पर भाषा-भिन्न-भिन्न असल्या कारणाने जे तत्त्व एकाचे असेल तेच दुसऱ्याचे असणार नाही आणि म्हणून जर सार्वत्रिकतेचे तत्त्व, जर हेयरच्या आदेशवादी सिध्दांताला मानले तर, ते तत्त्व केवळ अशाच नैतिक भाषा प्रकाराला लागू होईल जी आदेशपर असेल. मूल्यमापनपर नैतिक भाषेला हे तत्त्व लागू होऊ शकत नाही.

आपल्या अध्ययनाच्या संदर्भात आपण काही गोष्टी विशेषत्वाने लक्षात घ्यायला पाहिजे की, नैतिक निर्णयाच्या संदर्भात वर्णनात्मक अर्थ कधीही गैरहजर नसतो, तो निकष असतो तसेच त्यामुळेच नैतिक निर्णय सार्वत्रिक ठरते, तसेच वस्तुनिष्ठ ठरते. म्हणून मूल्यमापनपर नैतिक निर्णयाच्या संदर्भात वर्णनात्मक अर्थाचे महत्त्व विसरून जाता यावयाचे नाही. किंबहुना वर्णनात्मक अर्थच या निर्णयांच्या संदर्भात मूलभूत असतो असे म्हणावे लागेल. तसेच, मूल्यनिवेदन वस्तुनिष्ठ ठरतात. या संदर्भात असे म्हणता येते की, भावनिकवादाने मूल्यनिवेदनाची वस्तुनिष्ठता नाकारली. परंतु हेयर यांनी पुन्हा ती वस्तुनिष्ठता या निवेदनाच्या (नैतिक निर्णयांच्या) सार्वत्रिकतेच्या वैशिष्ट्यावर आधारीत राहून मिळवून दिली. हेयर असे करताना वर्णनात्मक अर्थाला महत्त्व देत असल्याचे दिसून येते.

### संदर्भ ग्रंथ सूची

- १ डिमरी, डॉ. मुकेशचंद्र पाश्चात्य नीतिदर्शन, भारतिय विद्या प्रकाशन, वाराणसी, २०००, पृ. नं. २७७
- २ Hare, R. M. Freedom and Reason, P. No. 15, 16
- ३ जोशी, ग. णा. पाश्चात्य तत्त्वज्ञानाचा इतिहास, (खंड २), पृ. क्र. १०७७
- ४ Hare, R. M. Freedom and Reason, P. No. 69, 70
- ५ मिश्र, डॉ. हृदय उन्नत नीतिशास्त्र, षेखर प्रकाशन, ईलाहाबाद, तृतीय नारायण संस्करण, २००२, पृ. क्र. ३६
- ६ Hare, R. M. Freedom & Reason, P. No. 30, 32, 33
- ७ वाडेकर, दे. द. मराठी तत्त्वज्ञान महाकोष, (खंड दोन) पृ. क्र. २.२३२ आ
- ८ Harrison, Jonethan 'Ethical Naturalism' from Encyclopedia of Philosophy (Vol. 3-4) Edt. by Paul Edward, Macmillan, New York, Reprint, Edition 1972, Hare, R. M. Language of Morals,
- ९ Warnock, G. J. Contemporary Moral Philosophy, Macmillan & Co. Ltd. London, 1967
- १० रेगे, मे. पु. पाश्चात्य नीतिशास्त्राचा इतिहास, समाज प्रबोधन संस्था, पुणे, प्रथम आवृत्ती, जून १९७४,
- ११ गायधने, डॉ. सुरेंद्र नीतिशास्त्रीय आदेशवाद , २००४

## “उ०प्र० लोक सभा चुनाव २०१४ में मतदान करने वाले का स्थानिक विश्लेषण : एक भौगोलिक अध्ययन”

डॉ० संजय कुमार सिंह<sup>१</sup> जयप्रकाश<sup>२</sup>

<sup>१</sup>विभागाध्यक्ष भूगोल विभाग, राजा हरपाल सिंह पी०जी० कॉलेज, सिंगरमऊ, जौनपुर।

<sup>२</sup>रिसर्व स्कालर भूगोल विभाग, राजा हरपाल सिंह पी०जी० कॉलेज, सिंगरमऊ, जौनपुर।

**प्रस्तावना -**

हम एक लोकतांत्रिक देश के स्वतन्त्र नागरिक हैं, लोकतान्त्रिक प्रणाली के तहत जितने अधिकार नागरिक मिलते हैं उनमें सबसे बड़ा अधिकार वोट देने का अधिकार।

सारे काम छोड़ दो सबसे पहले वोट दो। आप का मतदान ही लोक तन्त्र की जान है, आप के अंगुली पर लगी स्याही सिर्फ निशान ही नहीं है आप की शान है। देश की पहचान है, लोकतन्त्र की जान है। “राज्य के नागरिकों को देश के संविधान द्वारा प्रदत्त सरकार चलाने हेतु अपने प्रतिनिधि निर्वाचित करने के अधिकार को “मताधिकार” (फ्रैंचाइज) कहते हैं।”

जनतांत्रिक लोक प्रणाली में इसका बहुत महत्व होता है। जनतन्त्र की नींव मताधिकार पर रखी जाती है। जिस देश में जितने अधिक नागरिकों को मताधिकार प्राप्त रहता है। उस देश को उतना ही अधिक जनतांत्रिक समझा जाता है। इस प्रकार नागरिकों प्राप्त मताधिकार सबसे बड़ा अधिकार है।

भारतीय संविधान के अनुच्छेद ३२५ व ३२६ के अनुसार प्रत्येक वयस्क नागरिक को जो पागल या अपराधी न हो मताधिकार प्राप्त है। किसी नागरिक को धर्म, जाति, वर्ण सम्प्रदाय अथवा लिंग भेद के कारण मताधिकार से वंचित नहीं किया जा सकता। जनतांत्रिक प्रणाली अब पूर्व विकसित हो चुकी है। एकाएक सभी वयस्क नागरिकों को मताधिकार प्रदान नहीं प्रदान किया, धीरे-धीरे सभी वयस्क नागरिकों को मताधिकार दिया है। भारतीय संविधान ने धर्म निरपेक्षता का सिद्धान्त मानते हुए और व्यापक महत्ता को स्वीकार करते हुए अमीर-गरीब के अन्तर को धर्म, जाति, सम्प्रदाय के अन्तर को तथा स्त्री, पुरुष के अन्तर को मिटाकर प्रत्येक वयस्क नागरिक को देश की सरकार बनाने के लिए अथवा अपना प्रतिनिधित्व निर्वाचित करने के लिए “मत” (वोट) देने का अमूल्य अधिकार प्रदान किया।

**अध्ययन क्षेत्र -**

**अध्ययन क्षेत्र**

उ०प्र० भारत के उत्तर पूर्वी भाग में स्थित है। इसका भौगोलिक अध्ययन क्षेत्र का कुल अक्षांशीय विस्तार ६° ३२' है। अक्षांशीय विस्तार २३° ५२' से ३०° २५' उत्तरी अक्षांश के मध्य है। उ०प्र० का कुल देशान्तरीय विस्तार ७° ३३' है। देशान्तरीय विस्तार ७७°३' से ८४°३८' पूर्वी देशान्तर के मध्य है। उ०प्र० का कुल भौगोलिक क्षेत्रफल २, ४०, ९२८ वर्ग किमी० है। जो भारत के कुल क्षेत्रफल के लगभग ७.३३ प्रतिशत के बराबर है। प्रदेश के पूर्व से पश्चिम की लम्बाई ६५० किमी० और उत्तर से दक्षिण तक की चौड़ाई २४० किमी० है। क्षेत्रफल की दृष्टि से उ०प्र० का भारत में चौथा स्थान है। उ०प्र० की सीमाएं ९ राज्यों से स्पर्श करती है। जो क्रमशः हिमाचल, राजस्थान, मध्य प्रदेश, हरियाणा, छत्तीसगढ़, झारखण्ड, बिहार उत्तराखण्ड एवं दिल्ली है।

उ०प्र० का राज्य का पूर्वी जिला-बलिया जिसके पूर्वी सीमा पर बिहार झारखण्ड लगी हुई है। उ०प्र० का उत्तरी जिला सहारनपुर, जिसके उत्तरी सीमा पर नेपाल के अतिरिक्त उत्तराखण्ड एवं हिमाचल प्रदेश से लगी हुई है। उ०प्र० का पश्चिमी जिला-मुजफ्फरनगर, जिसके पश्चिमी सीमा पर हरियाणा राजस्थान, दिल्ली से लगी हुई है।

उ०प्र० का दक्षिणी जिला-सोनभद्र जिसके दक्षिणी सीमा पर छत्तीसगढ़ मध्य प्रदेश को स्पर्श करती है। उ०प्र० की सबसे लम्बी सीमा मध्य प्रदेश से स्पर्श करती है तथा न्यूनतम सीमा



हिमांचल प्रदेश से स्पर्श करती है। इसके अलावा प्राकृतिक सीमा तौर देखा जाय तो उत्तर में हिमालय की शिवालिक श्रेणियाँ पश्चिम एवं दक्षिण में यमुना तथा विन्ध्याचल पूर्व में गण्डक नदी है।

### शोध विधि तन्त्र -

उ०प्र० लोक सभा निर्वाचन क्षेत्र से सम्बन्धित शोध विधि एवं आंकड़ों का क्रमबद्धता, तार्किकता प्रमाणिकता, तथ्यान्वेषण, समयावधि का उल्लेख, का संकलन लोक सभा क्षेत्र पर किया गया है। यह लोक सभा निर्वाचन २०१४ वर्ष के आंकड़ों का संकलन किया गया है। निर्वाचन क्षेत्रों का सीमांकन इण्टरनेट द्वारा आंकड़े जो निर्वाचन कार्यालय सत्यापित है। निर्वाचन क्षेत्रों का प्रमुख आधार वयस्क मतदाता होते हैं। यह एक निरन्तर प्रक्रिया है जिसमें, तार्किकता, क्रमबद्धता, योजनाबद्धता पायी जाती है, जिसमें आंकड़ों का संग्रह, परीक्षण मूल्यांकन, निर्वाचन आंकड़े, सामाजिक आर्थिक आंकड़े, क्षेत्रीय आंकड़ों के माध्यम से विधितन्त्रात्मक तरीके से विश्लेषण करने का प्रयास किया गया है। जो शोध पत्र में प्राथमिक एवं द्वितीयक आंकड़ों का प्रयोग किया गया है। आंकड़ों का विश्लेषण सांख्यिकी नियमों प्रतिशत, माध्यम माध्यिका, बहुलक वितरण श्रेणीकरण आदि का प्रयोग किया गया है आंकड़ों के सरल प्रस्तुती हेतु आरेखों-आलेखों का प्रयोग किया गया है।

### अध्ययन के उद्देश्य -

उ०प्र० लोक सभा चुनाव २०१४ में मत देने वाले निर्वाचकों के वितरण का अध्ययन किया गया है। जिसका उद्देश्य मानव व्यवहार व जनता की भावना को समझना जिसका प्रत्यक्ष या अप्रत्यक्ष प्रभाव उस क्षेत्र के भौगोलिक भू-दृश्य और मानव व्यवहार के द्वारा क्षेत्र विशेष की आर्थिक सामाजिक, राजनैतिक, धार्मिक एवं जनता का सामाजिक विकास करना है। निर्वाचकों से प्राप्त मतदान जनता की सक्रियता का बोध होता है। जिससे उस देश के राजनीतिक भविष्य या सरकार के लिए शुभ संकेत है। जिनके निम्न उद्देश्य हैं-

1. किसी क्षेत्र में राजनीतिक तन्त्र के अध्ययन हेतु अवसर उपलब्ध करना।
2. राष्ट्र, राज्य या प्रदेश व स्थानीय जनता के व्यवहार विचार व विकास पर सरकार के पड़ने वाले प्रभाव का विश्लेषण।
3. जनता के मतदान व्यवहार व उसे प्रभावित करने वाले कारकों का विश्लेषण।

उ०प्र० लोकसभा २०१४ में मत देने वाले निर्वाचकों का प्रतिशत सभी क्षेत्रों में विद्यमान है। उ०प्र० में सम्पन्न १६वीं लोकसभा निर्वाचन वर्ष २०१४ में मत देने वाले निर्वाचक के वास्तविक स्थानिक वितरण को प्रतिशत के रूप में प्रस्तुत किया गया है।

मतदान करने वाले निर्वाचकों के प्रतिशत के आधार पर उ०प्र० के लोक सभा क्षेत्रों को वर्गीकृत किया गया है।

### लोक सभा २०१४ में मतदान करने वाले मतदाता सारिणी संख्या- (अ)

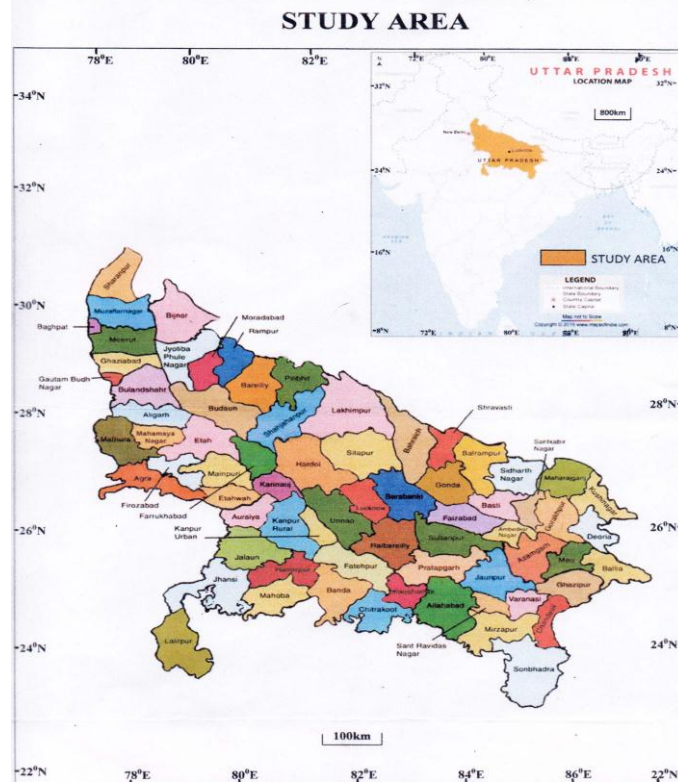
क्र०सं०	निर्वाचन क्षेत्र	मतदान करने वाले का प्रतिशतांक
1.	सहारनपुर	७४.२४:
2.	कैराना	७३.०८:
3.	मुजफ्फरनगर	६९.७२:
4.	विजनौर	६७.८८:
5.	नगीना	६३.०९:
6.	मुयदाबाद	६६.६६:
7.	रामपुर	७९.१६:
8.	सम्भल	६२.४३:
9.	अमरोहा	७०.९७:

10.	मेरठ	६३.११ :
11.	बागपत	६६.७२ :
12.	गाजियाबाद	७६.९४ :
13.	गौतम बुद्ध नगर	६०.३८ :
14.	बुलन्द शहर	७८.१७ :
15.	अलीगढ़	७९.३६ :
16.	हाथरस	७९.६६ :
17.	मथुरा	६४.०२ :
18.	आगरा	७८.९९ :
19.	फतेहपुर सिकरी	६१.२४ :
20.	फिरोजाबाद	६७.४९ :
21.	मैनपुरी	६१.३२ :
22.	एटा	७८.७२ :
23.	बदायूँ	७८.०९ :
24.	आँवला	६०.२१ :
25.	बरेली	६१.१७ :
26.	पीलीभीत	६२.८६ :
27.	शाहजहाँपुर	४८.६८ :
28.	खीरी	६४.१८ :
29.	धौरहरा	६६.१२ :
30.	सीतापुर	६६.२७ :
31.	हरदोई	७६.७७ :
32.	मिसरिख	७७.८६ :
33.	उन्नाव	७७.७२ :
34.	मोहनलालगंज	६०.७७ :
35.	लखनऊ	७३.०२ :
36.	रायबरेली	७१.७३ :
37.	अमेठी	७२.३८ :
38.	सुल्तानपुर	७६.६४ :
39.	प्रतापगढ़	७२.१२ :
40.	फरुखाबाद	६०.१७ :
41.	इटावा	७७.०४ :
42.	कन्नौज	६१.६१ :
43.	कानपुर	७१.८३ :
44.	अकबरपुर	७४.९३ :
45.	जालौन	७८.७७ :
46.	झाँसी	६८.३६ :
47.	हमीरपुर	७६.११ :
48.	बादाँ	७३.७९ :
49.	फतेहपुर	७८.७७ :

50.	कौशाम्बी	५२.३८:
51.	फूलपुर	५०.१९:
52.	इलाहाबाद	५३.५०:
53.	बाराबंकी	६२.०६:
54.	फैजाबाद	५८.८२:
55.	अम्बेडकर नगर	६०.१९:
56.	बहराइच	५७.०१:
57.	कैसरगंज	५५.११:
58.	श्रावस्ती	५४.७९:
59.	गोण्डा	५२.६३:
60.	डुमरियागंज	५३.०९:
61.	बस्ती	५८.६६:
62.	सन्त रविदास नगर	५३.१३:
63.	महराजगंज	५१.१४:
64.	गोरखपुर	५४.६३:
65.	कुशीनगर	५६.५४:
66.	देवरियाँ	५३.७८:
67.	बाँसगाँव	४९.८८:
68.	लालगंज	५४.०९:
69.	आजमगढ़	५६.३८:
70.	घोसी	५४.५८:
71.	सलेमपुर	५१.४४:
72.	बलिया	५३.२९:
73.	जौनपुर	५४.४८:
74.	मछलीशहर	५२.७५:
75.	गाजीपुर	५४.७७:
76.	चन्दौली	६१.५५:
77.	वाराणसी	५८.३५:
78.	भदोई	५३.५२:
79.	मिर्जापुर	५८.५६:
80.	शर्बट्सगंज	४८.९९:

**मतदान करने वाले निर्वाचकों के प्रतिशतांक एवं उनका क्षेत्र वितरण**

क्र०सं०	मत देने वाले निर्वाचक प्रतिशत	क्षेत्र वितरण
६५/८		उच्च प्रतिशत मत देने वालों का क्षेत्र
५५-४५		मध्यम प्रतिशत मत देने वालों का क्षेत्र
५५/३		निम्न प्रतिशत मत देने वाले का क्षेत्र



**१- मतदान करने वालो का उच्च प्रतिशतांक (६७/७)**

मतदान करने वाले उच्च निर्वाचको के क्षेत्र के अन्तर्गत अ क्षेत्रों को सम्मिलत किया जाता है। जिन क्षेत्रों में ११ से अधिक प्रतिशत के निर्वाचकों ने अपने मताधिकार का प्रयोग किया है। इस निर्वाचकों के निर्वाचन के क्षेत्र क्रमशः सधरनपुर (७४.२४:), कैराना (७३.०८:), मुजफ्फरनगर (६९.७२:), बिजनौर (६७.८८:), मुरादाबाद (६६.६६:) अमरोहा (७०.९७:), बागपत (६६.७२:), फिरोजाबाद (६७.४९:), सीतापुर (६६.२७:), झाँसी (६८.३६:), धौरहय (६१.१२:) निर्वाचन क्षेत्र सम्मिलत है। अध्ययन क्षेत्र की ११ निर्वाचन क्षेत्र इस वर्ग में सम्मिलत है। निर्वाचन क्षेत्र प्रदेश के पश्चिमी हिस्से में विस्तृत है।

**२- मतदान करने वाले मध्यम प्रतिशतांक (७७-६७) -**

मतदान करने वाले मध्यम निर्वाचकों के क्षेत्र के अन्तर्गत उन क्षेत्रों को सम्मिलत किया जाता है। जिन क्षेत्रों में ७७-६७ प्रतिशत के मध्य निर्वाचकों ने अपने के अधिकार का प्रयोग किये है। इस क्षेत्र के अन्तर्गत निर्वाचक क्रमशः - नगीना (६३.०९:), रामपुर (७९.१६:), सम्भल (६२.४३:), मेरठ (६३.११:), गाजियाबाद (७६.९४:), गौतमबुद्ध नगर (६०.३८:), बुलन्दशहर (७८.१७:), अलीगढ़ (७९.३६:), हाथरस (७९.६६:), मथुरा (६४.०२:), आगरा (७८.९९:), फतेहपुर सीकरी (६१.२४:), मैनपुरी (६१.३२:), एटा (७८.७२:), बदायूँ (७८.०९), आँवला (६०.२१), बरेली (६१.१७:), पीलीभीत (६२.८६:), लखीमपुर खीरी (६४.१८), हरदोई (७६.७७:), मिसरिख (७७.८६:), मोहनलालगंज (६०.७७:), सुल्तानपुर (७६.६४), फर्रुखाबाद (६०.१७:), कन्नौज (६१.६१:), जालौन (७८.७७:), हमीरपुर (७६.११:), फतेहपुर

(१८.११:), बाराबंकी (६२.०६:), फैजाबाद (१८.८२:), अम्बेडकरनगर (६०.१९:), बहराइच (१७.०१:), बस्ती (१८.६६:), कुशीनगर (१६.१४:), आजमगढ़ (१६.३८:), चन्दौली (६१.११:), वाराणसी (१८.३१:), मिर्जापुर (१८.१६:), आदि निर्वाचन क्षेत्रों के सम्मिलित गया है। अध्ययन क्षेत्र की ३८ लोकसभा क्षेत्र इस वर्ग में सम्मिलित है। ये निर्वाचन क्षेत्र प्रदेश के मध्य भागों में विस्तृत है।

### ३- मतदान करने वाले निम्न प्रतिशतांक (११/३) -

मतदान करने वाले के निम्न प्रतिशत क्षेत्रों के अन्तर्गत उन क्षेत्रों को सम्मिलित किया जाता है, जिन निर्वाचन क्षेत्रों में ११/३ प्रतिशत के मध्य निर्वाचन ने अपने मताधिकार का प्रयोग किया है। इस क्षेत्र के अन्तर्गत शाहजहाँपुर (४८.६८:), उन्नाव (११.१२:), लखनऊ (१३.०२:), रायबरेली (११.७३:), अमेठी (१२.३८:), प्रतापगढ़ (१२.१२:), इटावा (११.०४:), कानपुर (११.८३:), अकबरपुर (१४.९३:), बाँदा (१३.१९:), कौशाम्बी (१२.३८:), फूलपुर (१०.१९:), इलाहाबाद (१३.१०:), कैसरगंज (११.११:), श्रावस्ती (१४.७९:), गोण्डा (१२.६३:), डुमरियागंज (१३.०९:), सन्त रबिदासनगर (१३.१३:), महाराजगंज (११.१४:), गोरखपुर (१४.६३:), देवरियाँ (१३.७८:), बाँसगाँव (४९.८८:), लालगंज (१४.०९:), धोसी (१४.१८:), सलेमपुर (११.४४:), बलिया (१३.२९:), जौनपुर (१४.४८:), मछलीशहर (१२.७९:), गाजीपुर (१४.७७:), भदोही (१३.१२:), राबर्ट्सगंज (४८.९९:), आदि निर्वाचन क्षेत्र सम्मिलित है। इस निर्वाचन क्षेत्र (निम्न) में ३१ लोकसभा क्षेत्र सम्मिलित है। ये क्षेत्र पूर्वी क्षेत्र पर विस्तृत है।

### निष्कर्ष एवं सुझाव -

“मेरे पास शक्ति है।” मतदान करने के मौलिक अधिकार की शक्ति के महत्व की अनुभूति यह मतदाताओं की जिन्दगी और राष्ट्र में बदलाव ला सकती है। मतदान केवल एक विषय या अधिकार या कर्तव्य नहीं है बल्कि “किसी एक व्यक्ति की शक्ति को प्रयोग में लाना है।” मतदाता शिक्षा एक सतत् प्रक्रिया है जो निर्वाचन चक्र के सभी चरणों में इसकी महत्वपूर्ण भूमिका प्रदान करती है। भारत निर्वाचन आयोग समावेशी, जागरूकता और नैतिक सहभागिता के लिए मतदाताओं के लिए निम्न सुझाव है-

१. निर्वाचकीय लोकतन्त्र में जागरूकता एवं नैतिक सहभागिता का समर्थन करना।
२. शैक्षिक संस्थानों के औपचारिक क्षेत्र के बाहर लोगों को निर्वाचकीय साक्षरता प्रदान करना।
३. मतदाताओं के व्यवहारों, का अवलोकन करना।
४. मतदाता शिक्षा से सम्बन्धित चुनौतियों और उनसे निपटने के तरीकों को खोजना/तलाशना।
५. मतदाताओं में समावेशी जागरूकता, नैतिक निर्वाचन, सहभागिता को बढ़ावा देने की दिशा में निर्वाचन प्रबन्ध निकायों (मण्डल) की सर्वश्रेष्ठ पद्धतियों का अध्ययन करना।

६. शैक्षिक संस्थानों में पाठ्यचर्या एवं पाठ्येन्तर क्रिया-कलापों के माध्यम से निर्वाचकीय साक्षरता प्रदान करने के लिए तौर-तरीके तलाशना।

### **सन्दर्भ ग्रन्थ सूची**

- 1- Tiwari, R.C. 2016 : Geography of India, Bavalika Publications, Allahabad, 776, pp.\
- 2- Rai, R.K. (2011) Presidential Address : The Indian Disaster, Scenario and Its Mitigation, Annals of the NAAGI, 13(1), pp.
- 3- Krishan, G. (2012) In the quest of question for Geographical Reasarch (Key Note Adress at the 33rd Conference of Institute of Indian Geographers, Agrtala).
- 4- Dikshit, R.K. (2009) : Tending the Plante Earth : The Key to Human Survival, Presidential Address Annals of the NAGI, 29(1), pp.
- 5- Sharma, H.S. (2008) Repositioning, Geographycal Reasarch Envairment Devlopment and Austinability Prssidental Address-Annals of the NAGI.
- 6- Singh .J. (2004) Indian Geography - Vision, 2020, Annas of the NAAGI, 24(1)m oo.
- 7- Leary Zina (2010) Essential Guide to Doing Your Research Project, New Delhi.
- 8- Government of India, Planning Commission 2007 k: Groups Water Management and Ownership Report of the Expert Group, New Delhi.
9. मूर्ति अखिल २०१७ : रक्षा अध्ययन पूर्ति पब्लिकेशन दिल्ली।

## पशु संसाधन का स्थानिक वितरण प्रतिरूप : जनपद हरदोई का भौगोलिक वितरण डॉ० संजय कुमार सिंह निशात फातिमा

### प्रस्तावना -

संसाधन व स्रोत है जिसके द्वारा मानव की आवश्यकताओं की आंशिक या पूर्ण रूप से पूर्ति होती है। संसाधन एक जीवित वातावरण के समान है जो मानवीय प्रयासों के फलस्वरूप सृजित एवं परिष्कृत होता रहता है। समस्त जैव-अजैव तत्व, जिन्हें मानव अपनी बुद्धि, श्रम, तकनीकी-कौशल, प्रयोगों एवं अनुभवों द्वारा अपनी आवश्यकता के अनुरूप संशोधन, परिवर्धन तथा परिष्कृत कर वह अधिक उपयोगी बनाकर उसके गुण अभिमूल्यन में वृद्धि करता है, संसाधन है अर्थात् कोई भी वस्तु मानव की आवश्यकता की पूर्ति के लिए प्रयोग में आने पर संसाधन बन जाती है। शान्तिकाल में युक्तिसंगत व्यवहार से इनका विकास एवं विस्तार तथा युद्ध एवं संघर्ष काल में इनका विनाश एवं ह्रास होता है। संसाधन मानवीयकृत होता है।

मनुष्य समस्त भौतिक अन्वोन्यक्रियाओं का केन्द्र बिन्दु है तथा उसका कल्याण पूर्ण पारिस्थितिकी की यथोचित अन्वोन्याश्रमण में ही निहित है। संसाधन गत्यात्मकता का मूल स्रोत मानव अनुभूति है, जो उसकी संस्कृति के रूप में प्रकट होती है। संस्कृति स्वतः ही मनुष्य के लिए सर्वाधिक महत्वपूर्ण संसाधन अर्थात् किसी प्रदेश का संसाधन आधार उस प्रदेश के सांस्कृतिक प्रतिरूप का प्रतिफल होता है। विभिन्न सांस्कृतिक, सामाजिक, राजनीतिक, प्राविधिक एवं आर्थिक नियोजन में मानवीय तत्व ही संसाधनों के शोषण एवं विकास सम्बन्धी तरीयता को निर्धारित करते हैं।

### अध्ययन क्षेत्र -

भौगोलिक मानचित्र के पटल पर जनपद हरदोई का भौगोलिक विस्तार २६°५३' उत्तरी अक्षांश से २७°४३' उत्तर अक्षांश के मध्य एवं ७९°४९' मिनट पूर्वी देशान्तर से ८०°४६' मिनट पूर्वी देशान्तर तक है। यह जनपद उत्तर में शाहजहाँपुर, खीरी लखीमपुर, दक्षिण में उन्नाव, लखनऊ और पश्चिम में कानपुर, फर्रुखाबाद, पूरब में सीतापुर जनपद की सीमाओं से परिसीमित है।

### शोध विधि तंत्र एवं आंकड़ा संग्रह -

आंकड़ों का संग्रह प्राथमिक एवं द्वितीयक आंकड़ों के संग्रह से लिया गया है। शोध संकल्पना, उद्देश्य अन्य प्रश्नों का क्रमबद्ध, व्यवहृत उपयुक्त हल, व्याख्या, विश्लेषण हेतु आंकड़ा संग्रह निर्वचन, वर्गीकरण, परीक्षण, मूल्यांकन, मानचित्र आलेख आदि के माध्यम से परीक्षण करने का प्रयास किया गया है। भूमि उपयोग, कृषि सम्बन्धी आंकड़े राजस्व विभाग के तहसील, जिलामण्डल मुख्यालय एवं कार्यालय द्वारा प्रकाशित एवं अप्रकाशित अभिलेखों द्वारा एकत्र किए जाते हैं।

### शोध का उद्देश्य -

किसी भी शोध कार्य को पूर्ण करने के लिए उसके उद्देश्यों का निर्धारण करना अति आवश्यक है। प्रत्येक मानवीय कार्य के मूल्य में कोई उद्देश्य अवश्य निहित होता है। सभी शोध कार्यों का मूल उद्देश्य ज्ञान में वृद्धि करना अथवा नवीन जानकारी उपलब्ध करना है।

प्रस्तुत शोध अध्ययन जनपद हरदोई में संसाधनों के मूल्यांकन में सुझाव देना है। संसाधनों की समस्या के प्रति जनमानस काफी जागरूक हुए हैं, परन्तु अभी भी अनेक तत्व संसाधनों के गुणात्मक विकास में बाधक है। आज के इस वैज्ञानिक युग में नए प्रयोगों से गंभीर प्रयास करने होंगे, जिनके माध्यम से हम संसाधनों का गहन अध्ययन एवं विश्लेषण कर सकेंगे। संसाधन उपयोग का उद्देश्य निम्नलिखित हैं-

- ❖ अध्ययन क्षेत्र की समस्याओं की पहचान करना एवं समाधान ढूँढना है।
- ❖ नियोजकों के विचारों को दृष्टिगत रखते हुए वर्तमान विकास कार्यक्रमों के प्रभाव की समीक्षा करना।
- ❖ अध्ययन क्षेत्र में आर्थिक विकास सम्बन्धी संभावनाओं का आकलन किया जाना।

- ❖ प्राकृतिक संसाधनों की खोज एवं वितेकपूर्ण उपयोग को प्रभावी बनाने का प्रयास करना।
- ❖ अध्ययन क्षेत्र में संसाधन आधारित आर्थिक क्रियाकलापों एवं सामाजिक सुविधाओं का मूल्यांकन करना।
- ❖ आर्थिक विकास अनुकूलता हेतु सुझाव प्रस्तुत करना।
- ❖ लोगों के जीवन स्तर में सुधार हेतु उपयुक्त संभावनाओं को तलाशना।

#### **संसाधन उपयोग की व्याख्या -**

किसी भी देश के विकास में संसाधन एक महत्वपूर्ण स्रोत है, जिसके द्वारा आर्थिक, सामाजिक, राजनीतिक विकास संभव है। मनुष्य अपने सामाजिक संगठनात्मक परिवेश में अपने लिए भोजन संग्रह, वस्त्र की खोज एवं आवास निर्माण की प्रारम्भिक अवस्था से आधुनिक योजनाओं तक क्रियाशील बना रहा है। बहुआयामी विकास हेतु निरन्तर अनेक योजनाओं का क्रियान्वयन किया जा रहा है, जिससे प्रत्येक मनुष्य तक आवश्यकताएं पहुँच सके।

जिम्मरमैन के अनुसार, कोई वस्तु या पदार्थ है तभी संसाधन कहलायेगा, जब उसका उपयोग मनुष्य की किसी आवश्यकता की पूर्ति के लिए किया जा सके। अतः मनुष्य के लिए उपयोगिता ही संसाधन की सर्वप्रथम विशेषता है। "संसाधन कोई वस्तु या पदार्थ नहीं है, बल्कि जिसे कोई वस्तु या पदार्थ मानवीय आवश्यकता की पूर्ति के लिए कर सकता है।"

बैटन मेकाय का विचार था कि प्रत्येक सुविचारित कार्यवाही का शुभारम्भ सर्वप्रथम मानव मस्तिष्क में ही होता है, क्योंकि मस्तिष्क ही सभी विचारों का उपज क्षेत्र है।

अध्ययन क्षेत्र में समन्वित विकास कार्यक्रम, पंचायती राज व्यवस्था, परिवहन, जमींदारी उन्मूलन, कृषि एवं उद्योग बहुउद्देशीय परियोजनाएं, क्षेत्रीय विषमता को दूर करने के उपाय, चकबन्दी बन्दोबस्त, भूमि सुधार, विशिष्ट आर्थिक प्रखण्ड (म्स) नवाचार उपयोग के द्वारा परिवर्तन एवं प्रसार हुआ है।

#### **जनपद में संसाधन उपयोग -**

संसाधनों का उपयोग मानव आदिकाल से करता आ रहा है। आदिमानव अपने समीपवर्ती क्षेत्रों से अन्य पशुओं की भांति अपनी प्राथमिक आवश्यकताओं की पूर्ति करता था। तत्कालीन मानव वातावरण के तटस्थ तत्वों का भी उपयोग करने में अक्षम था, क्योंकि उसका ज्ञान सीमित तथा प्राविधिक क्षमता भी अल्पविकसित थी। अपनी प्राविधिक एवं बौद्धिक क्षमता को विकसित करके मानव ने वातावरण के तटस्थ तत्वों तथा प्रतिरोधक शक्तियों जो उसकी प्रगति में बाधक रही हैं, से संघर्ष प्रारम्भ किया, जिसके फलस्वरूप संसाधनों के अन्तर्गत अनेक पदार्थ सम्मिलित होने लगे। इस प्रकार मानव प्रकृति के साथ सक्रिय समन्वय स्थापित करने लगा।

संसाधन मुख्यतः दो भागों में बांटा जाता है- १. अजैविक संसाधन, २. जैविक संसाधन। जिम्मरमैन संसाधनों को चार उपवर्गों में विभक्त किया गया है -

1. सर्व सुलभ संसाधन
2. सामान्य सुलभ संसाधन
3. विरल संसाधन
4. अद्वितीय या अनन्य संसाधन।

जाबलर के अनुसार, उपयोग की प्रारम्भिक अवस्था में संसाधन सापेक्षिक एवं वास्तविक दोनों ही दृष्टि से कम थे। उन्होंने संसाधन उपयोग की आवश्यकता को चार वर्गों में रखा है।

#### **१- प्रारम्भिक न्यूनता की अवस्था -**

प्रारम्भिक न्यूनता की अवस्था में मानव ज्ञान अत्यन्त सीमित था, जिसके कारण उसने संसाधन का न्यून उपयोग किया।

#### **२- बाहुल्य की अवस्था -**

औद्योगिक एवं प्राविधिक क्रांति के परिणामस्वरूप अनेक नए संसाधनों का विकास हुआ। १९वीं शताब्दी के उत्तरार्द्ध से सन १९५० तक यह अवस्था रही। इस अवधि में मानव ने अत्यधिक संसाधनों का प्रयोग किया।



### 3- परिवर्तन बाहुल्य की अवस्था -

सन् १९५० के पश्चात संसाधनों की अत्यधिक उपयोग के कारण संसाधनों में सापेक्षित कमी आ गई। इस काल में कम गुण वाले पदार्थों का भी उपयोग होने लगा। यह समय प्राकृतिक संसाधनों को भविष्य की दृष्टि से अल्पता की ओर अंकित करता है।

### ४- भावी न्यूनता की अवस्था -

संसाधनों का भविष्य वर्तमान संसाधनों के प्रयोग पर निर्भर करेगा। यदि संसाधनों का प्रयोग उचित ढंग से न किया जाए तो संसाधन न्यूनता की स्थिति उत्पन्न हो जाएगी। इस अवस्था में संसाधनों के प्रयोग को उचित ढंग से करने की आवश्यकता है।

संसाधनों के प्रयोग में दुरुपयोग, कम उपयोग, अनुकूलतम उपयोग एवं संघृत उपयोग आदि शब्दावली का प्रयोग किया जाता है। आवश्यकता से अधिक या कम प्रयोग भी दुरुपयोग के समान है। अनेक जैविक एवं अजैविक संसाधनों की संसाधनता अल्प उपयोग के कारण अवरुद्ध होती जा रही है, जबकि क्षेत्र विशेष में विद्यमान संसाधनों का अनुकूलतम उपयोग देशकाल एवं परिस्थिति के अनुसार इस प्रकार किया जाता है, जिससे उस देश की जनसंख्या जीवन स्तर प्रविधि एवं औद्योगिक उन्नति होती रहे तथा संसाधनों की उत्पादन क्षमता के अनुसार मांग बढ़ती रहे।

वर्तमान समय में संसाधनों का संतुलित उपयोग अत्यन्त महत्व का है। संघृत उपयोग के अन्तर्गत उत्पादन एवं उपयोग की क्रियाओं में काल प्रभानुसार विकसित ज्ञान एवं प्राविधिक दक्षता का उपयोग किया जाता है, जिससे कम से कम अपशिष्टीकरण हो तथा संसाधनों के उपयोग के लिए सातव्य बना रहे, इसके लिए केवल आर्थिक लाभ को नहीं देखना चाहिए अपितु पारिस्थितिकी संतुलन का ध्यान भी परम आवश्यक हो जाता है, जिससे कोई संसाधन संकट उत्पन्न न हो और उनके उपयोग से पारिस्थितिकी संतुलन बना रहे।

### पशु संसाधन का स्थानिक वितरण प्रतिरूप -

जनपद हरदोई एक कृषि प्रधान क्षेत्र है, जहां पशु एक महत्वपूर्ण संसाधन है। यहां ग्रामीण अर्थव्यवस्था में पशुओं की महत्वपूर्ण भूमिका है। पशु संसाधन से विभिन्न प्रकार की खाद्य वस्तुएं तो प्राप्त होती हैं, साथ ही इनका उपयोग कृषि कार्यों, बोझा ढोने व यातायात के साधनों के रूप में किया है।

सारणी-१ जनपद के पशुधन की संख्या (प्रतिशत में)

क्र० सं०	विकासखण्ड	गोजातीय	महिष जातीय	भेड़	कुल बकरा बकरी	कुल घोड़े एवं टट्टू	कुल सुअर	कुल कुक्कुट
	भरखनी	२५.८०	४४.९२	०.९२	२६.८५	०.१९	१.२१	१५.१४
	शाहाबाद	३५.००	३६.०७	१.३३	२५.१८	०.१८	२.११	१६.९४
	टोडरपुर	३४.४८	३७.१७	१.२२	२४.८३	०.२६	१.८९	१६.८५
	पिहानी	३३.५५	३९.८९	०.६४	२३.५३	०.२३	२.०१	१४.७२
	बावन	३०.८१	४२.७७	१.०६	२३.४७	०.३१	१.४५	१४.८९
	हरियावाँ	३१.२६	३९.२०	१.२२	२५.५५	०.३३	२.३४	१७.६७
	टडियावाँ	३०.९६	४२.१७	१.४५	२४.१८	०.१६	०.९८	१६.३१
	सुरसा	३८.५३	३३.४९	१.१५	२५.६०	०.२८	२.०१	१३.७३
	अहिरौरी	२७.०३	४८.२४	१.०७	२१.६३	०.१५	१.७७	१८.११
	हरपालपुर	२४.८४	५०.२५	१.९१	२०.८९	०.२६	१.७६	१३.४६
	सौडी	२५.६६	४४.१७	१.४५	२६.१३	०.२८	२.१८	१५.८६
	बिलग्राम	३१.६५	३८.५९	१.२४	२६.१३	०.३६	१.९३	१४.९६
	माधोगंज	३४.९२	३७.५८	१.४६	२३.७५	०.२५	१८.७७	१५.२७
	मल्लावाँ	२६.६१	४२.४७	१.३६	२७.७३	०.१८	१.५०	१७.८७

कोथावाँ	३८.६३	३७.३०	१.७४	२२.३१	०.१९	१.७७	१६.२८
कछौना	४०.०१	३६.२७	१.६१	१९.७४	०.२७	२.०१	१७.२७
बेहन्दर	३६.३६	३७.६७	२.३०	२३.०३	०.२१	२.३२	१६.७७
संडीला	४०.८१	३७.९४	१.६१	१८.११	०.४९	२.९८	१४.६७
भरावन	३७.६८	३३.७४	१.६७	२३.८९	०.३७	२.६२	१६.१०
योग ग्रामीण	३२.८८	३९.६८	१.४०	२३.६७	२३.६७	१.९४	१७.७७
योग नगरीय	३७.६६	४९.१९	०.४४	१२.६२	०.३६	१.६७	८.२७
योग जनपद	३३.१६	४०.६७	१.३०	२२.७८	०.२७	१.९१	१७.०३

### (अ) गोजातीय -

गोजातीय का महत्व अन्य पशुओं की भांति सर्वाधिक है। गोजातीय को विकासखण्डवार विश्लेषित करने के लिए वर्ष २०१२ के आंकड़ों का प्रयोग किया गया है जनपद के कुल पशुओं में गोजातीय ३३.१६: है। जनपद के १९ विकासखण्डवार स्थानिक वितरण प्रतिरूप को स्पष्ट करने के लिए तीन वर्गों में रखा गया है।

#### १- उच्च गोजातीय क्षेत्र (३७: से ढ) -

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग में रखा गया है, जहां पर गोजातीय वंश की संख्या ३७: से अधिक है। इस वर्ग के अन्तर्गत सुरसा (३८.७३:), कोथावाँ (३८.६३:), कछौना (४०.०१:), बेहन्दर (३६.३६:), संडीला (४०.८१:) एवं भरावन (३७.६८:), आदि सम्मिलित है।

#### २- मध्यम गोजातीय क्षेत्र (३०.००: से ३७.००:) तक -

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग में रखा गया है जहां पर गोजातीय वंश की संख्या ३०.००: से अधिक है। इस वर्ग में अन्तर्गत शाहाबाद (३७.००:), टोडरपुर (३४.४८:), पिहानी (३३.७७:), बावन (३०.८१:), हरियावाँ (३१.२६:), टडियावाँ (३०.९६:), बिलग्राम (३१.६७:), माधोगंज (३४.९२:), विकासखण्ड आते हैं।

#### ३- निम्न गोजातीय क्षेत्र (२४.००: से ३०.००:) तक -

प्रस्तुत शोध पत्र में जनपद हरदोई के पूर्ण विकासखण्डों को इस वर्ग के अन्तर्गत रखा गया है, जहां गोजातीय वंश का प्रतिशत (२४.००:) से अधिक है, जिसके अन्तर्गत भरखनी (२७.८०:), अहियेरी (२७.०३:), हरपालपुर (२४.८४:), सॉडी (२७.६६:), मल्लावाँ (२६.६१:) आदि विकासखण्ड सम्मिलित है।

### (ब) महिषजातीय -

महिषजाति के पशुओं का महत्व भी गौ जाति के समान ही है। महिषजातीय को विश्लेषण करने के लिए वर्ष २०१२ के आंकड़ों का प्रयोग किया गया है। जनपद के कुल पशुधन में महिषजातीय का प्रतिशत ४०.६७: है। जनपद के १९ विकासखण्डवार स्थानिक वितरण प्रतिरूप को स्पष्ट करने के लिए तीन वर्गों में बांटा गया है।

#### १- उच्च महिषजातीय क्षेत्र (४२.००: से ढ) -

प्रस्तुत शोध पत्र में जनपद हरदोई के पूर्ण विकासखण्डों को इस वर्ग के अन्तर्गत रखा गया है जहां पर महिषजाति का प्रतिशत ४२.००: से अधिक है। इस वर्ग के अन्तर्गत भरखनी (४४.९२:), बावन (४२.७७:), टडियावाँ (४२.१७:), अहियेरी (४८.२४:), हरपालपुर (७०.२७:), सॉडी (४४.१७:), मल्लावाँ (४२.४७:) आदि विकासखण्ड सम्मिलित है।

#### २- मध्यम महिषजातीय क्षेत्र (३७.००: से ४२.००:) तक -

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग के अन्तर्गत रखा गया है जहां पर महिषजाति का प्रतिशत ३७.००: से अधिक है। इस वर्ग के अन्तर्गत टोडरपुर (३७.१७:), पिहानी (३९.८९:), हरियावाँ (३९.२०:), बिलग्राम (३७.७९:), माधोगंज (३७.७८:), आदि विकासखण्ड सम्मिलित है।

#### ३- निम्न महिषजातीय क्षेत्र (३३.००: से ३७.००:) तक -

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग के अन्तर्गत रखा गया जहां पर महिषजाति का प्रतिशत 33.00: से अधिक है। इस वर्ग के अन्तर्गत शाहाबाद (36.09:), सुरसा (33.89:), कोथावां (39.30:), कछौना (36.29:), बेहन्दर (39.69:), संडीला (39.98:), भरावन (33.98:) आदि विकासखण्ड सम्मिलित है।

**(स) भेड़ -**

भेड़ एक पालतू पशु है, जिसका पालन मनुष्य बहुत समय से करता आया है। भेड़ का पालन ऊन, दूध और मांस के लिए किया जाता है। भेड़ को विश्लेषित करने के लिए वर्ष 2012 के आंकड़ों का प्रयोग किया जाता है। जनपद के कुल पशुधन में भेड़ों का प्रतिशत 1.30: है। जनपद के 19 विकासखण्डवार स्थानिक वितरण प्रतिरूप को स्पष्ट करने के लिए तीन भागों में बांटा गया है।

**1- उच्च भेड़ों का क्षेत्र (1.60: से ढ) -**

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को किस वर्ग के अन्तर्गत रखा गया है, जहां पर भेड़ों का प्रतिशत 1.60: से अधिक है। इस वर्ग के अन्तर्गत हरपालपुर (1.91:), कोथावां (1.98:), कछौना (1.61:), बेहन्दर (2.30:), संडीला (1.61:) तथा भरावन (1.69:) आदि विकासखण्ड सम्मिलित है।

**2- मध्यम भेड़ों का क्षेत्र (1.20: से 1.60:) तक -**

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग के अन्तर्गत रखा गया है जहां पर भेड़ों का प्रतिशत 1.20: से अधिक है। इस वर्ग के अन्तर्गत शाहाबाद (1.33:), टोडरपुर (1.22:), हरियावाँ (1.22:), टडियावाँ (1.89:), सौंडी (1.89:), बिलग्राम (1.28:), माधोगंज (1.86:), मल्लावाँ (1.36:) आदि विकासखण्ड सम्मिलित है।

**3- निम्न भेड़ों का क्षेत्र (0.92: से 1.20:) तक -**

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग के अन्तर्गत रखा गया है जहां पर भेड़ों का प्रतिशत 0.92: से अधिक है। इस वर्ग के अन्तर्गत भरखनी (0.92:), पिहानी (0.68:), बावन (1.06:), सुरसा (1.19:), अहियेरी (1.09:) आदि विकासखण्ड सम्मिलित है।

**(द) कुल बकरी बकरी -**

कुल बकरी बकरी को विकासखण्डवार विश्लेषण करने के लिए वर्ष 2012 के आंकड़ों का प्रयोग किया गया है। जनपद के कुल पशुओं में कुल बकरी बकरी का प्रतिशत 22.96: है। जनपद के 19 विकासखण्ड वार स्थानिक वितरण प्रतिरूप को स्पष्ट करने के लिए तीन वर्गों में रखा गया है।

**1- उच्च बकरी बकरी क्षेत्र (28.00: से ढ) -**

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग में रखा गया है जहां पर बकरी बकरी का प्रतिशत 28.00 प्रतिशत से अधिक है। इस वर्ग के अन्तर्गत भरखनी (26.69:), शाहाबाद (29.16:), टोडरपुर (28.63:), हरियावाँ (29.99:), टडियावाँ (28.16:), सुरसा (29.60:), सौंडी (26.13:), बिलग्राम (26.13:), मल्लावाँ (29.93:) आदि विकासखण्ड सम्मिलित है।

**2- मध्यम बकरी बकरी क्षेत्र (21.00: से 28.00:) तक -**

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग में रखा गया है जहां पर बकरी बकरी का प्रतिशत 21.00: से अधिक है। इस वर्ग के अन्तर्गत पिहानी (23.93:), बावन (23.89:), अहियेरी (21.63:), माधोगंज (23.99:), कोथावां (22.31:), बेहन्दर (23.03:), तथा भरावन (23.69:), आदि विकासखण्ड सम्मिलित है।

**3- निम्न बकरी बकरी का क्षेत्र (16.00: से 21.00:) तक -**

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग में रखा गया है जहां बकरी बकरी का प्रतिशत 16.00: से कम है। इसके अन्तर्गत हरपालपुर (20.69:), कछौना (19.98:) एवं (16.11:) आदि विकासखण्ड सम्मिलित है।

**(य) कुल घोड़े एवं टट्ट -**

कुल घोड़े एवं टट्ट को जनपद के विकासखण्ड तार विश्लेषण करने के लिए वर्ष २०१२ के आंकड़ों का प्रयोग किया गया है। जनपद के कुल घोड़े एवं टट्टों का प्रतिशत ०.२७: है। जनपद के १९ विकासखण्ड तार स्थानिक वितरण प्रतिरूप को स्पष्ट करने के लिए तीन वर्गों में रखा गया है।

**१- उच्च कुल घोड़े एवं टट्ट क्षेत्र (३०.००: से ढ) -**

प्रस्तुत शोध पत्र में जनपद हरदोई से कौन विकासखण्डों को इस वर्ग में रखा गया है जहां पर कुल घोड़े एवं टट्ट का प्रतिशत ३०.००: से अधिक है। इस वर्ग के अन्तर्गत बावन (०.३१:), हरियावाँ (०.३३:), बिलग्राम (०.३६:), संडीला (०.४९:), तथा भरावन (०.३७:) आदि विकासखण्ड सम्मिलित है।

**२- मध्यम कुल घोड़े एवं टट्ट क्षेत्र (०.२७: से ०.३०:) तक -**

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग में रखा गया है जहां पर कुल घोड़े एवं टट्ट का प्रतिशत ०.२७: से अधिक है। इस वर्ग के अन्तर्गत टोडरपुर (०.२६:), पिहानी (०.२३:), सुरसा (०.२८:), हरपालपुर (०.२६:), सौंडी (०.२८:), माधोगंज (०.२७:), एवं कछौना (०.२७:), आदि प्रमुख विकासखण्ड है।

**३- निम्न कुल घोड़े एवं टट्ट क्षेत्र (०.१७: से ०.२७:) तक -**

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग में रखा गया है जहां पर कुल घोड़े एवं टट्ट का प्रतिशत ०.१७: से अधिक है। इस वर्ग के अन्तर्गत भरखनी (०.१९:), शाहाबाद (०.१८:), टडियावाँ (०.१६:), अहिरोरी (०.१७:), मल्लावाँ (०.१८:), कोथावाँ (०.१९:), आदि विकासखण्ड सम्मिलित है।

**(२) कुल सूअर -**

कुल सूअर को विकासखण्ड तार विश्लेषण करने के लिए वर्ष २०१२ के आंकड़ों का प्रयोग किया गया है। जनपद के कुल पशुओं में कुल सूअर का प्रतिशत १.९१: है। जनपद के १९ विकासखण्ड तार स्थानिक वितरण प्रतिरूप को स्पष्ट करने के लिए तीन वर्गों में रखा गया है।

**१- उच्च कुल सूअर क्षेत्र (२.००: से ढ) -**

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग में रखा गया है जहां पर कुल सूअर का प्रतिशत २.००: से अधिक है। इस वर्ग के अन्तर्गत शाहाबाद (२.११:), पिहानी (२.०१:), हरियावाँ (२.३४:), सुरसा (२.०१:), सौंडी (२.१८:), माधोगंज (१.८.७७:), कछौना (२.०१:), बेहन्दर (२.३२:), संडीला (२.९८:) तथा भरावन (२.६२:) आदि विकासखण्ड सम्मिलित है।

**२- मध्यम कुल सूअर क्षेत्र (१.७०: से २.००:) -**

प्रस्तुत शोध पत्र में जनपद हरदोई के पूर्ण विकासखण्डों को इस वर्ग में रखा गया है जहां पर कुल सूअर का प्रतिशत १.७०: से अधिक है। इस वर्ग के अन्तर्गत टोडरपुर (१.८९:), अहिरोरी (१.७७:), हरपालपुर (१.७६:), बिलग्राम (१.९३:), मल्लावाँ (१.७०:) तथा (१.७७:) आदि विकासखण्ड सम्मिलित है।

**३- निम्न कुल सूअर क्षेत्र (०.९८७: से १.०७:) -**

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग में रखा गया है जहां पर कुल सूअर का प्रतिशत ०.९८: से अधिक है। इसके अन्तर्गत बावन (१.४७:), टडियावाँ (०.९८:), भरखनी (१.२१:) आदि विकासखण्ड सम्मिलित है।

**कुल कुक्कुट -**

कुल कुक्कुट को विकासखण्ड तार विश्लेषण करने के लिए वर्ष २०१२ के आंकड़ों का प्रयोग किया गया है। जनपद के कुल पशुओं में कुल कुक्कुट का प्रतिशत १७.०३: है। जनपद के १९ विकासखण्ड तार स्थानिक वितरण प्रतिरूप को स्पष्ट करने के लिए तीन वर्गों में रखा गया है।

**१- उच्च कुल कुक्कुट क्षेत्र (१६.००: से ढ) -**

प्रस्तुत शोध पत्र में जनपद हरदोई के पूर्ण विकासखण्डों को इस वर्ग में रखा गया है जहां पर कुल कुक्कुट का प्रतिशत १६.००: से अधिक है। इस वर्ग के अन्तर्गत शाहाबाद (१६.९४:), टोडरपुर (१६.८९:), हरियावाँ (१७.६७:), टडियावाँ (१६.३१:), अहिरोरी (१८.११:), मल्लावाँ (१७.८७:), कोथावाँ (१६.२८:), बेहन्दर (१६.७७:), तथा भरावन (१६.१०:) मुख्य विकासखण्ड है।

### २- मध्यम कुल कुक्कुट क्षेत्र (१७.००: से १६.००:) -

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग में रखा गया है जहां पर कुल कुक्कुट का प्रतिशत १७.००: से अधिक है। इस वर्ग के अन्तर्गत भरखनी (१७.१४:), सॉडी (१७.८६:), माधोगंज (१७.२७:), कछौना (१७.२७:), आदि मुख्य विकासखण्ड आते हैं।

### ३- निम्न कुल कुक्कुट क्षेत्र (१३.००: से १७.००:) -

प्रस्तुत शोध पत्र में जनपद हरदोई के उन विकासखण्डों को इस वर्ग के अन्तर्गत रखा गया है जहां पर कुल कुक्कुट का प्रतिशत १३.००: से अधिक है। इस वर्ग के अन्तर्गत पिहानी (१४.७२:), बावन (१७.८३:), सुरसा (१३.७३:), हरपालपुर (१३.४६:), बिलग्राम (१४.९६:), तथा संडीला (१४.६७:) आदि प्रमुख विकासखण्ड सम्मिलित है।

### शोध निष्कर्ष -

जनपद हरदोई में पशु संसाधन का विकास अत्यन्त मंद गति से हुआ है। यहां पशुधन का विकास अत्यन्त दयनीय स्थिति में है।

जनपद हरदोई में पशु संसाधनों में गोजातीय (३३.१६:), महिषजाति (४०.६७:), भेड़ (१.३०:), कुल बकरी बकरी (२२.७८:), कुल घोड़े एवं टट्ट (०.२७:), कुल सूअर (१.९१:), कुल कुक्कुट (१७.०३:) पाए जाते हैं।

यहां पशु संसाधन प्रतिशत को देखने से स्पष्ट है कि पशुधन का विकास किया जाना अत्यन्त आवश्यक है। जनपद में महिषजातीय की स्थिति ही सामान्य दशा में है, जबकि कुल घोड़े एवं टट्ट की स्थिति अत्यन्त दयनीय दशा में है, जिसका सुधार किया जाना अत्यन्त आवश्यक है।

### सरकारी योजनाएं पशुधन विकास से सम्बन्धित -

पशुओं के विकास के लिए सरकार द्वारा कुछ योजनाएं निर्धारित की गई हैं जो निम्न प्रकार से हैं।

1. राष्ट्रीय गोकुल मिशन
2. गोकुल ग्राम
3. राष्ट्रीय कामधेनु प्रजनन केंद्र
4. ई पशु हाट नकुल प्रजनन बाजार
5. पशु संजीवनी
6. उन्नत प्रजनन प्रौद्योगिकी
7. स्वदेशी नस्लों के लिए बोवाइन जिनेमिक केंद्र

पशुधन के साथ हम सदियों से रहते आ रहे हैं। पशु व उनके उत्पाद हमारी दिनचर्या व भोजन के महत्वपूर्ण अंग हैं। पशु हमारे लिए बहुत उपयोगी हैं। अतः उनके जीवन एवं पालन पोषण तथा संरक्षण व संवर्धन के बारे में समुचित जानकारी प्राप्त करके हम अपना जीवन स्तर सुधार सकते हैं। पशुओं से दुग्ध उत्पाद की प्राप्ति होती है। यातायात और परिवहन कृषि कार्य चमड़ा उनादी अवयवों की प्राप्ति के साथ मनोरंजन व राष्ट्र रक्षा के लिए पशु पालन किया जाता है।

कृषि प्रधान देश होने के कारण भारत वर्ष में पशुधन की ऊर्जा का पूर्ण रूप से उपयोग किया जाता था परन्तु आजकल कृषि कार्य अधिकतर स्थानों पर मशीनी उपकरणों से किया जा रहा है। इन उपकरणों पेट्रोल डीजल इत्यादि प्राकृतिक ईंधन का प्रयोग होता है जिस प्रकार इन दिनों का अन्धाधुन्ध प्रयोग हो रहा है जिसके कारण यह ईंधन समाप्ति के कगार पर है। अतः आज इस बात की आवश्यकता है कि कृषि कार्य में पशुधन की ऊर्जा एवं गौ में तथा गोमूत्र आदि पदार्थों का वैज्ञानिक तरीके से संरक्षण एवं संवर्धन करके कम्पोस्ट खाद के रूप में परिवर्तित करके प्रयोग में

लाया जाए। यातायात एवं भार परिवहन में सहायक पशुधन की ऊर्जा शक्ति अधिकाधिक प्रयोग किया जाए इससे पशुपालन कर्म को बढ़ावा मिलेगा। बायोगैस संयंत्र में यदि पशुधन के गोबर एवं मूत्र का प्रयोग किया जाए तो ईंधन का एक स्वच्छ एवं धुआं रहित संसाधन प्राप्त किया जा सकता है।

आधुनिक वैज्ञानिक शोधों से यह बात स्पष्ट है कि पर्यावरण में शुद्धता बनाए रखने में सहायक है। अतः आज इस बात की आवश्यकता है कि पशुधन के सामाजिक आर्थिक धार्मिक एवं शारीरिक आरोग्यता सम्बन्धी विभिन्न पक्षों को ध्यान में रखकर पशुपालन कर्म को बढ़ावा देकर पशुधन के संरक्षण एवं संवर्धन में प्रत्येक जन प्रयत्नशील बने।

## References

1. Hunker H.J. (ed.), Zimmerman's Introduction to World Resources, Harper & Row Publishers, New York, 1964.
2. Karan, M.P (1995), "Resource Geography" Kitab Ghar, P. 19.
3. Weaver, J.C. (1959), "Conservation More Ethics than Economies" Economic Geography, Vol. 35, P. 22.
4. Pinchot, G. (1910), "The Fight for conservation," Formers, Bull. 327, US Deptte of Agriculture, Washington.
5. Marsh, G.P. (1864), "The Earth as Modified by Human Action", New York.
6. Kayastha, S.L.& Rambabu, Regional Development, Through Special Planning: a Micrco level case study from India, Journal of Regional Science. Vol. 13.
7. Khan. M.A. (2005), Krishi Evam Paryavaran, ABH Publishing co. New Delhi.
8. Kulinski, A. (ed) (1977), Growth Poles and Growth Centres in Regional Planning mouton.
9. Agrawala, R.R.(1968), Soil Fertility in India Asia Publishing House, New Delhi.
10. Agrawala, A.N. & Lal, Economic planning: Principles Technique and practice, Vikas Publishing House, PVT, Ltd, New Delhi.
11. Akhtar R. (1978), Spatial Distribution & Growth of Health facilities in Rajasthan, Geographical Review of India, Vol-40, No. 3.
12. Chand M.& V.K. puri (1983), Regional planning in India. Allied Publisher Pvt, Ltd. New Delhi.
13. Darnel. Y.B. (1955), Impact of Industrialization roal Eation, on rusal Society UNESCO Mouten, Paris.
14. Dube, B & Singh Mangla (1985), Samanvit Gramin vikas' Jeeuandhara Prakashan Varanasi'.
15. सिंह, जगदीश संसाधन भूगोल, ज्ञानोदय प्रकाशन, गोरखपुर, २०००.
16. सिंह, जगदीश एवं सिंह, काशीनाथ आर्थिक भूगोल के मूल तत्व, ज्ञानोदय प्रकाशन, गोरखपुर, २००६.
17. श्रीवास्तव, हरिओम विपणन भूगोल, एसोसिएशन ऑफ मार्केटिंग ज्योग्राफर्स ऑफ इण्डिया, गोरखपुर १९९९.

## जनपद गोण्डा में न्यूनतम समर्थन मूल्य का गेहूँ और जौ फसल के उत्पादन क्षेत्र पर प्रभाव का एक भौगोलिक अध्ययन

अखण्ड प्रताप पाल एवं डॉ (श्रीमती) पुष्पा सिंह

राजा हरपाल सिंह पी जी कालेज सिंगरामऊ जौनपुर

संबद्ध वी बी एस पूर्वांचल यूनिवर्सिटी जौनपुर

\* email- akhand30@gmail.com

जनपद गोण्डा में न्यूनतम समर्थन मूल्य के प्रभावों का भौगोलिक अध्ययन किया गया। अध्ययन में न्यूनतम समर्थन मूल्य तथा रबी फसल के उत्पादन क्षेत्र का सापेक्षिक अध्ययन किया गया। इस अध्ययन में द्वितीयक आंकड़ों का प्रयोग किया गया। ये द्वितीयक आंकड़े वर्ष 2005-06 से वर्ष 2014-15 के हैं। न्यूनतम समर्थन मूल्य का निर्धारण सरकार द्वारा सीएसीपी की अनुशंसा के आधार पर किया जाता है। न्यूनतम समर्थन मूल्य एक ऐसी राशि होती है जिसपर सरकार निर्धारित फसल को खरीदने के लिए तैयार रहती है। न्यूनतम समर्थन मूल्य का निर्धारण फसल बुवाई के पहले किया जाता है। किसान न्यूनतम समर्थन मूल्य के आधार पर जिस फसल के उत्पादन में उन्हें अत्यधिक लाभ दिखता है किसान उन्ही फसलों को उगाते हैं। भारत के अधिकांश किसान अशिक्षित हैं उन्हें न्यूनतम समर्थन मूल्य की जानकारी नहीं हो पाती इसलिए वे मनमानी तरीके से या पारंपरिक तरीके फसलों का उत्पादन करते हैं। फसलों के उत्पादन में सिंचाई, श्रम, उर्वरक, जलवायु, किसान का तकनीकी ज्ञान, किसान का प्रशिक्षण आदि की भी आवश्यकता पड़ती है, किसान इनको भी ध्यान में रख कर फसल उत्पादन करते हैं।

प्रस्तावना — न्यूनतम समर्थन मूल्य वह मूल्य होता है जिसपर सरकार किसानों द्वारा बेचे जाने वाले उपज की संपूर्ण मात्रा को क्रय करने के लिए तैयार रहती है। सरकार द्वारा जब बाजार में न्यूनतम समर्थन मूल्य के अंतर्गत आने वाली फसलों का मूल्य गिर रहा होता है तब सरकार न्यूनतम समर्थन मूल्य पर कृषि उत्पाद को खरीद कर किसानों के हितों को रक्षा करती है। न्यूनतम समर्थन मूल्य की घोषणा सरकार द्वारा वर्ष में दो बार (एक बार रबी फसल की बुवाई के पहले तथा दूसरी बार खरीफ फसल बुवाई के पहले) की जाती है। रबी खरीफ और जायद की फसलों को मिलाकर कुल 24 फसलों के लिए न्यूनतम समर्थन मूल्य की घोषणा की जाती है। जिसमें रबी फसल के अंतर्गत 8 फसलों (गेहूँ, जौ, चना, मसूर, रेपसीड, सरसो, कुसुंभ, तोरिया) के न्यूनतम समर्थन मूल्य की घोषणा की जाती है। एफएमसी मंडिया न्यूनतम समर्थन मूल्य के आधार पर किसानों से उनकी उपज को खरीदती है। एफएमसी आधारित खरीद प्रणाली किसानों को बिचौलियों से सुरक्षा प्रदान करती है। न्यूनतम समर्थन मूल्य को ध्यान में रख कर किसान कई बार किसी फसल के उत्पादन क्षेत्र को बढ़ा देता है तथा अन्य के उत्पादन क्षेत्र को कम कर देता है। इससे विभिन्न फसलों के उत्पादन क्षेत्र में न्यूनतम समर्थन मूल्य के आधार पर उतार चढ़ाव आता रहा है। फसलों के उत्पादन में न्यूनतम समर्थन मूल्य के अलावा किसान की इच्छाशक्ती, सिंचाई की उपलब्धता, मृदा की उत्पादन क्षमता, उर्वरक की उपलब्धता आदि की भी महत्वपूर्ण भूमिका होती है, इन सबका सम्मिलित प्रभाव फसल उत्पादन पर पड़ता है। जनपद गोण्डा में रबी फसल की बुवाई अक्टूबर-नवंबर महीने में होती है। रबी फसल के न्यूनतम समर्थन मूल्य के अंतर्गत जनपद गोण्डा में गेहूँ, जौ, चना, मसूर, रेपसीड की खेती की जाती है।

उद्देश्य — 1— न्यूनतम समर्थन मूल्य तथा गेहूँ और जौ के उत्पादन क्षेत्र के मध्य सहसम्बन्धों का अध्ययन करना।

2— न्यूनतम समर्थन मूल्य के प्रति किसानों के भौगोलिक उत्पादन व्यवहार का मूल्यांकन करना।

3 — न्यूनतम समर्थन मूल्य का जनपद गोण्डा के विभिन्न भौगोलिक क्षेत्र पर पड़ने वाले प्रभावों का परीक्षण करना।

आंकड़ा स्रोत एवं विधि तंत्र — जनपद गोण्डा में न्यूनतम समर्थन मूल्य तथा उत्पादन क्षेत्र के मध्य सम्बन्धों के अध्ययन के लिए द्वितीयक आंकड़ों का प्रयोग किया गया है। द्वितीयक आंकड़े वर्ष 2005-06 से वर्ष 2014-15 के हैं। न्यूनतम समर्थन मूल्य से संबंधित आंकड़ों का संग्रह भारत सरकार के कृषि एवं किसान मंत्रालय के कृषि सहकारिता और

किसान कल्याण विभाग द्वारा जारी किए गए आंकड़ों से किया गया है। उत्पादन क्षेत्र से संबंधित आंकड़ों (वर्ष 2005-06 से वर्ष 2014-15) का संग्रह जिला सांख्यिकीय पत्रिका जिला गोण्डा के आंकड़ों से किया गया है। न्यूनतम समर्थन मूल्य तथा उत्पादन क्षेत्र के मध्य सम्बन्धों के निर्धारण में सांख्यिकीय निरूपण विधि का प्रयोग किया गया है। न्यूनतम समर्थन मूल्य तथा उत्पादन क्षेत्र और उत्पादकता के मध्य सापेक्षिक अध्ययन हेतु आरेखों एवं मानचित्रों का प्रयोग किया गया है। आंकड़ों की गणना में माध्य, माध्यिका एवं बहुलक का प्रयोग किया गया है।

**अध्ययन क्षेत्र** — जनपद गोण्डा भारत देश के उत्तर प्रदेश राज्य में स्थित है। इसका देशान्तरीय विस्तार  $81^{\circ}31'$  पूर्व से  $82^{\circ}86'$  पूर्व है तथा अक्षांशीय विस्तार  $26^{\circ}47'$  उत्तर से  $27^{\circ}20'$  उत्तर है। जनपद गोण्डा उत्तर प्रदेश के निम्न जनपदों से सीमा बनाता है। इसकी सीमा उत्तर में श्रावस्तो एवं बलरामपुर जनपद से, पूर्व में बस्ती जनपद से, दक्षिण में अयोध्या जनपद से, उत्तर पश्चिम में बहराइच जनपद से तथा दक्षिण पश्चिम में बाराबंकी जनपदों से सीमा बनाती है। जनपद गोण्डा का कुल क्षेत्रफल 4003 वर्ग किलोमीटर है। जनपद गोण्डा की मृदा बलुई, दोमट तथा बलुई - दामट प्रकार की है। जनपद गोण्डा में खरीफ, रबी, जायद तीनो प्रकार की फसलें उगाई जाती हैं। यहां खरीफ की फसल के अंतर्गत धान, मक्का, बाजरा, गन्ना, सन, उड़द आदि की खेती की जाती है। खरीफ की फसल की बुवाई जून जुलाई में होती है तथा इनकी कटाई अक्टूबर तक हो जाती है। यहां रबी की फसल के अंतर्गत गेहूँ, चना, मसूर, मटर, सरसों आदि की खेती होती है। रबी फसल की बुवाई अक्टूबर नवंबर में होती है तथा कटाई फरवरी से मार्च तक होती है। जायद की फसल के अंतर्गत मक्का, उड़द, मूंग, खीरा, खरबूज, तरबूज आदि की खेती की जाती है। जायद की फसल की बुवाई मार्च अप्रैल में होती है तथा कटाई मई जून में हो जाती है।

**न्यूनतम समर्थन मूल्य एवं उत्पादन क्षेत्र का भौगोलिक अध्ययन**

न्यूनतम समर्थन मूल्य एक समन्वित व्यवस्था है। जिसमें एक तरफ किसानों को उसकी उपज का उचित मूल्य दिलाने की व्यवस्था है वहीं दूसरी ओर उपभोक्ताओं को उचित मूल्य पर अनाज प्राप्त हो सके इसके लिए पब्लिक डिस्ट्रीब्यूशन सिस्टम (पीडीएस) की व्यवस्था है। न्यूनतम समर्थन मूल्य के निर्धारण में मांग और आपूर्ति, उत्पादन की लागत, घरेलू एवं अंतरराष्ट्रीय दोनों बाजारों में मूल्य प्रवृत्तियाँ, अंतर फसल मूल्य समता, कृषि और गैरकृषि के बीच व्यापार की शर्तें, उस उत्पाद की उपभोक्ताओं पर न्यूनतम समर्थन मूल्य का संभावित प्रभाव को ध्यान में रखा जाता है।

सरकार का लक्ष्य होता है कि वह न्यूनतम समर्थन मूल्य के माध्यम से अत्यधिक उत्पादन करने वाले राज्यों से अनाज की खरीद कर कम उत्पादन करने वाले राज्यों में वितरित करे। इससे सरकार मांग और आपूर्ति व्यवस्था में समन्वय स्थापित करने का प्रयास करती है। न्यूनतम समर्थन मूल्य के सम्बन्ध में किसानों की जागरूकता का अत्यधिक महत्व होता है। राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय के 70वीं रिपोर्ट के अनुसार भारत में 23.72 प्रतिशत ग्रामीण कृषि परिवार ऐसे हैं जिन्हें रबी फसल के न्यूनतम समर्थन मूल्य के बारे में पता है तथा 20.04 प्रतिशत ग्रामीण कृषि परिवार ऐसे हैं जिन्हें खरीफ फसल के न्यूनतम समर्थन मूल्य की जानकारी है।

एमएसपी की घोषणा फसल की बुआई के पहले साल में दो बार की जाती है। एक बार रबी फसल के लिए दूसरी बार खरीफ फसल के लिए। किसान अपने फायदे और नुकसान को देखते हुए फसलों का उत्पादन करते हैं। किसान फसल उत्पादन के लिए एमएसपी के साथ-साथ बीजों की उपलब्धता, सिंचाई की स्थिति, खेत से बाजार की दूरी, उर्वरक की उपलब्धता, जलवायु आदि अवयवों को भी फसल उत्पादन में तरजीह देता है। जैसे अगर किसी क्षेत्र में सिंचाई की सुविधा उपलब्धता की कमी है तो किसान ऐसी फसलों के उत्पादन को तरजीह देगा जिसमें कम सिंचाई की आवश्यकता पड़े। इसी प्रकार यदि उर्वरकों का दाम बढ़ जाए तो किसान कम उर्वरक उपभोग वाली फसलों की खेती को प्राथमिकता में रखेगा या ऐसी फसल को उगाएगा जो जैविक उर्वरक से अच्छी पैदावार देते हों। कई बार किसान



किसी फसल की खेती करना चाहते हैं लेकिन उस फसल के बीज उन्हें बाजार में उपलब्ध नहीं हो पाते ऐसे में किसान उपलब्ध बीजों का उत्पादन करते हैं। यदि किसान के खेत और मंडियों की दूरी अधिक होती है तो किसान ऐसी फसलों का उत्पादन करना चाहते हैं जिसस परिवहन लागत की अपेक्षा अधिक लाभ हो। भारत में किसान अपनी आजीविका को ध्यान में रखकर फसलों का उत्पादन करते हैं उन्हें लगता है कि गेहूँ, धान जैसे पारंपरिक खेती के अलावा किसी अन्य फसल की खेती करने पर उनकी आजीविका प्रभावित हो जाएगी।

गेहूँ –

गेहूँ एक शीतोष्ण कटिबंधीय फसल है। भारत में इसे रबी फसल के अंतर्गत बोया जाता है। गेहूँ के उत्पादन के लिए मध्यम ताप और मध्यम वर्षा की आवश्यकता होती है। गेहूँ के लिए बोते समय 10° सेंटीग्रेट तापमान की आवश्यकता होती है तथा वर्धन के समय 15° सेंटीग्रेट तापमान की आवश्यकता होती है और पकते समय 20 से 25 डिग्री सेंटीग्रेट तापमान की आवश्यकता होती है। लगभग 80 सेमी की वार्षिक वर्षा इसकी कृषि हेतु उपयुक्त है। वर्षा की कमी वाले क्षेत्रों में सिंचाई की सुविधा उपलब्ध होने पर न्यूनतम चार सिंचाई की जरूर होती है।

जनपद गोण्डा में गेहूँ के उत्पादन, उत्पादन क्षेत्र, एमएसपी से संबंधित आंकड़े तालिका (अ) में निम्न प्रकार हैं –

**तालिका (अ)**

क्रम संख्या	वर्ष	एमएसपी रुपया में	एमएसपी में परिवर्तन	उत्पादन क्षेत्र (हे. में)	उत्पादन क्षेत्र में परिवर्तन	उत्पादन (मी. टन में)	उत्पादन में परिवर्तन
1	2005-2006	650	+10	150230	-9110	373487	-3084
2	2006-2007	750	+100	145333	-4897	397955	+24468
3	2007-2008	1000	+250	153341	+8008	425976	+28021
4	2008-2009	1080	+80	159042	+5701	463157	+37181
5	2009-2010	1100	+20	160011	+969	434309	-28848
6	2010-2011	1120	+20	160768	+757	471250	+36941
7	2011-2012	1285	+165	154960	-5808	466401	-4849
8	2012-2013	1350	+65	154070	-890	448588	-17813
9	2013-2014	1400	+50	153045	-1025	456090	+7502
10	2014-2015	1450	+50	156666	+3621	405271	-50819

1-जिला सांख्यिकीय पत्रिका(जि.सां.पा.)जनपद गोण्डा, वर्ष 2005,2006,2007,2008,2009,2010,2011,2012,2013,2014,2015,2016, के आंकड़ों से उत्पादन क्षेत्र, उत्पादन के आंकड़ों का संकलन

2-सीएसपी इंडिया से वर्ष 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, से एमएसपी के आंकड़ों का संकलन, एमएसपी के आंकड़ों में बोनस मूल्य को सम्मिलित नहीं किया गया है। हे.में- हेक्टेयर में, मी. टन- मीट्रिक टन, एमएसपी- न्यूनतम समर्थन मूल्य

तालिका (अ) के आंकड़ों के अनुसार वर्ष 2005-2006 में गेहूँ के एमएसपी में 10 रुपए प्रति क्विंटल की बढ़ोत्तरी की गई जो कि बढ़ कर 650 रुपया प्रति क्विंटल हो गई। इसी वर्ष उत्पादन क्षेत्र में -9110 हेक्टेयर का परिवर्तन आया जो कि घट कर 150230 हेक्टेयर हो गई तथा उत्पादन में परिवर्तन -3084 मीट्रिक टन का आया जो कि घट कर 373487 मीट्रिक टन हो गई। जौ, मसूर, रेपसीड या सरसों, के उत्पादन क्षेत्र में बढ़ोत्तरी हुई तथा उत्पादन क्षेत्र के कम होने से उत्पादन कम हो रहा है।(जि.सां.पा.-2006)

वर्ष 2006-2007 में गेहूँ की एमएसपी में 100 रुपए प्रति क्विंटल की बढ़ोत्तरी की गई और यह 750 रुपया प्रति क्विंटल हो गई। इसी वर्ष में गेहूँ का उत्पादन क्षेत्र -4897 हेक्टेयर घट कर 145333 हेक्टेयर हो गया। इस वर्ष उत्पादन क्षेत्र कम होने के बावजूद उत्पादन में गिरावट नहीं आई और उत्पादन 24468 मीट्रिक टन बढ़ोत्तरी के साथ 397955 मीट्रिक टन

रहा । इस वर्ष में भी उत्पादन क्षेत्र कम हो रहा है लेकिन वर्ष 2005–2006 की अपेक्षा कम, कम हो रहा है। इस वर्ष उत्पादन क्षेत्र कम होने पर भी उत्पादन अधिक रहा । इस वर्ष प्रति हेक्टेयर उर्वरक का उपयोग अधिक किया गया था। (जि.सां.पा.–2007)

वर्ष 2007–2008 में गेहूँ की एमएसपी में 250 रुपए प्रति क्विंटल की बढ़ोत्तरी की गई और यह 1000 रुपया प्रति क्विंटल हो गई। इसी वर्ष उत्पादन क्षेत्र 8008 हेक्टेयर बढ़ कर 153341 हेक्टेयर हो गया । उत्पादन क्षेत्र के बढ़ने के कारण उत्पादन 28021 मीट्रिक टन बढ़ कर 425976 मीट्रिक टन हो गया। पिछली वर्ष के उत्पादन का प्रभाव इस वर्ष पड़ा और किसान ने गेहूँ का उत्पादन क्षेत्र बढ़ा दिया । उत्पादन क्षेत्र के बढ़ने से उत्पादन भी बढ़ गया ।

वर्ष 2008–2009 में गेहूँ के एमएसपी में 80 रुपए की बढ़ोत्तरी की गई। इसी वर्ष उत्पादन क्षेत्र 5701 हेक्टेयर बढ़कर 159042 हेक्टेयर हो गया। इस वर्ष गेहूँ के कुल उत्पादन में 37181 मीट्रिक टन की बढ़ोत्तरी के साथ 463157 मीट्रिक टन रहा। इस वर्ष प्रति हेक्टेयर उर्वरक उपभोग और शुद्ध सिंचित क्षेत्रफल का प्रतिशत पिछली वर्ष की तुलना में अधिक है लेकिन उत्पादन घट रहा है। इसके दो कारण हो सकते हैं कि पहला प्रति हेक्टेयर उर्वरक उपभोग और कुल सिंचित क्षेत्र के प्रतिशत उपभोग में गेहूँ का प्रतिशत कम रहा हो। दूसरा इस वर्ष कम उन्नतशील बीजों का प्रयोग किया गया रहा हो। (जि.सां.पा.–2009)

वर्ष 2009–2010 में गेहूँ की एमएसपी में 20 रुपए प्रति क्विंटल की बढ़ोत्तरी की गई यह 1100 रुपया प्रति क्विंटल हो गई। इसी वर्ष गेहूँ के उत्पादन क्षेत्र में 969 हेक्टेयर की मामूली बढ़ोत्तरी हुई जो की बढ़कर 160011 हेक्टेयर हो गया। इस वर्ष गेहूँ के कुल उत्पादन में –28848 मीट्रिक टन की गिरावट दर्ज की गई और कुल उत्पादन 434309 मीट्रिक टन रहा । वर्ष 2010–11 में गेहूँ के एमएसपी में 20 रुपया प्रति क्विंटल की वृद्धि की गई जिससे गेहूँ कि एमएसपी 1120 रुपया प्रति क्विंटल हो गई। इसी वर्ष उत्पादन क्षेत्र में 757 हेक्टेयर की वृद्धि हुई तथा उत्पादन में 36941 मीट्रिक टन का अधिक उत्पादन हुआ । इस वर्ष गेहूँ का कुल उत्पादन 471250 मीट्रिक टन रहा ।

वर्ष 2011 –2012 में गेहूँ का एमएसपी 1285 रुपया प्रति क्विंटल निर्धारित किया गया जो कि पिछली वर्ष की तुलना में 165 रुपया अधिक था। इस वर्ष गेहूँ के कुल उत्पादन क्षेत्र में 5808 हेक्टेयर की गिरावट के साथ 154960 हेक्टेयर रहा। गेहूँ के कुल उत्पादन में भी 4849 मीट्रिक टन की कमी हुई और कुल उत्पादन 466401 मीट्रिक टन रहा ।

वर्ष 2012–2013 में गेहूँ का एमएसपी 1350 रुपया प्रति क्विंटल था जो कि पिछली वर्ष की तुलना में 65 रुपया अधिक था। इस वर्ष भी गेहूँ के उत्पादन क्षेत्र में 890 हेक्टेयर की गिरावट दर्ज की गई और गेहूँ का कुल उत्पादन क्षेत्र 154070 हेक्टेयर था। इस वर्ष गेहूँ का कुल उत्पादन 448588 मीट्रिक टन था जो कि पिछली वर्ष की तुलना में 17813 मीट्रिक टन कम उत्पादन है ।

वर्ष 2013–2014 में गेहूँ के एमएसपी में 50 रुपया प्रति क्विंटल की वृद्धि की गई। जो कि 1400 रुपया प्रति क्विंटल थी। इस वर्ष में भी गेहूँ का कुल उत्पादन क्षेत्र 1025 हेक्टेयर घट कर 153045 हेक्टेयर हो गई। इस वर्ष गेहूँ के कुल उत्पादन में 7502 मीट्रिक टन की वृद्धि हुई और कुल उत्पादन 456090 मीट्रिक टन रही। इस वर्ष शुद्ध सिंचित क्षेत्रफल प्रतिशत में वृद्धि दर्ज की गई थी। (जि. सां.पा.–2014)

वर्ष 2014–15 में गेहूँ की एमएसपी 1450 रुपया प्रति क्विंटल थी जो कि पिछली वर्ष की तुलना में 50 रुपया अधिक थी। इस वर्ष गेहूँ के कुल उत्पादन क्षेत्र में 3621 हेक्टेयर की वृद्धि हुई और गेहूँ का कुल उत्पादन क्षेत्र 156666 हेक्टेयर हो गया। इस वर्ष गेहूँ के कुल उत्पादन में 50819 मीट्रिक टन की गिरावट दर्ज की गई। गेहूँ का कुल उत्पादन 50819 मीट्रिक टन कम हो कर 405271 मीट्रिक टन था। इस वर्ष वार्षिक वर्षा में कमी दर्ज की गई थी। (जि. सां.पा.–2015)

जौ –

जौ भारत में एक प्राचीन कालीन फसल है इसका उत्पादन भारत में हड़प्पा काल से हो रहा है। यह शीतोष्ण कटिबंधीय जलवायु की फसल है। लेकिन इसका उत्पादन समशीतोष्ण कटिबंधीय जलवायु में भी अच्छा होता है। जौ की खेती के लिए मध्यम ताप और मध्यम

वर्षा की आवश्यकता होती है। जौ के उत्पादन के लिए न्यूनतम तापमान लगभग 2-4 डिग्री सेंटीग्रेट तथा अधिकतम तापमान 22 से 30 डिग्री सेंटीग्रेड होना चाहिए। जौ की बुवाई से लेकर कटाई तक अलग अलग समय में अलग अलग तापमान की आवश्यकता होती है। जौ की अच्छी खेती के लिए चार से पांच सिचाई पर्याप्त होती है। जौ की खेती के लिए मध्यम दोमट मृदा अधिक उपर्युक्त होती है।

जनपद गोण्डा में जौ के उत्पादन , उत्पादन क्षेत्र, एमएसपी से संबंधित आंकड़े तालिका (ब) में निम्न प्रकार हैं –

**तालिका (ब)**

क्रम संख्या	वर्ष	एमएसपी रुपया में	एमएसपी में परिवर्तन	उत्पादन क्षेत्र (हे. में)	उत्पादन क्षेत्र में परिवर्तन	उत्पादन (मी. टन में)	उत्पादन में परिवर्तन
1	2005-2006	550	+10	1341	+74	2844	+297
2	2006-2007	565	+15	559	-782	1215	-1629
3	2007-2008	650	+85	579	+20	1173	-42
4	2008-2009	680	+30	394	-185	932	-241
5	2009-2010	750	+70	467	+73	1050	+118
6	2010-2011	780	+30	600	+133	1561	+511
7	2011-2012	980	+200	661	+61	1821	+260
8	2012-2013	980	+0	560	-101	1480	-341
9	2013-2014	1100	+120	848	+288	2458	+978
10	2014-2015	1150	+50	640	-208	1045	-1413

1-जिला सांख्यिकीय पत्रिका जनपद गोण्डा, वर्ष

2005,2006,2007,2008,2009,2010,2011,2012,2013,2014,2015,2016, के आंकड़ों से उत्पादन क्षेत्र ,उत्पादन के आंकड़ों का संकलन

2-सीएसीपी इंडिया से वर्ष 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, से एमएसपी के आंकड़ों का संकलन, एमएसपी के आंकड़ों में बोनस मूल्य को सम्मिलित नहीं किया गया है।

हे.में- हेक्टेयर में, मी. टन- मीट्रिक टन, एमएसपी- न्यूनतम समर्थन मूल्य

तालिका (ब) के आंकड़ों के अनुसार वर्ष 2005-2006 में जौ के एमएसपी में 10 रुपए प्रति क्विंटल की बढ़ोत्तरी की गई। यह 550 रुपया प्रति क्विंटल हो गई। इसी वर्ष जौ के उत्पादन क्षेत्र में +74 हेक्टेयर का परिवर्तन आया यह बढ़ कर 1341 हेक्टेयर हो गया तथा उत्पादन में परिवर्तन +297 मीट्रिक टन था जो की बढ़कर 2844 मीट्रिक टन रहा।

वर्ष 2006-2007 में जौ की एमएसपी में 15 रुपया प्रति क्विंटल की बढ़ोत्तरी की गई और यह 565 रुपया प्रति क्विंटल हो गई। इसी वर्ष में जौ का उत्पादन क्षेत्र -782 घट कर 559 हेक्टेयर हो गया। इस वर्ष उत्पादन क्षेत्र कम होने के कारण उत्पादन में गिरावट आई और उत्पादन -1629 मीट्रिक टन कमी के साथ 1215 मीट्रिक टन रहा।

वर्ष 2007-2008 में जौ की एमएसपी में 85 रुपए प्रति क्विंटल की बढ़ोत्तरी की गई और यह 650 रुपया प्रति क्विंटल हो गई। इसी वर्ष उत्पादन क्षेत्र 20 हेक्टेयर बढ़ कर 579 हेक्टेयर हो गया। उत्पादन क्षेत्र के बढ़ने के बाद भी उत्पादन 42 मीट्रिक टन घट कर 1173 मीट्रिक टन हो गया।

वर्ष 2008-2009 में जौ की एमएसपी में 30 रुपए प्रति क्विंटल की बढ़ोत्तरी की गई और यह 680 रुपया प्रति क्विंटल हो गई। इसी वर्ष में जौ का उत्पादन क्षेत्र -185 घट कर 394 हेक्टेयर हो गया। इस वर्ष उत्पादन क्षेत्र कम होने के कारण उत्पादन में गिरावट आई और उत्पादन -241 मीट्रिक टन कमी के साथ 932 मीट्रिक टन रहा।

वर्ष 2009-2010 में जौ के एमएसपी में 70 रुपए की बढ़ोत्तरी की गई। इसी वर्ष उत्पादन क्षेत्र 73 हेक्टेयर बढ़कर 467 हेक्टेयर हो गया। इस वर्ष के कुल उत्पादन में 118 मीट्रिक टन की बढ़ोत्तरी के साथ 1050 मीट्रिक टन रहा।

वर्ष 2010–2011 में जौ की एमएसपी में 30 रुपए प्रति क्विंटल की बढ़ोत्तरी की गई यह 780 रुपया प्रति क्विंटल हो गई। इसी वर्ष गेहूं के उत्पादन क्षेत्र में 133 हेक्टेयर की बढ़ोत्तरी हुई। इस वर्ष गेहूं के कुल उत्पादन में 511 मीट्रिक टन की बढ़ोत्तरी दर्ज की गई और कुल उत्पादन 1561 मीट्रिक टन रहा।

वर्ष 2011–12 में जौ के एमएसपी में 200 रुपया प्रति क्विंटल की वृद्धि की गई जिससे जौ की एमएसपी 980 रुपया हो गई। इसी वर्ष उत्पादन क्षेत्र में 61 हेक्टेयर को वृद्धि हुई तथा उत्पादन में 260 मीट्रिक टन का अधिक उत्पादन हुआ। इस वर्ष जौ का कुल उत्पादन 1821 मीट्रिक टन रहा।

वर्ष 2012 –2013 में जौ का एमएसपी 980 रुपया प्रति क्विंटल निर्धारित किया गया जो कि पिछली वर्ष की तुलना में 0 रुपया अधिक था। इस वर्ष जौ के कुल उत्पादन क्षेत्र में 101 हेक्टेयर की गिरावट के साथ 560 हेक्टेयर रहा। गेहूं के कुल उत्पादन में भी 341 मीट्रिक टन को कमी हुई और कुल उत्पादन 1480 मीट्रिक टन रहा।

वर्ष 2013–2014 में जौ का एमएसपी 1100 रुपया प्रति क्विंटल था जो कि पिछली वर्ष की तुलना में 120 रुपया अधिक था। इस वर्ष भी जौ के उत्पादन क्षेत्र में 288 हेक्टेयर की बढ़ोत्तरी दर्ज की गई और जौ का कुल उत्पादन क्षेत्र 848 हेक्टेयर था। इस वर्ष जौ का कुल उत्पादन 2458 मीट्रिक टन था जो कि पिछली वर्ष की तुलना में 978 मीट्रिक टन अधिक उत्पादन है।

वर्ष 2014–2015 में जौ के एमएसपी में 50 रुपया प्रति क्विंटल की वृद्धि की गई। जो कि 1150 रुपया प्रति क्विंटल थी। इस वर्ष में भी जौ का कुल उत्पादन क्षेत्र 208 हेक्टेयर घट कर 640 हेक्टेयर हो गई। इस वर्ष जौ के कुल उत्पादन में 1413 मीट्रिक टन की कमी हुई और कुल उत्पादन 1045 मीट्रिक टन रही।

#### निष्कर्ष –

तालिका अ तथा तालिका ब के आकड़ों से स्पष्ट है कि गोण्डा जिला एक कृषि प्रधान क्षेत्र है। जहां की गेहूं और जौ की गहन कृषि की जाती है। गेहूं का उत्पादन क्षेत्र जौ की अपेक्षा अधिक है, गेहूं का कुल उत्पादन भी जौ से अधिक है। एमएसपी का प्रत्यक्ष या समानुपाती प्रभाव गेहूं और जौ के उत्पादन क्षेत्र पर नहीं पड़ता है, लेकिन दीर्घकाल में एमएसपी का प्रभाव उत्पादन क्षेत्र पर प्रदर्शित होता है। उत्पादन क्षेत्र के बढ़ने से कुल उत्पादन नहीं बढ़ता है क्योंकि कुल उत्पादन उत्पादकता पर निर्भर करती है। उत्पादकता के लिए उन्नतशील बीज, भूमि की उर्वरता, सिंचाई की उपलब्धता, जलवायु, किसान का तकनीकी ज्ञान, किसान का प्रशिक्षण आदि की आवश्यकता होती है। एमएसपी के तहत उत्पादन में किसान फसल की गुणवत्ता को ध्यान में नहीं रखते हैं, उसका लक्ष्य होता है कि कम लागत में अत्यधिक उत्पादन प्राप्त किया जाए। बहुत सारे किसान पिछले साल के अनाज को बीज के रूप में अगले साल में इस्तेमाल करते हैं जिससे उत्पादकता घट जाती है। क्योंकि पुराने बीजों की उत्पादन क्षमता नए बीजों की अपेक्षा कम होती है इसलिए कई बार उत्पादन क्षेत्र के बढ़ जाने पर भी उत्पादकता नहीं बढ़ पाती है। गेहूं और जौ सरल फसल उत्पादन वाली फसलों में आते हैं। इनके उत्पादन के लिए किसी विशेष ज्ञान या तकनीक की आवश्यकता नहीं होती है तथा ये फसल किसान की आजीविका को आधार प्रदान करती है। अगर फसल की पैदावार खराब हो जाए तो ये फसलें किसान की आजीविका को आधार प्रदान करती हैं। इसलिए इन फसलों की उत्पादकता कम होने पर या अन्य किसी कारण से फसल के बबाद होने की स्थिति में भी किसान अगले वर्ष इनके उत्पादन के प्रति आशान्वित रहता है।

#### *References*

- 1- Aguilar J, Gramig GG, Hendrickson JR, Archer DW, Forcella F, Liebig MA (2015) Crop Species Diversity Changes in the United States: 1978–2012.
- 2- Plos One 10(8), 1–4. Ali SZ, Sidhu RS, Vatta K (2012) The Effectiveness of Minimum Support Price Policy for Paddy in India with a Case Study of Punjab.

- 3-Chand R (2008) *MSP and Other Interventions in Wheat Market: Are They Contributing to the Buffer Stock Cycles and Market Destabilization?*  
<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.620.3112&rep=rep1&type=pdf>
- 4-Deshpande RS (Ed) (2008) *Impact of Minimum Support Prices on the Agricultural Economy. In Glimpses of Indian Agriculture. Ministry of Agriculture & Academic Foundation, Government of India. New Delhi.*
- 5-Ellis F (1998) *Household Strategies and Rural Livelihood Diversification. Journal of Development Studies* 35(1), 1–38. <http://doi.org/10.1080/00220389808422553>.
- 6-Jha, Brajesh (2009) *Drivers of Agricultural Diversification in India, Haryana, and the Greenbelt Farms of India. Working Paper Series No. 303. Institute of Economic Growth. New Delhi.*
- 7-Kadasiddappa M, Soumya B, Prashanth P, Sachin HM (2013) *A Historical Prospective for Minimum Support Price of Agricultural Crops. Kisan World* 40(12).
- 8-K.S. Aditya, S.P. Subash, K.V. Praveen, M.L. Nithyashree, N. Bhuvana and Akriti Sharma\*(2017), *Awareness about Minimum Support Price and Its Impact on Diversification Decision of Farmers in India*
- 9-NSSO (National Sample Survey Office) (2015) *Situation Assessment Survey of Agricultural Households: January–December 2013. NSS 70th Round (unit level data). Ministry of Statistics and Programme Implementation (MOSPI). Government of India.*
- 10-Tripathi AK (2013) *Agricultural Price Policy, Output, and Farm Profitability—Examining Linkages during Post-reform Period in India. Asian Journal of Agriculture and Development* 10(1), 91–111.
- 11–जिला सांख्यिकीय पत्रिका जनपद गोण्डा, वर्ष 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, के आंकड़ों से उत्पादन क्षेत्र, उत्पादन के आंकड़ों का संकलन किया गया है।
- 12–सीएसपी इंडिया से वर्ष 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, से एमएसपी के आंकड़ों का संकलन किया गया है।
- 13-DISTRICT CENSUS HANDBOOK GONDA, VILLAGE AND TOWN WISE PRIMARY CENSUS ABSTRACT (PCA) DIRECTORATE OF CENSUS OPERATIONS UTTAR PRADESH, 2011.

## सिंचाई सुविधाओं का कृषि विकास पर प्रभाव शिवपुरी जिले के विशेष सन्दर्भ में

बीरिन्द्र कुमार अहिरवार

सहायक प्राध्यापक (भूगोल)

शासकीय गाँधी महाविद्यालय

बालाजी मिहोना-भिण्ड

### शोध सारांश-

कृषि भारतीय अर्थव्यवस्था का आधार स्तम्भ है। भारत सदैव से ही कृषि प्रधान देश रहा है भारत का हृदय प्रदेशकहा जाने वाला मध्य प्रदेश भी संसाधनों की दृष्टि से सम्पन्न है। प्रदेश की ७० : आबादी कृषि कार्य से जुड़ी हुई है यहां की अधिकतर कृषि मानसून पर निर्भर थी, सिंचाई सुविधाओं के विकास के कारण अब यह निर्भरता कम होती जा रही है, कृषि विकास से तात्पर्य, कृषि के क्षेत्र में उत्पादकता के उच्च स्तर को प्राप्त करने से है, और यह स्तर सिंचाई सुविधाओं के साथ ही अच्छे खाद, बीज, रसायन, और कृषक की सूझ-बूझ पर निर्भर करता है।

**प्रस्तावना-** भारत की अर्थव्यवस्था के विकास का आधार उसका कृषि क्षेत्र है। आर्थिक समृद्धि का मापक व देश की उन्नति का सूचकांक कृषि विकास ही है, कृषि क्षेत्र में वृद्धि हेतु आवश्यक है कि असिंचित, अल्प सिंचित, तथा पड़ती भूमि को कृषि के लिए उपयोग किया जाय। मानसून पर निर्भर क्षेत्रों में सिंचाई सुविधाओं के विकास पर अधिक महत्व दिया जाय। भारत में ३६.७ : क्षेत्र पर ही सिंचाई सुविधाएँ उपलब्ध हैं अर्थात् ६३७३ : क्षेत्र अभी भी वर्षा पर निर्भर है। कृषि उत्पादकता में सिंचाई के साधनों का सर्वाधिक महत्व है। देश की बढ़ती जनसंख्या के लिये, खाद्यान्न आपूर्ति हेतु कृषि उत्पादन में वृद्धि आवश्यक है भारत जैसे विकासशील देश में कृषि वर्षा पर निर्भर है वर्षा, अनियमित व अनिश्चित होने के कारण कृषि उत्पादन में सिंचाई सुविधाओं की प्रमुख भूमिका है।

कृषि विकास के लिये सिंचाई के साधन बीज व खाद से अधिक महत्वपूर्ण है। सिंचाई साधन पर्याप्त मात्रा में होते हैं, तो दोहरी फसलें प्राप्त की जा सकती है तथा पड़ती व अकृष्य भूमि को भी कृषि कार्यों में लिया जा सकता है, कुछ फसलें ऐसी होती हैं, जिन्हें नियमित व अधिक जल की आवश्यकता होती है। जैसे-कपास, गन्ना, धान, गेहूँ आदि, अतः इन फसलों से अधिकाधिक उत्पादन प्राप्त करने के लिए आवश्यक है कि सिंचाई के कृत्रिम साधनों का प्रयोग किया जाय, कृत्रिम साधनों से आशुय, वर्षा जल को संग्रहित करने के लिए तालाबों का निर्माण व उनकी क्षमता का विकास करना, नदियों के जल को संग्रहित करने हेतु डेम का निर्माण, भूमिगत जल के लिए ट्यूबवेल तथा कुंओं का निर्माण करना।

सिंचाई परियोजनाओं को तीन श्रेणियों में बृहद, माध्यम और लघु में विभाजित किया गया है जिन परियोजनाओं का कृषि योग्य कमान क्षेत्र (सी.सी.ए.) १०,००० हेक्टेयर से अधिक होती है, उन्हें बृहद परियोजनाएँ कहा जाता है, और जिन परियोजनाओं का कृषि योग्य कमान क्षेत्र १०,००० हेक्टेयर से कम किन्तु २००० हेक्टेयर से अधिक होता है वे मध्यम परियोजनाएँ कहलाती हैं, तथा जिन परियोजनाओं का कृषि योग्य कमान क्षेत्र २००० हेक्टेयर या उससे कम होता है वह लघु परियोजनाएँ कहलाती हैं लघु सिंचाई परियोजनाओं के स्रोत के रूप में सतही

तथा भू-जल दोनों होते हैं जबकि वृहद तथा मध्यम परियोजनाएँ अधिकतर सतही जल संसाधनों का दोहन करती हैं।

शिवपुरी जिले की सिंचाई सुविधाओं का कृषि पर प्रभाव यहां स्पष्ट रूप से दिखाई देता है क्योंकि यहां की कुल आबादी का लगभग ६७% हिस्सा कृषि कार्य में लगा हुआ है। सिंचाई की सुविधाओं के बिस्तार में यहां के कृषकों को सम्पन्न बनाने में अहम भूमिका अदा की है।

**उद्देश्य-**प्रस्तुत शोध का उद्देश्य यह बताना है कि मानव के लिए कृषि का महत्व अति प्राचीन काल से है स्वतंत्रता से पूर्व मानव अपनी आवश्यकताओं की पूर्ती कृषि कार्यों से करता था। फिर भी जनसंख्या कम होने के कारण मानव के कृषि के साथ इतने अच्छे सम्बन्ध थे कि परिस्थितिकी में किसी तरह की अव्यवस्था नहीं थी जैसे-जैसे जनसंख्या वृद्धि होती गई मानव की खाद्यान सम्बंधी आवश्यकताओं की पूर्ती हेतु समस्या उत्पन्न होने लगी।

प्रस्तुत शोध पत्र के माध्यम से शिवपुरी जिले में कृषि विकास हेतु सिंचाई के साधनों के उपयोग पर बल दिया जा रहा है इससे कृषि उत्पादन में वृद्धि होगी और खाद्यान की समस्या का समाधान होगा और क्षेत्र के लोगों को रोजगार प्राप्त होगा।

**अध्ययन क्षेत्र-**शिवपुरी जिला मध्य प्रदेश के उत्तर में स्थित है उसका विस्तार २४°५०'उत्तरी अक्षांश से २७°५६' उत्तरी अक्षांश तथा ७७°५४' पूर्वी देशान्तर से ७८°३०' पूर्व देशान्तर के मध्य स्थित है। इसका कुल क्षेत्रफल १०२७७ वर्ग किलोमीटर है इस जिले में तहसीलें क्रमशः करैरा, पिछौर नखर, बदरवास, पोहरी, कोलारस, खनियाधाना, वैराढ़, सन्नौद, तथा शिवपुरी आदि सम्मिलित हैं।

इस जिले के उत्तरी पूर्व में श्योपुर मुरैना ग्वालियर एवं दतिया जिले पूर्व में उत्तर प्रदेश का झांसी जिला स्थित है। यह पश्चिम में राजस्थान के कोटा जिले से अपनी सीमा बनाता है। तथा दक्षिण में गुना जिले से अपनी सीमा बनाता है।

**शोध प्रविधि-** प्रस्तुत शोध पत्र में सिंचाई सुविधाओं के विकास से कृषि उत्पादन में वृद्धि के अध्ययन के लिए प्राथमिक एवं द्वितीयक समकों का प्रयोग किया गया है।

प्राथमिक समकों का संकलन शिवपुरी जिले की १० तहसीलों में सविचार निदर्शन विधि से ४ तहसीलों जिनमें कौलारम, करैरा, पिछौर और वदरवास का चयन किया गया है चयनित तहसीलों में प्रत्येक से ७-७ गाँव में देव निदर्शन विधि द्वारा १०-१० कृषकों का साक्षात्कार के लिये चयन किया गया। इस प्रकार शिवपुरी जिले से कुल २०० कृषकों का साक्षात्कार अनुसूची के माध्यम से सिंचाई सुविधाओं की उपलब्धता तथा कृषि विकास पर प्रभाव का अध्ययन किया गया।

द्वितीय समकों के लिये कृषि, कार्यालय शोध पत्रिकाएँ, शोध आलेख अध्यादेश अधिनियम तथा इनटरनेट आदि से प्राप्त जानकारी का प्रयोग किया गया।

**परिणाम व विश्लेषण-**शिवपुरी जिले में कृषकों के सर्वेक्षण से प्राप्त तथ्यों का विश्लेषण निम्न प्रकार से किया गया।

तालिका क्रमांक-०१

क्र०	विवरण	संकेतक	परिणाम
१	आयु	८२.३ प्रतिशत	७६-६० वर्ष

२.	सदस्य	६९.७ प्रतिशत	७ से ८ सदस्य
३.	शिक्षा	७६.७ प्रतिशत	१-३ सदस्य
४.	कार्यशील व्यक्ति	७९.४ प्रतिशत	१-४ सदस्य

स्रोत-प्राथमिक सर्वेक्षण पर आधारित विश्लेषण।

तालिका क्रमांक-१ के अनुसार अध्ययन में सम्मिलित उत्तर दाताओं में ८२.३ प्रतिशत युवा हैं परिवार में सदस्य संख्या न्यूनतम ७ तथा अधिकतम ८ सदस्य है। परिवार में कार्यशील व्यक्ति अधिकतम ४ सदस्य है, प्रत्येक परिवार में अधिकतम सदस्य प्राथमिक स्तर तक शिक्षित है।

तालिका क्रमांक-०२

क्रमांक	विवरण	न्यूनतम	अधिकतम	औसत
१	कृषि भूमि	२	३०	७.९८
२	सिंचित भूमि	१	१७	७.३७
३	असिंचित भूमि	१	१७	२.६३

स्रोत-प्राथमिक सर्वेक्षण पर आधारित विश्लेषण।

तालिका क्रमांक-०२ के अनुसार अध्ययन में सम्मिलित उत्तर दाताओं की कृषि भूमि का आकार न्यूनतम २ बीघा तथा अधिकतम ३० बीघा है उक्त भूमि पर सिंचित तथा असिंचित भूमि का आकार समान है जिसमें न्यूनतम १ बीघा तथा अधिकतम १७ बीघा है किंतु औसत में पर्याप्त अन्तर है सिंचित भूमि का औसत ७.३७ बीघा तथा असिंचित भूमि का २.६३ प्रतिशत है। अर्थात् स्पष्ट है कि अध्ययन में सम्मिलित उत्तर दाताओं के पास सिंचाई के साधन पर्याप्त मात्रा में उपलब्ध है।

तालिका क्रमांक -०३ सिंचाई के साधन

क्र.	विवरण	आवृत्ति	प्रतिशत
१.	कुंआ	२७	१२.७
२.	कुंआ, नदी, नाला	७७	२८.७
३.	तालाब	१७	७.७
४.	नहर	१३	६.७
५.	ट्यूबवेल	१२	६.०
६.	कुंआ, नदी, नहर	७८	३९.०
	कुल		१००.०

स्रोत- प्राथमिक सर्वेक्षण पर आधारित विश्लेषण।

तालिका क्रमांक ०३ के अनुसार सिंचाई के साधन के रूप में १२.७ प्रतिशत कुंआ द्वारा तथा कुंआ नदी नाला द्वारा २८.७ प्रतिशत तालाब द्वारा ७.७ प्रतिशत नहर द्वारा ६.७ प्रतिशत ट्यूबवेल द्वारा ६.० प्रतिशत तथा कुंआ, नदी, नहर द्वारा ३९.० प्रतिशत उपयोग किया जाता है।

तालिका क्रमांक-०४

कृषकों द्वारा विभिन्न मौसमों में उत्पादित फसलें

क्रमांक	मौसमी फसलें	आवृत्ति	प्रतिशत
१.	खरीफ फसल	४१	२७.७७:



२.	खरीफ व रबी फसल	१४४	७२७०:
३.	खरीफ, रबी व जायद फसल	१७	७७७:
	कुल	२००	१००७०:

स्रोत-सर्वेक्षण पर आधारित समंको के विश्लेषण के आधार पर।

तलिका क्रमांक ४ से स्पष्ट है कि अध्ययन क्षेत्र में २०.७ प्रतिशत कृषक सिंचाई सुविधाओं की कमी व परम्परागत कृषि उपकरणों की उपलब्धता के कारण खरीफ फसलों का ही उत्पादन कर पाते हैं जिनमें मुख्य रूप से धान, ज्वार, बाजरा, मक्का, सोयाबीन व मूँगफली की फसलें। इसी प्रकार से ७२ : उत्तरदाता खरीब व रबी दोनों फसलों का उत्पादन करते हैं रबी फसल के सर्वाधिक रकवे में गेहूँ सरसों व चने की फसल का उत्पादन होता है।

अध्ययन क्षेत्र में तीनों रबी, खरीफ व जायद फसलों का उत्पादन करने वाले कृषक मात्र ७७७ : है। अतः स्पष्ट है कि इन फसलों का उत्पादन। उर्वरकों की कमी, कीट प्रकोप मौसम का प्रभाव, संसाधनों की कमी आदि कारणों से कृषि उत्पादन औसत से भी कम होता है जो कृषकों की मुख्य आवश्यकताओं की पूर्ति करने के लिए पर्याप्त नहीं है।

#### **कृषि विकास को प्रभावित करने वाले कारक**

कृषि विकास को प्रभावित करने वाले कारक अत्यंत जटिल व अन्तर्सम्बन्धित हैं क्योंकि इन्हें किसी तार्किक व क्रमबद्ध रूप में व्यवस्थित करना कठिन है। यह प्रमाणित करना कठिन है कि कृषि उत्पादन में वृद्धि अमुख कारक के परिणाम स्वरूप है। अथवा अनेक कारकों के सम्मिलित प्रभाव के कारण।

कृषि विकास को प्रभावित करने वाले कारकों को दो भागों में बांटा जा सकता है। भौतिक तथा अभौतिक भौतिक कारकों अन्तर्गत जलवायु, मिट्टी एवं प्राकृतिक प्रकोप आदि कारक आते हैं।

इनके स्थानिक बदलाव का कभी भी कमनहीं आंका जा सकता है अन्य कारकों में सिंचाई, बीज, उर्वरक, जोत का आकार फसल प्रारूप, सरकार की नीतियां, उपभोग का स्तर तथा जनसंख्या का दबाव आदि कारक हैं।

#### **सिंचाई साधनों के उपयोग में समस्या-**

१. अध्ययन क्षेत्र में नदियों तथा तालाबों के पानी को खेतों तक लाने के साधनों की कमी है।
२. जानकारी में अधिकतर कुएं कच्चे हैं। जिसमें उनमें मिट्टी केगिरने की बजह से पानी की आवक कम हो जाती है।
३. नहरों के पास के कृषकों को सिंचाई की भरपूर आपूर्ति हो जाती है जबकि नहरों के छोर पर के कृषकों की सिंचाई की आपूर्ति पर्याप्त नहीं हो जाती है।
४. नहरों के माध्यम से खेतों तक पहुंचने वाली नालियों का विकास नहीं है यानि की नालियों को पक्का नहीं किया जाता जिससे जल नालियों में ही समा जाता है।
५. नहर प्रणाली में सम्पर्क स्थानों के गायब होने या इसमें टूट-फूट होने से जल का व्यर्थ वहाव होता है।

#### **निष्कर्ष-**

निष्कर्ष रूप में कहा जा सकता है। कि कृषि विकास में सिंचाई सुविधा अत्यंत महत्वपूर्ण कारक है। शिवपुरी जिले में सिंचाई का रकवा कुल बोवाई के रकवे का एक तिहाई

है। वर्तमान में अधिकाधिक कृषि विकास की आवश्यकताओं को देखते हुये सिंचाई की सुविधाओं को बढ़ाया जाना अतिमहत्वपूर्ण है शासन द्वारा सिंचाई प्रबंधन के क्षेत्र में सहयोग के कारण सिंचित क्षेत्र में उल्लेखनीय वृद्धि हुई व साथ ही तकनीकी विकास मौसम विभाग और कृषि विभाग द्वारा उचित सलाह की आवश्यकता है

**संदर्भ ग्रंथ सूची-**

१. अग्रवाल डॉ अमित (२००७) "भारत में ग्रामीण विकास" वितके प्रकाशन जवाहर नगर नई दिल्ली।
२. तिवारी डॉ. कल्पना 'रचना' अंक १०८ मई-जून २०१४ म.प्र. शासन उच्च शिक्षा विभाग एवं हिन्दी ग्रंथ अकादमी का संयुक्त उपक्रम (२०१४) प्र० ३४
३. 'योजना' (२०१४) आर्थिक एवं सांख्यिकीय विभाग म.प्र. शासन भोपाल।
४. कुमार डॉ. प्रमीला (२०१७) मध्य प्रदेश हिन्दी ग्रंथ अकादमी भोपाल।
- 5- B.Holer Dr. Prakash (2019) "Impact of Changes in Rainfall pattern on Agriculture in Haveri District-Karnataka"

## बुद्धी प्रामाण्यवादी विचारवंत मानवेंद्रनाथ रॉय यांच्या कार्याचा विश्लेषणात्मक अभ्यास

### डॉ.संभाजी संतोष पाटील

श्री.शि.वि.प्र.संस्थेचे भाऊसाहेब ना.स.पाटील साहित्य आणि मु.फि.मु.अ.वाणिज्य महाविद्यालय, धुळे  
(महाराष्ट्र)

#### प्रस्तावना :-

आधुनिक भारतीय राजकीय विचारवंतांमधील एक श्रेष्ठ दर्जाचे विचारवंत म्हणून मानवेंद्रनाथ रॉय यांची ओळख होती. मावर्सच्या विचारांमध्ये मोलाची भर टाकणारा मावर्सवादी विचारसरणी विकसित करणारा विचारवंत रॉय होते. रॉय हे मावर्सवादी होते पण त्यांनी स्वतंत्र विचारसरणी विकसित केली त्यास नवमानवतावाद असे म्हणतात. रॉय हे राजकीय नेत्यापेक्षा तत्ववेत्ते आणि विचारवंत म्हणून प्रसिध्द होते. राजकारणामध्ये ते काही काळ सक्रीय होते पण त्यांच्या जिवनातील प्रधानकार्य हे वैचारिक क्षेत्रातील होते विसाव्या शतकातील पुर्वार्ध हा रॉय यांच्या जिवनकार्याचा कालखंड होय. याच कालखंडात रशिया साम्यवादीक्रांती होवून जगातील पहिले साम्यवादी शासन उदयास आले. या क्रांतीने प्रभावित होऊन जगातील अनेक देशात साम्यवादी चळवळ सुरु झाली होती. भारतातही साम्यवादी पक्षाची स्थापना झाली होती. साम्यवाद हा दोन्ही विचारसरणीबाबत रॉय हे समाधानी नव्हते. त्याचप्रमाणे पाश्चात्य देशातील उदारमतवादी लोकशाही प्रणाली सुध्दा त्यांना समाधानकारक वाटत नव्हती या सर्व विचारप्रणाली व्यवतीस खऱ्या अर्थाने स्वातंत्र्य प्राप्त करून देण्यास आणि त्यांच्या व्यवतीमत्वाचा विकास घडवून आणण्यास परिपूर्ण नाही असे त्यांचे मत होते. राष्ट्रीय वृत्तीचे क्रान्तीकारक त्यानंतर कट्टर मावर्सवादी आणि अखेरच्या काळात नवमानवतावादी असे मानवेंद्रनाथ रॉय यांचे वैचारिक स्थित्यंतर घडून आलेले आहे. क्रान्तीकारकाच्या गटातील सहभागापासून त्यांच्या सार्वजनिक कार्यास सुरुवात झाली. कम्युनिस्ट इंटरनेशनल मधील इतर नेत्यांशी वैचारिक मतभेद झाल्यावर ते साम्यवादी चळवळीतून या नव्या विचारप्रणालीचे प्रवर्तक बनले अशा प्रकारचे वैचारिक स्थित्यंतर त्यांच्यात झालेले असले तरी प्रारंभापासून काही मुलतत्वे त्यांनी निष्ठापूर्वक स्विकारलेली होती, आणि त्यांच्याशी अखेरपर्यंत ते एकनिष्ठ होते. व्यवती स्वातंत्र्यवाद, बुद्धीनिष्ठता, भौतिकवाद आणि धर्मनिरपेक्षता ही रॉय यांच्या विचारांची मुलभूत तत्वे होती. त्यांनी नवमानवता वाद ही विचारप्रणाली याच मुलतत्वावर आधारलेली आहे. समाजापुढील प्रश्न सोडवितांना वैज्ञानिक आणि बुद्धीनिष्ठ दृष्टीकोन स्विकारला पाहिजे असा रॉय यांचा आग्रह होता. दैवी ११वतीचे अस्तित्व मानून मानवी जीवन हे त्या दैवी ११वतीच्या अधीन आहे असे मानण्याच्या प्रवृत्तीस त्यांचा विरोध होता. आपल्या जीवनातील प्रश्न सोडविण्याची कुवत मानणांमध्येच आहे फक्त त्याने बुद्धीनिष्ठ आणि वैज्ञानिक दृष्टीकोन स्विकारला पाहिजे असे ते मानत. याच बरोबर रॉय हे व्यवती स्वातंत्र्याचे पुरस्कर्ते आणि राजकीय, सामाजिक जीवन हे नितीमान असले पाहिजे याबाबत आग्रही होते.

#### शोधनिबंधाचा उद्देश :-

बुद्धी प्रामाण्यवादी विचारवंत मानवेंद्रनाथ रॉय यांच्या कार्याचा विश्लेषणात्मक अभ्यास करणे हा प्रस्तुत लघुशोध निबंधाचा उद्देश आहे.

#### संशोधनाची उद्दिष्टे :-

१. मानवेंद्रनाथ रॉय यांच्या नवमानवतावादी या विषयी विचारांची माहिती जाणून घेणे.
२. रॉय यांचे मुलगाही लोकशाही विषयी विचारांचा अभ्यास करणे.
३. रॉय यांचे राजकीय व आर्थिक विषयी विचारांचा अभ्यास करणे.

#### माहितीचे संकलन आणि विश्लेषण :-

बुद्धीप्रामाण्यवादी विचारवंत मानवेंद्रनाथ रॉय यांच्या कार्याचा विश्लेषणात्मक अभ्यास करतांना ऐतिहासिक नोंदी, घडलेल्या घडामोडी याची माहिती विविध साधनाद्वारे प्राप्त केलेली आहे. या लघुशोध निबंधासाठी विविध संदर्भग्रंथ, मासिके, साप्ताहिक, इंटरनेट, वर्तमानपत्र; या दुस्यम साधनांचा वापर करण्यात आला आहे.

#### रॉय यांचे नवमानवतावाद विषयी विचार :-

रॉय यांच्या नविन मानवतावादात व्यवती आणि समाजाच्या संबंधात व्यवतीस अधिक महत्व देण्यात आले आहे. कारण व्यवतीच सर्व काही असून व्यवतीने निर्माण केलेली सृष्टी म्हणजे समाज होय. त्यामुळे समाजाला दुस्यम स्थान असते. या जगातील ध्येय पुर्तीसाठी मानवाने समाजाची निर्मिती केलेली आहे म्हणून व्यवतीच्या स्वातंत्र्याचा अधिकाधिक विचार करून राजकीय, सामाजिक, नैतिक बंधने निर्माण करण्यात यावीत. स्वातंत्र्य मानवतावादासाठी

आवश्यक आहे. व्यवतीचे व्यवतीत्व नष्ट करण्याचा प्रयत्न जर राज्य,समाजाने केली की, त्याचा परिणाम मानवतावादाच्या नाशात होईल परंतु आजचा मानव हे सर्व विसरला असून नैतिकतेऐवजी शक्तीना अधिक महत्त्व प्राप्त होत चालले आहे. ही मुल्ये नष्ट होऊ नये असे रॅय यांना वाटते. भारतीयांचे पुर्नजागरण व्हावे यासाठी त्यांनी प्रयत्न केलेले दिसून येतात. त्यांच्या नवमानवतावादी विचारांचा केंद्रबिंदु व्यवती आहे. राजकीय विचारसरणीमध्ये रॅयच्या नवमानवतावादी विचाराने मोठी भर टाकलेली आहे. व्यवतीच्या विचारस्वातंत्र्याला रॅय महत्त्व देत होते म्हणूनच नवमानवतावाद त्या सर्व प्रकारच्या विचारांना व व्यवस्थेला विरोध करतो जेथे व्यवती स्वातंत्र्याची गळवेपी होतेत्र हुकूमशाही वर्गवाद, तर्कशून्य विचार, राष्ट्रवाद या संकल्पना व्यवतीस्वातंत्र्यांचा संकोच करतात. संसदीय शासन पध्दतीदेखील व्यवती स्वातंत्र्याचा संकोच करते व रॅय या सर्व गोष्टींना विरोध करतात. नवमानवतावादामध्ये राष्ट्रांच्या सरहद्दींना फारसे स्थान नाही. भांडवलशाही, फॅसिझम, साम्यवाद या व्यवस्था नाही नवमानवतावादात स्थान नाही. कारण या सर्व व्यवस्था विचार स्वातंत्र्य विरोधी आहेत. रॅय यांच्या मतानुसार मानवतावादी विचार प्राचीन काळापासून मांडण्यात आलेले आहेत. १९ व्या शतकात काही ब्रिटीश आणि फ्रेंच विचारवंतांनी मानवतावादी विचारांच्या परंपरेचे पुनरुज्जीवन करण्याचा प्रयत्न केला हे विचारवंत मानवतावादी जरूर होते. पण त्यांनी माणसापेक्षा दैवी शक्तीला श्रेष्ठ मानले. मानवी जीवन हे त्यांचा दृष्टीने एक गुढ राहिले. युरोपातील मानवतावादी विचारवंतांच्या विचारातील हा तर्कदोष दूर करण्याची आवश्यकता रॅय यांना वाटली. राजा राममोहन रॅय, रविंद्रनाथ टागोर, श्री.अरविंद घोष, महात्मा गांधी, जयप्रकाश नारायण इत्यादी भारतीय विचारवंतांच्या विचारांनाही मानवतावादी दृष्टीकोन दिसून येतो. या विचारवंतांच्या विचारात व्यवतीला सर्वोच्च स्थान दिलेले आहे. राज्यापेक्षा त्यांनी दुस्यम स्थान मानले नाही पण रॅय यांच्या मते या विचारवंतांनाही खऱ्या अर्थाने मानवतावादी म्हणता येणार नाही कारण त्यांच्या एकंदरीत विचारांमध्ये मानवतावाद हा एक घटक आहे. मनुष्य हाच केंद्रस्थानी मानून त्यांनी आपले विचार मांडलेले नाहीत. मनुष्य हा आपल्या विचारांच्या केंद्रबिंदु मानावयाचा असेल तर मनुष्य हा मापदंड मानून सर्व गोष्टींचे मोजमाप केले पाहिजे.

#### नवमानवतावादी तत्त्वे :-

१. मानवाच्या प्रगतीचा शोध आणि स्वातंत्र्याचा शोध सत्याचा शोध मुलभूत मानवी प्रगतीसाठी उपयुक्त आहे.
२. मनुष्य समाजव्यवस्थेतील मुलस्थायी आहे. सहकारी सामाजिक संबंधरचना व्यवतीमधील सुप्त शक्तीचा विकासामध्ये योगदान देते.
३. विचारप्रणाली सुचणे ही स्वाभाविक शरीरशास्त्रीय प्रक्रिया असून पर्यावरणीय घटकाची ती निष्पत्ती आहे. विचारप्रणाली प्रक्रिया आणि सामाजिक उत्क्रांती समांतरही असतात आणि एकमेकांना प्रभावित करित असतात.
४. इतिहासाची भौतिक मिमांसा ही भौतिकवादाच्या चुकीच्या अन्वयार्थाची निष्पत्ती आहे.
५. मनुष्यप्राणी मुलतः विवेक असतो. तर्कशक्ती हा शारिरीक गुणधर्म आहे तो विरोधी नसतो. मानवी ईच्छा शक्तीरहीत हा निर्णायक घटक आहे.
६. स्वातंत्र्याचे नवे विश्व उभारण्यासाठी क्रांती समाजाचा आर्थिक पुर्नसंघटनेच्या पलीकडे गेला पाहिजे. दडपलेल्या आणि शोषित वर्गांच्या नावाने राजकीय सत्ता हस्तगत करून खाजगी संपत्तीचे उच्चाटन केल्याने स्वातंत्र्य येते असे होत नाही.
७. मजुरांचे शोषण तसेच उत्पादनाचे समान वितरण यांची, राज्यांची उद्योगांवरील मालकी आणि आर्थिक नियोजन यातून आपोआप समाप्त होणार नाही. राजकीय लोकशाही शिवाय आर्थिक लोकशाही शक्य नाही.
८. हुकूमशाहीस सुरुवात झाली की ती कायम घर करून राहते. सर्वकष नियोजन राजकीय हुकूमशाहांच्या नियंत्रणाखाली व्यवतीचे स्वातंत्र्य उपेक्षित राहते. परिणामतः समाजवादी राज्यात उच्च प्रतीची लोकशाही अशक्यप्राय ठरते.
९. संसदीय लोकशाहीस पर्याय हुकूमशाही नाही तर संघटीत लोकशाही हा आहे. कारण संसदीय लोकशाही ही सत्ताहीन यांत्रिक व्यवतीची, नागरिकांची शासन पध्दती आहे. त्याऐवजी देशभर पसरलेल्या लोकसमित्यांच्या जाळ्यांच्या आधारवर उभारलेली पिरॅमीडप्रमाणे संसद ही संस्था असली पाहिजे.
१०. समाजाचे आर्थिक पुर्नगठन करणे हे मुलग्रामी लोकशाहीचे गृहीतकृत्य आहे त्यामुळे माणसाचे माणसाकडून शोषण समाप्त होईल.

११. मुलगामी लोकशाहीचे आदर्श लोकांच्या सामुहिक प्रयत्नातून साध्य होईल. अध्यात्मिक दृष्ट्या स्वतंत्र आणि स्वातंत्र्याचे जग निर्माण करण्याचा दृढ निश्चयाने एकत्र झालेल्या लोकांचे हे प्रयत्न असतील.

१२. मनुष्य हा प्रत्येक वस्तु निकष आहे, मानदंड आहे. मनुष्यप्राण्याचे मुळ हे मनुष्य आहे. अशा वचनापासून मुलगाहीवादाचा प्रारंभ होतो. जग ही स्वतंत्र माणसाची प्रजासत्ताक राजवट आहे. स्वतंत्र माणसांच्या बंधुत्वाचा समाज आहे यांचा मुलगाहीवाद पुरस्कार करतो.

नवमानवतावादाची ही तत्वे या तत्वज्ञानाची व्यवतीगत आणि सामाजिक अंग विशद करतात. स्वातंत्र्य, बौद्धिक, नैतिकता ही प्राथमिक मुल्ये अधोरेखित करतात. जीवशास्त्रीय उत्क्रांतीत त्यांना शोधतात. नवमानवतावादाचा दृष्टीकोन हा विशाल, वैश्विक आहे असा रॉय यांचा दावा आहे.

(२) **मुलगामी लोकशाहीविषयी विचार :-**

नागरिकांच्या स्वातंत्र्यात हुकूमशाही मध्ये धोका असतो. लोकशाहीत प्रामुख्याने राजकीयपक्ष निवडणुका असतात. सत्तेसाठी स्पर्धा असते या पध्दतीत जनता आपले अधिकार प्रतिनिधींना देतात जनतेचे सार्वभौमत्व नामधारी स्वरूपाचे असते. जनतेला लोकप्रतिनिधींवर नियंत्रण ठेवण्याचा प्रभावी व्यवहारी माध्यम नसते. परिणामतः लोकशाहीचा गाभा म्हणजे जनतेचे सार्वभौमत्व संसदीय पध्दतीने समाप्त होते. स्वातंत्र्याची उत्कठ इच्छा ही माणसातील एक मुलभूत प्रेरणा आहे असे नवमानवतावाद मानतो. रूसो यांनी असे म्हटले आहे की, मनुष्य हा जन्मतःच स्वतंत्र असतो. पण तो सर्वत्र बंधनात अडकलेला असतो. ही बंधने तोडून माणसाला त्याचे जन्मजात स्वातंत्र्य प्राप्त करून देण्याच्या हेतुने रूसोने नवा समाज निर्माण करण्याची कल्पना मांडली. त्याचप्रमाणे नवमानवतावादी असे मानतो की, वर्तमान काळातील समाजाने माणसाचे स्वातंत्र्य हिरावून घेतले आहे. ही प्रस्थापित समाज व्यवस्था बदलून माणसाला त्याचे स्वातंत्र्य प्राप्त होईल आणि त्याला आपल्या व्यवतीत्वाचा पूर्ण विकास करण्याची संधी मिळेल अशी नवी राजकीय आणि सामाजिक व्यवस्था निर्माण केली पाहिजे. फ्रान्स, अमेरिका, इंग्लंड या देशातील उदार मतवादी लोकशाही व्यवस्था आणि रशियातील साम्यवादी व्यवस्था या आधुनिक काळात उदयास आलेल्या दोन प्रमुख व्यवस्था आहेत. या दोन्ही व्यवस्था व्यवतीला खरे स्वातंत्र्य प्राप्त करून देण्यास अपयशी ठरल्या अशी रॉय यांची टिका आहे.

आधुनिक शासन प्रकार म्हणून लोकशाहीचा रितकार सर्वसाधारणपणे आज मान्य केला असला तरी जगभर एकाच प्रकारची लोकशाही कार्यवाहीत नाही. ज्या त्या देशांनी आपल्या सामाजिक, राजकीय, आर्थिक, सांस्कृतिक पर्यावरणानुसार व देशाच्या आपल्या अस्मितेला अनुकूल अशा लोकशाही प्रकारांचा अवलंब केला आहे. तसेच एकेकाळी प्रचलित असलेल्या अनियंत्रित लोकशाही, हुकूमशाही, महाजनशाही यांना योग्य पर्याय म्हणून जरी लोकशाही हिरावली असली तरी आधुनिक लोकशाहीत अनेक दोष शिरले आहे. नवनविन समस्या निर्माण झाल्या आहेत त्यामुळे निकोप, निर्दोष लोकशाहीचा शोध विद्वान अभ्यासक घेत आले आहेत. मानवेंद्ररॉय यांनी मार्क्सवादाला झिडकारून नव्या लोकशाहीचा ध्यास घेतला होता. अमेरिकेचे भांडवलशाही लोकशाही आणि रशिया प्रणित जनतेची लोकशाही यांच्यावर टिका करून त्यांनी आधुनिक काळातील समस्यांचा वेध घेणारी आधुनिक काळातील पंच प्रसंगांना उत्तर शोधणारी लोकशाही कशी असावी यावर त्यांनी सखोल चिंतन केले. पर्याय नमुना देण्याचा प्रयत्न केला. रॉय स्वतःच आपल्या प्रारूपाचे वर्णन मुलगामी लोकशाही असे करतात. रॉय म्हणतात की, सध्याच्या पंचप्रसंगातून बाहेर पडण्यासाठी मुलगामी लोकशाहीची तत्वे प्रस्थापित केली पाहिजेत. कारण १९शंभर वर्षांमध्ये झालेले बदल हे आधुनिक सभ्यतेसाठी निराशाजनक आणि आत्मविश्वास व उज्वल अशा यांचा अभ्यास जाणवणारे होते. सर्वत्र विचारसरणींनी भ्रमनिरास केला आहे. लोकशाही सर्वांना परिचीत आहे. गेल्या १९० वर्षांत सिध्दांत आणि व्यवहाराच्या दृष्टीने लोकशाही इच्छित परिणाम देऊ शकली नाही. सिध्दांताचे दृष्टीने व्यवतीचे स्वातंत्र्य लोकशाही १शासनाचे ध्येय आहे पण असे स्वातंत्र्य लोकशाहीतून मिळत असल्याचे दिसून येत नाही. लोकशाही म्हणजे लोकांचे आणि लोकांकरिता असणारे शासन होय. त्यामुळे सार्वभौमसत्ता ही लोकांकडे असते. तत्वतः हे जरी चांगले असले तरी लोकशाहीचा सिध्दांत आणि व्यवहार यात तफावत आहे. प्रत्यक्ष व्यवहार असे सांगतो की, दोन निवडणुकीच्या दरम्यान जनतेचे सार्वभौमत्व हे अस्तित्वात नसते. ज्यांच्यावतीने १शासनकर्ते सत्ता वापरतात त्यांच्यावर जनतेचे कोणतेही नियंत्रण नसते परिणामी प्रदान सत्ता ही सत्तेची

शरणागती ठरली आहे असे रॅय म्हणतात. रॅय यांच्या मुलग्रामी लोकशाहीतील स्थानिक समित्या पुढीलप्रमाणे कार्य करतील.

१. संघीय व प्रांतिक कायदे मंडळाच्या निवडणुकीसाठी उमेदवार नामांकन करणे.
२. या मंडळाच्या सभासदांना जनतेच्या ईच्छा माहित करून देणे.
३. या मंडळाच्या कायदे विषयक प्रस्तावांचे परीक्षण करणे व मान्यता देणे.
४. एखादे विधेयक या मंडळांनी घ्यावे म्हणून पुढाकार दाखविणे.
५. कायदेमंडळांनी मांडलेल्या विधेयकावर जननिर्णयाची मागणी करणे.
६. कार्यकारी प्रमुख किंवा कायदे मंडळ सभासदांना प्रत्यावर्तन करणे.

### (३) राजकीय आणि आर्थिक विचार :-

रॅय यांनी मानवतावादाचा विचार राजकीय आणि आर्थिक दृष्टीकोनातून केलेला दिसून येतो कारण रॅय ज्याप्रमाणे राजकीय पुढारी होते त्याचप्रमाणे ते राजकीय विचारवंतही होते. भारतातील सामाजिक व राजकीय परिस्थितीचा विचार केल्यानंतर मात्र मुलभूत स्वरूपाचा बदल करणे गरजेचे आहे असे त्यांना वाटे त्यासाठी देशात विकेंद्रीकरणाची व्यवस्था निर्माण केली पाहिजे. केंद्रीकरणाचा वापर, राजकीय पक्ष, आर्थिक संघटना, संघटना सत्तेच्या स्पर्धासाठी करून होत असतात यासाठी राजकीय पक्षांनी कमीत कमी हस्तक्षेप करावा सामाजिक परिवर्तनासाठी वर्तमानशासनावर अधिकार स्थापन करणे उपयुक्त नाही. सामाजिक परिवर्तनासाठी राजकीय संघटना आणि राजकीय पक्षात शक्ती खर्च करण्यासाठी ग्रामीण विभागाला आणि कारखान्यात विधायक खर्च करणे मानवासाठी हितावह ठरेल. ज्यामुळे मानवातील संकुचितपणा नष्ट होतून राजकीय क्षेत्रात मानवतावादी विचाराला चालना मिळू शकेल. त्यासाठी लोकशाही शासन यंत्रणा निर्माण करणे हितावह ठरेल. कारण मानवतेच्या विकासासाठी जे स्वातंत्र्याचे वातावरण हवे असते ते फक्त लोकशाहीतच असते. रॅय यांनी सुचविलेल्या अर्थव्यवस्थेत राज्याचे नियंत्रण अर्थकारणावर असेल पण ते सर्वव्यापी राहणार नाही. उत्पादन वाढविणे, मोठ्या उद्योगांवर नियंत्रण ठेवणे. मोठे अवजड उद्योग चालविणे, सहकारी १शेतीस प्रोत्साहन देणे, किमान वेतन निश्चित करणे. आठ तासाचा दिवस करणे, किमान वेतन ठरविणे. समाजातील सर्व प्रकारच्या कमकुवत व अपंग घटकांना सामाजिक सुरक्षितता प्रदान करणे. त्यांच्या औद्योगिकरणास विरोध नव्हता पण जलदगतीने करण्यास विरोध होता. कारण मोठ्या प्रमाणात औद्योगिकरण झाल्यास उत्पादनात प्रचंड वाढ होते. मात्र लोकांच्या क्रयशक्तीत वाढ होत नाही. तेव्हा औद्योगिकरणात वाढ ही स्वाभाविक व्हावी. रॅय यांचा जमीनदारीस विरोध होता. कारण ही जमीनदारी पध्दतीच १शेतीच्या आधुनिकीकरणातील प्रमुख अडसर आहे. जमीनदारी पध्दतीत दारिद्र्य वाढते. गरीबांची संख्या वाढते. रॅय यांच्या मते नव्या अर्थव्यवस्थेत पाणीपुरवठा १शेतीला पुरक उद्योगांचा विकास, सुधारित वहातुक व्यवस्था इत्यादी गोष्टी अनुक्रमाने येतील.

### समारोप :-

मानवतावाद, भौतिकवाद, बुध्दीनिष्ठता, वैज्ञानिकदृष्टी ही रॅय यांच्या विचारांची वैशिष्ट्ये होती. पोथीनिष्ठ विचार न करता स्वतंत्र बुध्दीने आपल्याला योग्य वाटतील ते विचार मांडणारे ते महान विचारवंत होते. यामुळेच त्यांच्या विचारात स्थित्यंतरे झालेली दिसून येतात. सुरुवातीच्या काळात प्रखर राष्ट्रवादी नंतर मावसवादी आणि जीवनाच्या अखेरच्या कालखंडात नवमानवतावादी अशी रॅय यांची वैचारिक वाटचाल झाली. अर्थात हा बदल होत असतांना मानवी स्वातंत्र्य, बुध्दीनिष्ठता आणि वैज्ञानिक दृष्टीकोन या तत्वांचे त्यांची निष्ठा प्रारंभापासून अखेर पर्यंत कायम राहिली. भारतीय समाजाने वैज्ञानिक दृष्टीकोनाचा स्विकार केला पाहिजे. अनिष्ठ रुढी, प्रथा, परंपरा, धार्मिक कर्मकांड यांची बौध्दिक विकित्सा करून १शास्त्रीयदृष्ट्या जे अयोग्य ठरेल त्याचा त्याग केला पाहिजे. याबाबतीत त्यांची भूमिका आग्रहावी होती. सार्वजनिक जीवनामध्ये नैतिक मुल्यांची पुर्नस्थापना झाली पाहिजे हा रॅय यांचा आग्रह महत्वाचा होता. रॅय हे मुख्य विचारवंत, तत्ववेष्ठे होते आणि वैचारिक क्षेत्रातील त्यांच्या कार्यामुळे आधुनिक काळातील केवळ भारतीयच नाही तर जगातील प्रमुख विचारवंतांमध्ये त्यांची गणना होते.

### संदर्भ ग्रंथ

(१) डॉ. ढोबळे रमेश: आधुनिक भारतीय राजकीय विचारवंत विद्या बुक्स पब्लीशर्स, औरंगाबाद. प्रथम आवृत्ती जुन २०१०.

(२) प्रा. वराडकर र.घ. : भारतीय राजकीय विचारवंत विद्या प्रकाशन, नागपुर सन २००५.

- (३) डॉ.कळवे दिनकर एस:भारतीय राजकीय विचारवंत,कैलास पब्लीकेशन्स,औरंगाबाद,प्रथम आवृत्ती १५ ऑगस्ट २००६
- (४) प्रा.चोपडे किसन:भारतीय राजकीय विचार विद्या बुक्स पब्लीशर्स, औरंगाबाद प्रथम आवृत्ती सप्टेंबर, २००२
- (५) गर्गे स.मा. : सुगम राज्यशास्त्रे सिध्दांत आणि विचार अनिरुध्द पब्लीशिंग हाऊस, पुणे. सन २०००.

## अनुसूचित जातीच्या संकल्पनेचा विश्लेषणात्मक अभ्यास

प्रा.डॉ.वसंत तुकाराम नाईक<sup>१</sup> नारायण हणमंतराव पांचाळ<sup>२</sup>

मार्गदर्शक, विभागप्रमुख तथा संशोधक मार्गदर्शक, ग्रामीण महाविद्यालय, वसंतनगर, ता.मुखेड जि.नांदेड  
संशोधक, भूगोल विभाग, स्वामी विवेकानंद महाविद्यालय, मुक्रमाबाद, ता.मुखेड जि.नांदेड

### प्रस्तावना

आर्यांचे भारतात आगमन झाल्यानंतर त्यांनी स्थानिक भारतीय लोकांबरोबर युद्ध केले. या युद्धात स्थानिक भारतीयांचा पराभव होऊन आर्य विजयी झाले. त्यामुळे पराभूत मूळ भारतीयांना आर्यांनी दास बनविले. आर्यांमध्ये वर्णव्यवस्था होती. वर्णांचा प्रथम उल्लेख ऋग्वेदात आढळतो. वर्ण या शब्दाचा ऋग्वेदात अर्थ शरीराचा रंग यावरून ठरविले जात होते. वर्णाने विचार करता या काळात दोन वर्ण होते. एक आर्य जे रंगाने गोरे होते तर दुसरे दास हे रंगाने काळे होते. दास या शब्दाला नंतर सेवक, गुलाम, अस्पृश्य असा अर्थ प्राप्त झाला व सामाजातील कनिष्ठ दर्जा हे दासांचे एक वैशिष्ट्ये ठरले.

### अभ्यासाची उद्दिष्टे

१. अनुसूचित जातीच्या संकल्पनेचा अभ्यास करणे.
२. अनुसूचित जातीची ऐतिहासिक पार्श्वभूमी जाणून घेणे.
३. अनुसूचित जातीच्या अभ्यासाचे महत्त्व जाणून घेणे.

### अनुसूचित जातीची संकल्पना

वैदिक कालखंडात चार वर्ण तयार झाले यामध्ये ब्राह्मण, क्षत्रिय, वैश्य आणि शूद्र. या कालखंडात ऋग्वेदातील वर्ण या शब्दाचा अर्थ बदलून वृ-वृणोती म्हणजे व्यवसाय निवडणे असा अर्थ प्राप्त झाला. ऋग्वेदात पहिल्या तीन वर्णांचा उल्लेख आढळतो. पुरुष सूक्तांची रचना ऋग्वेदातील इतर सूक्तांच्या नंतर झाली असावी. त्यामुळे पुरुष सूक्तात मात्र शूद्रांचा उल्लेख आढळतो. पुरुष सुक्तात चारही वर्णांची कर्तव्ये निश्चित करण्यात आली होती. या संदर्भातील एक सूक्त आढळते-

ब्राह्मणस्य मुख्यमासिद बाहू राजन्यकृता  
उरूस्तदस्य यद्वैश्या शूद्रो पादजायते

या सूक्तानुसार चारही वर्णांची कर्तव्ये पुढीलप्रमाणे दिली आहेत.

१. ब्राह्मण : अध्ययन, अध्यापन, यज्ञ कार्यातील पैरोहित्य, दान घेण्याचा अधिकार होता.
२. क्षत्रिय : पुरुष सूक्तात क्षत्रियांचा उल्लेख राज्यन्य असा केला असून क्षात्रतेजाशी निगडित युद्ध शासकीय धर्म करण्याचे अधिकार होते.
३. वैश्यांना पशुपालन, शेती, व्यापार करण्याचे अधिकार होते.
४. शूद्र : शूद्रांची निर्मिती पायातून झाली. पाय संपूर्ण शरीराची सेवा करतात म्हणून शूद्रांनी संपूर्ण समाजाची म्हणजेच तिन्ही वर्णांच्याची सेवा करणे असे त्यांचे कर्तव्य होते.

वेगवेगळे धर्मशास्त्र, विचारवंत, राजकीय पंडित, समाजसुधारक, शासनाचे अहवाल यामध्ये बदलत्या काळानुसार अस्पृश्य शब्दात बदल होत गेला आहे. या शब्दाचे बदलते स्वरूप पुढीलप्रमाणे नमूद केले आहे.

१. ऋग्वेदात चर्मन म्हणजे चामडे कमविणारा अर्थात चांभार यांना अस्पृश्य मानले होते.
२. मनुस्मृतीनुसार प्रतिलोम विवाहातून निर्माण झालेल्या संततीला अस्पृश्य म्हटले.
३. विष्णुधर्मशास्त्र यानुसार चांडाळ, म्लेच्छ आणि पारसी यांना अस्पृश्य मानले.
४. महात्मा गांधींनी सर्व अस्पृश्यांना हरिजन या संज्ञेचा वापर केला.
५. डॉ.बाबासाहेब आंबेडकर स्वतः एक अस्पृश्य समजल्या जाणाऱ्या जातीत जन्माला आले होते. त्यांनी अस्पृश्यांसाठी भ्रग्नहृदयी माणसे (Broken Men) असे म्हटले.
६. ब्रिटीश सरकारने अस्पृश्यांना दलित जाती हा शब्द उल्लेख केला.
७. इ.स.१९३१ मध्ये जनगणना आयुक्तानी अस्पृश्य जातीचा उल्लेख बहिर्जाती (Exteruir Castes) असा केला.
८. सायमन कमिशनने अस्पृश्य जातीसाठी सर्वप्रथम अनुसूचित जाती असा शब्द वापरला.

डॉ.वि.रा.शिंदे यांनी दलित असाच उल्लेख केला. भारतीय संविधानातील अनुच्छेद ३४१ मध्ये या जातींची सूची दिली आहे. त्यामुळे आज अनुसूचित जाती ही संज्ञा सर्वत्र रूढ झाली आहे. मुळात दलित या विशेषणाची उत्पत्ती 'दल' या संस्कृत धातूपासून झाली असून दलित शब्दाचा अर्थ दलित-सांवे, तुडविलेले चुरडलेले असा आहे. इंग्रजीमध्ये या शब्दासाठी Depressed Class हा शब्द वापरला जातो.

### अनुसूचित जाती म्हणजे काय ?

१. अनुसूचित जाती ही संज्ञा मानवी प्रगतीत सर्वात मागे पडलेल्या आणि रेटलेल्या सामाजिक वर्गासाठी वापरली जाते.
२. अनेक शतकापासून संस्कृतीचा ज्यांना बरोबरीचा हिस्सा मिळू शकला नाही. या देशाचे मूळ वारसदार असूनही त्यांना तो वारसा प्राप्त झाला नाही. ते या देशाचे मुळनिवाशी आहेत परंतु हा देश त्यांचा कधीच होऊ शकला नाही, ही खंत सर्वच दलित बांधवात निर्माण झाली.
३. अनुसूचित जाती ही संज्ञा अशा व्यक्तींच्या समुहासाठी आहे, की ज्यांचा माणूस म्हणून जगण्याचा हक्क नाकारला गेला. समाज रचनेच्या उतरंडीनुसार ज्यांच्या वाट्याला एकाच प्रकारचे जीवन आले, ज्यांचे माणूस म्हणून माणूसपण गेले, ज्यांना मानसन्मान नाकारला गेले ते सर्व दलित ठरतात.
४. अनुसूचित जाती ही संज्ञा सनातन संस्कृतिच्या व्यवस्थेत दबल्या गेलेल्या लोकांसाठी आहे.



५. आर्थिक, सामाजिक, सांस्कृतिक आणि राजकीय दृष्ट्या ज्यांना कित्येक शतके उपेक्षित ठेवल्या गेले ते सर्व अनुसूचित जाती उरतात.
६. अनुसूचित जाती ही संज्ञा कोणत्या एका विशिष्ट जातीसाठी किंवा गटासाठी नसून समाजव्यवस्थेमध्ये ज्यांचे अस्तित्व पशुवत आहे, त्या सर्वांसाठी आहे.

### अनुसूचित जातीची ऐतिहासिक पार्श्वभूमी

प्राचीन काळापासून भारतीय समाजव्यवस्थेतील अनुसूचित जाती संबंधी अनेक मत मतांतरे आहेत. काहीनी जन्मावर आधारित, काहीनी श्रमावर आधारित तर काहीनी त्यांच्या कर्मावर आधारित वर्गीकरण केले आहे. वैदिक काळात अनुसूचित जातीचा उल्लेख हा ऋग्वेदाच्या पुरुष सुक्तामध्ये सर्वप्रथम प्रयोग केल्याचे आढळून येते. वर्णव्यवस्थेमध्ये अनुसूचित जातीची स्थिती सर्वात खालची होती. अथर्ववेदाच्या १९ व्या अध्यायामध्ये अनुसूचित जातीचे वर्णन एका वर्णाच्या रूपात केले होते. सामाजिक जीवनाच्या प्रत्येक क्षेत्रामध्ये इतर वर्णांच्या लोकांसोबत वेदपठन, शिक्षण आदी बाबतीत भाग घेत असत. असे दलितता प्रति वैदिक काळात वर्णन आलेले आहे. समाजाची जडणघडण ही जातीय वर्गीय समाजावर होती. ज्यात जातिव्यवस्था प्रधान होती. ती धार्मिक, सांस्कृतिक अशा घकांच्या परिणामातून घडत गेली.

उत्तरवैदिक काळाच्या शेवटी-शेवटी अनुसूचित जातींना धार्मिक कृत्यापासून दूर केले गेले. या काळात वर्णांचा उगम हा जन्माचा अधार प्रमुख मानला आणि कर्म गौण मानले. वर्णव्यवस्थेच्या स्थितीमध्ये अनुवंशिकतेला महत्त्व देण्यात आले. यातूनच शुद्र किंवा अस्पृश्य जाती निर्माण झाल्या. शुद्रांना वेदपठनाच्या आधिकारापासून वंचित करण्यात आले. तसेच त्यांना सर्व धार्मिक विधी पासून दूर करण्याचा प्रयत्न ब्राह्मणांकडून होऊ लागला. पाणिनी यांनी अनुसूचित जातीचे निर्वासित (बहिष्कृत) आणि अनिर्वासित (अबहिष्कृत) असे वर्गीकरण केले आहे. रामायण महाभारत आणि उत्तरवैदिक काळातील वर्णव्यवस्थेचे चित्र अनुसूचित जाती संदर्भात पहावयास मिळते. तसेच गीतकार यांनी गुण आणि कर्मानुसार चार वर्ण सांगितले.

मौर्य काळात चांडाळांना अस्पृश्य मानले जात होते. परंतु मौर्यकाळामध्ये शुद्रांची सामाजिक स्थिती आजून बिघडली. ब्राह्मण आणि शुद्रामध्ये सामाजिक विभेद निर्माण झाला. स्मृती काळामध्ये मनुने ब्राह्मणांना आकाशात नेऊन ठेवून त्यांना भू देवताचा दर्जा दिला. त्यामुळे वर्णव्यवस्थेच्या जागी जातिव्यवस्था दृढ बनली गेली. शुद्रांना वेदपठण्याचा व यज्ञ करण्याचा अधिकार नव्हता, मनुच्या नियमानुसार शुद्रांना अतिशय हिन समजले गेले. या काळात शुद्रांच्या गुन्हांना दंड देण्यासाठी अत्यंत कठोर नियम बनविण्यात आले.

प्राचीन काळात न्यायसंस्थेवरही वर्णव्यवस्थेचा खूप प्रभाव पडला होता. ब्राह्मण हे समाजव्यवस्थेत सर्वात वरच्या स्तरावर होते. ते त्याचा सतत फायदा घेत असत. त्यामुळे ब्राह्मण जातीला खुपच मोठे मान सन्मान होते. पारंपारिक न्यायव्यवस्थेत व्यक्तित्वाच्या वर्णावरून नियम व कायदे बदलत असल्याचा अगदी स्पष्ट उल्लेख आलेला आहे. यातूनच एकप्रकारची विषमतेवर आधारलेली समाजव्यवस्था निर्माण करून त्यांच्यावर कायदेशीरपणाची मोहोर लावण्यात आली. त्या पद्धतीप्रमाणे एखाद्याने पालन केले नसेल तर तो शिक्षेस पात्र ठरत होता.

अनुसूचित जातीचा उल्लेख १८८१ मधील जनगणना म्हणजे फक्त निरनिराळ्या राज्यांतील आणि परगाण्यांतील जातीबदलचे वर्णन आहे. जातीचे वर्णांप्रमाणे विभाजन केले जात होते. त्यामुळे अनुसूचित जातीचे लोक त्या यादीच्या शेवटीच असत. १८९१ च्या जनगणनेत जातीचे वर्गीकरण करून त्यावेळच्या प्रथेप्रमाणे प्रत्येकाला जे काम दिले जात असे त्यांची नोंद आहे. अनुसूचित जातीत व्यवसाय धंद्यात, श्रेणीत शेतमजूर, चामड्याचे काम, सफाई कर्मचारी, पहारेकरी आणि खेड्यातील किरकोळ हलके काम करणारे अशा श्रेणीत ठेवले गेले. असा भारतीय जनगणनेच्या माध्यमातून दलिततासंबंधी माहिती आल्याचे आढळून येते. १९३१ मध्ये वार्तकनाच्या वेळी अस्पृश्यांचा उल्लेख दलित म्हणून सर्वप्रथम केला गेला. अनुसूचित जाती हा शब्द सर्वप्रथम एप्रिल १९३५ मध्ये वापरला गेला. इंग्रज सरकारने भारत सरकारला (अनुसूचित जाती) जो आदेश १९३६ मध्ये दिला त्यानुसार काही जाती, वंश आणि जमाती या अनुसूचित जातीमध्ये गणल्या जाऊ लागल्या. आदी सदर लोकांचे गट मागासवर्गीय म्हणून ओळखले जात असत.

'दलित' या शब्दाची उत्पत्ती डॉ.बाबासाहेब आंबेडकरांच्या सामाजिक क्रांतिच्या लढ्यातून झाली. १९४२ मध्ये नागपूर येथे 'ऑल इंडिया शेड्युल्ड कास्ट फेडरेशन' या संघटनेची स्थापना झाली. फेडरेशनला मराठीत 'दलित फेडरेशन' असे म्हटले जाऊ लागले. तसेच शेड्युल्ड कास्ट या इंग्रजी शब्दाला मराठी पर्याय म्हणून दलित हा शब्द पुढे आला. या शब्दाचे मूळ १९३१ साली डॉ.बाबासाहेब आंबेडकर आणि श्रीनिवास यांनी गोलमेज परिषदेला सादर केलेल्या प्रस्तावामध्ये 'डिप्रेस्ड क्लासेस' असा उल्लेख केला होता. डिप्रेस्ड क्लासेसची व्याख्या पुढील पोटकलम क्रमांक दोन मध्ये नमूद केली आहे.

निवडणुकीच्या वेळी शेड्युल कास्ट हा शब्द अस्पृश्य जमातीसाठी वापरण्यात आला होता. शेड्युल्ड कास्ट या शब्दाचे मराठीकरण 'अनुसूचित जाती' असे झालेले आहे. अनुसूचित जाती या प्रामुख्याने अस्पृश्य असल्याच्या दिसून येतात. १९४२ मध्ये शेड्युल्ड कास्ट फेडरेशन चे 'दलित फेडरेशन' मध्ये रूपांतर झाले. तेथूनच खऱ्या अर्थाने दलित हा शब्द अस्तित्वात आला. हा शब्द प्रामुख्याने अस्पृश्य जातीच्या संदर्भाने उदयाला आला आणि दलित म्हणजे अस्पृश्य असा अर्थ जनसामान्यात रूढ झाला. डिप्रेस्ड क्लासेस हाच शब्द सरकारी यंत्रणेपासून ते भारतीय जनतेपर्यंत अस्पृश्यांना लागू केला गेला. पुढे बहिष्कृत समाज हा शब्द वापरला जाऊ लागला. परंतु भारतीय संविधानात अस्पृश्य समजल्या जाणाऱ्या जातीसाठी अनुसूचित जाती अशी संज्ञा वापरली आहे.

### अनुसूचित जातीच्या अभ्यासाचे महत्त्व

अनुसूचित जातीच्या अभ्यासाचे महत्त्व पुढील विविध मुद्द्यांच्या आधारे जाणून घेण्यात आले आहे.

#### १. भारतीय समाजाचे यथार्थ दर्शन

हिंदू धर्म हा एक सनातन धर्म आहे. या धर्माला कोणीही संस्थापक नसून हा एक अपौरुषीय धर्म आहे. या धर्मात सुरुवातीला तीन वर्ण होते; पण कालांतराने चौथ्या शूद्र वर्णाच समावेश करण्यात आला. समाजातील हलक्या दर्जाची कामे करणाऱ्यांचा समावेश शूद्रांमध्ये करण्यात आला. वर्णव्यवस्थेचे उत्तरोत्तर जातीव्यवस्थेत रूपांतर झाले. जाती या जन्मानेच ठरू लागल्या. कनिष्ठ जातीचे सर्व सामाजिक, राजकीय, आर्थिक व सांस्कृतिक अधिकार वरिष्ठ जातीने काढून घेतले. त्यामुळे हजारो वर्षे शोषितांचे जीवन कनिष्ठ जातींना जगावे लागले, ही वस्तुस्थिती आहे. जातीव्यवस्था ही स्पृश्य-अस्पृश्यतेवर आधारलेली आहे. ही जातीव्यवस्था संपूर्ण भारतीय समाजाला व्यापून राहिलेली आहे. प्रत्येक राज्यातील जाती व्यवस्थेचे स्वरूप

आणि अनुसूचित जातीचे असणारे स्थान समजून घ्यावयाचे असेल तर साहित्याचा अभ्यास करणे गरजेचे आहे. त्यामुळे भारतीय समाजाचे यथार्थ दर्शन या दलित साहित्यातूनच होऊ शकते.

## २. अनुसूचित जातींसाठी कार्य करणाऱ्यास प्रोत्साहन

दलितांच्या मुक्तीला खऱ्या अर्थाने सुरुवात ही १९ व्या शतकात महात्मा फुले यांनी केली. त्याची प्रेरणा घेऊन राजर्षी शाहू महाराज यांनी आपल्या संस्थानात कार्य केले. तर दक्षिण भारतात १२ व्या शतकातील महात्मा बस्वेश्वर आणि स्वतंत्रपूर्व काळातील ई.व्ही.रामास्वामी पेरियार यांनीही महत्त्वपूर्ण कार्य केले. बाबासाहेबांनी काळाराम मंदिर प्रदेश, महाडचा चवदार तळ्याचा सत्याग्रह, मनुस्मृतीचे सामूहिक दहन इत्यादी कार्य करून समाजातील विषमतेला जोरदार हादरे दिले. परंतु अलीकडच्या काळात अनेक नेत्यांच्या किंसा समाज सुधारकांच्या कार्याविषयी समाजात जाणीवपूर्वक गैरसमज निर्माण केला जात आहे. राजकीय पोळी भाजून घेण्यासाठी कोणीही कोणत्याही मार्गाचा अवलंब करीत आहेत. अशावेळी वस्तुस्थिती काय आहे, दलितांसाठी कार्य करणाऱ्या नेत्यांची भूमिका, तत्कालिन परिस्थिती काय होती याचा वस्तुनिष्ठ अभ्यास असणे आवश्यक आहे. त्यामुळे समाजात होणारी चुकीची आंदोलने थोपविता येतात. आणि समाजाला योग्य दिशा दाखविण्याऱ्या नेत्यांचे कार्य मार्गदर्शक ठरत असते.

## ३. अनुसूचित जातींच्या समाजशास्त्रीय अभ्यासाला चालना

दलितांचा अभ्यास अनेक अंगानी आज केला जात आहे. त्यामुळे दलित अभ्यासाला एक व्यापक स्वरूप प्राप्त झालेले आहे. स्वातंत्र्यपूर्वकाळापासून अस्पृश्यता निर्मूलनाचे प्रयत्न केले जात आहे. स्वातंत्र्योत्तर कालखंडात अस्पृश्यता निर्मूलनासाठी व अस्पृश्यांच्या उन्नतीसाठी अनेक प्रकारचे कायदे करण्यात आले आहेत. आज स्वातंत्र्यानंतरही खेरलांजी, खेरडा सारख्या घटना घडतात. अनुसूचित जातीवर गावपातळीवर सामाजिक बहिष्काराचे प्रकार घडतात, दलित शिक्षकाला गावात घर भाड्याने दिले जात नाही. एखादी स्त्री सरपंच झाल्यास तिच्या विरुद्ध जाणीवपूर्वक अविश्वासाचा ठराव आणला जातो किंवा तिला कामच करू दिले जात नाही. जात पंचायती डोके वर काढतात दिसून येतात. याचा अर्थ दलितांच्या समस्या संपलेल्या आहेत असे नाही. यासाठी दलितांच्या समस्येच्या मूळाशी जाऊन त्यांच्या सामाजिक, राजकीय, धार्मिक, आर्थिक, सांस्कृतिक प्रश्नांचा सामाजशास्त्रीय अभ्यास अनुसूचित जातींच्या अभ्यासात करता येतो. म्हणून अनुसूचित जातींच्या अभ्यासाचे महत्त्व दिवसेंदिवस वाढत आहे.

## ४. अनुसूचित जातीतील परिवर्तनाचा अभ्यास

अनुसूचित जातीच्या कल्याणासाठी अनेक योजना शासकीय पातळीवरून राबविल्या जात आहेत. त्यासाठी राष्ट्रीय आयोगाची स्थापना करण्यात आलेली आहे. पंचवार्षिक योजनेच्या माध्यमातून अनुसूचित जातींसाठी आर्थिक तरतुदी करण्यात येतात. पहिल्या पंचवार्षिक योजनेत ३०.०४ कोटींची तरतूद केली होती. आठव्या पंचवार्षिक योजनेत १७७२.३६ कोटींची तरतूद करण्यात आली होती. ही तरतूद प्रत्येक पंचवार्षिक योजनेत वाढविली जात आहे. महाविद्यालयीन शिक्षण घेणाऱ्या विद्यार्थ्यांना शिष्यवृत्ती दिली जाते. डॉ.बाबासाहेब आंबेडकर संशोधन संस्थेच्या माध्यमातून उच्च शिक्षण घेणाऱ्या अनुसूचित जातीतील युवक व युवतींना आर्थिक मदत दिली जाते. ७३ व्या घटनादुरुस्तीने पंचायत राजव्यवस्थेत अनुसूचित जातीच्या महिला व पुरुषांना सत्तेत सहभाग मिळाला. ३३० ते ३३२ व्या कलमानुसार लोकसभा व विधानसभेत राखीव जागांची तरतूद करण्यात आली. यामुळे सत्तेत सहभाग वाढू लागला. त्यामुळे नेतृत्व करणारे राज्य व राष्ट्रीय पातळीवरील नेते उदयास आले. त्यामुळे त्यांच्यात परिवर्तनाची प्रक्रिया सुरू आहे. हे परिवर्तन कोणत्या दिशेने सुरू आहे, त्याचे तुलनात्मक प्रमाण किती आहे? याचा अभ्यास अनुसूचित जातीत होतो. परिवर्तनाचा सातत्याने व शास्त्रीय पद्धतीने अभ्यास करण्याच्या दृष्टीने याचे महत्त्व अनन्यसाधारण असे आहे. या अभ्यासामुळेच कल्याणकारी योजना गरजूवताना मिळण्यास कोणत्या अडचणी येत आहेत या अभ्यासामुळे लक्षात येते.

### निष्कर्ष :-

१. अनुसूचित जाती या संकल्पनेचा अभ्यास केल्यानंतर एक बाब लक्षात येते. म्हणजेच शब्दाचा कालपरत्वे अपभ्रंस होऊन वर्ण, अस्पृश्य, हरिजन, भ्रमहदयी, दलित, बहिर्जाती आणि अनुसूचित जाती हा शब्द प्रयोग अस्तित्वात आला. अनुसूचित जाती हा शब्द विशिष्ट व्यक्ती समूहाचे नाम निर्देशन करण्यासाठी उपयोगात आणला गेला आहे.
२. निसर्गतः सर्व मानव समान होते, परंतु आर्यांनी भारतात प्रवेश केल्यानंतर त्यांनी मनुस्मृती या ग्रंथात समाजव्यवस्थेचे चार वर्ग निर्माण केले. ही वर्ग किंवा वर्ण व्यवस्था विषमतावादी व असमर्थनीय आहे. स्वतंत्रपूर्व भारतामध्ये ज्या समूहाचे शोषण झाले आहे अशांना समान पातळीत आणण्यासाठी विशेष तरतुदी देण्याच्या दृष्टीने अनुसूचित जाती हा वर्ग निर्माण केला आहे. त्यामुळे अनुसूचित जाती हा जात नसून एक मानव समूह आहे.
३. अनुसूचित जातीमध्ये समाजातील अनेक लहान-लहान समूह आहेत. त्यांचे स्वातंत्र्योत्तर भारतात हजारो वर्षांपासून सातत्याने शोषण झाले आहे. तसेच स्वातंत्र्य भारताच्या ७० वर्षांत सुद्धा त्यांना योग्य तो न्याय मिळाला नाही. त्यामुळे त्यांच्यात दारिद्र्य, कुपोषण, बेकारी, बेरोजगारी, वेशन, निरक्षरता, लोकसंख्या वाढ, स्थलांतर इत्यादी समस्या वाढीस लागल्या आहेत. या विविध समस्यांच्या अभ्यास करून योग्य मार्ग काढण्याच्या दृष्टीने अनुसूचित जातीच्या अभ्यासाचे महत्त्व वाढत आहे.

### संदर्भग्रंथ :-

१. डॉ.भिमराव रामजी आंबेडकर, भारतातील जाती त्यांची संरचना, उत्पत्ती आणि विकास, प्रबुद्ध भारत प्रकाशन, नागपूर, २०१२
२. स.मा.गर्गे (संपादक), भारतीय समाज विज्ञान कोष, खंड २, समाज विज्ञान मंडळ पुणे, प्रथमावृत्ती १९९९
३. यशवंत सुमंत व द.वि.पुंडे (संपादक) महाराष्ट्रातील जाती संस्था विषयक विचार, प्रतिमा प्रकाशन, पुणे, प्रथमावृत्ती १९९८
४. महादेव शास्त्री जोशी (संपादक) भारतीय संस्कृती कोष खंड ३, भारतीय संस्कृती मंडळ, शनिवार पेठ, पुणे
५. जॉन सी.बी.वेबस्टर (अनुवाद विद्या भागे, संपादक एस.एम.मायकेल), भारतीय संस्कृतीतील अस्पृश्यता आणि सामाजिक स्तर व वर्गीकरण, आधुनिक भारतातील दलित, दृष्टिकोन आणि मुल्ये, डायमंड पब्लिकेशन, पुणे

६. जॉन सी.बी.वेबस्टर (अनुवाद विद्या भागे, संपादक एस.एम.मायकेल), दलित म्हणजे कोण आधुनिक भारतातील दलित दृष्टिकोन आणि मुल्ये, डायमंड पब्लिकेशन, पुणे, पृ.क्र.३४
७. तंत्रैव २०११
८. B.R. Ambedkar, What Congress & Gandhi have done to the untouchables, Appendix-II
९. The term for out castes in Govt. lit was usually Depressed classes Aout, १९३२ it was changed to scheduled caste, १९७९
१०. संजय साळवे, भारतीय समाज, यशवंतराव चव्हाण मुक्त विद्यापीठ नाशिक, प्रकाशित ग्रंथ, नाशिक
११. भालचंद्र फडके, दलित साहित्य वेदना आणि विद्रोह, दामोदर दिनकर कुलकर्णी, श्रीविद्या प्रकाशन, पुणे, तृतीय आवृत्ती, १९८९
१२. म.ना.वानखेडे, दलितांचे विद्रोही वाडःमय, प्रबोधन, नागपूर

**Chief Editor**

Dr. R. V. Bhole

'Ravichandram' Survey No-101/1, Plot, No-23,  
Mundada Nagar, Jalgaon (M.S.) 425102

Email- [rbhole1965@gmail.com](mailto:rbhole1965@gmail.com)

Visit-[www.jrdrvb.com](http://www.jrdrvb.com)

---

**Address**

'Ravichandram' Survey No-101/1, Plot, No-23,  
Mundada Nagar, Jalgaon (M.S.) 425102

---