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## Impact of Covid- 19 on Cell Phone Industry

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### Abstract :

The international mobileular telecellsmartphone manufacturers had been progressing aggressively over time. A surprising surprising turbulent state of affairs referred to as a international pandemic declared via way of means of the World Health Organization (WHO) approximately a century later withinside the records of human civilization stops this progress. It makes the enterprise certain to fall behind. This examine ambitions to study and examine the effect of the existing pandemic state of affairs because of Coronavirus Disease 2019 (COVID-19) on the worldwide mobileular telecellsmartphone enterprise. It indicates the aggressive eventualities that specialize in mobileular telecellsmartphone call for and deliver as-well-as shows a strategic technique to fight this state of affairs. It is achieved via way of means of reviewing the cutting-edge literature posted explicitly in 2020. The findings of this examine display a huge terrible effect of COVID-19 on international mobileular telecellsmartphone manufacturers, typically mainly withinside the massive markets of this enterprise, specifically India, China, USA, Europe. Conversely, it may additionally definitely effect the enterprise, mainly in a few growing countries. The positivity is visible because of the improved call for for mobileular telecellsmartphone in a few sectors like education, business, and leisure media that shifted online. This mentioned five Ways Corona virus is Affecting the Cell telecellsmartphone Industry, Overview of the Cell telecellsmartphone Industry, Effect at the Premium Cell telecellsmartphone market.

**Keywords :- International, Cell phone market, Impact of Covid, Pandemic etc.**

### Introduction

The outbreak of the coronavirus (COVID-19) pandemic has caused massive disruption to the smartphone supply chain and production schedules. Tough economic circumstances and job insecurity has also led to consumers putting off their purchase of expensive items such as smartphones, crimping demand. There is some positivity in the long-term industry projections, with growth in 2021 expected to surpass initial estimates by 3.9 percent. COVID-19 impact in Q2 2020 Huawei are the smartphone vendor that have displayed the most resilience to the pandemic, recovering from an initial drop to increase their shipment volume from 49 million smartphones in Q1 2020, to 55.8 million smartphones in Q2 2020. That was enough to give Huawei a 20 percent share of the market, more than any other vendor. This marked the first time Huawei managed to ship more units than their competitors. Samsung, conversely, appear to be the hardest hit so far, with shipments dropping to their lowest level since the second quarter of 2012. Samsung shipped 54.2 million smartphones in the second quarter of 2020, marking two consecutive quarters of decline.

### Objective of the study

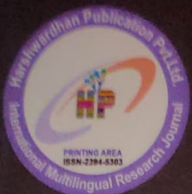
1. To study 5 Ways Corona virus Is Affecting the Cell phone Industry
2. To study Overview of the Cell phone Industry

### Research Methodology

Exploratory research methodology is used here to analyze the data. Data was collected from multiple sources such as books, journals to understand the cell phone industry. In this paper, we have referred previous research articles. Apart from this, we have visited different websites and professional magazine

### Five Ways Corona virus Is Affecting the Cell phone Industry





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## "Role and Importance of Infrastructure in Agriculture Development"

Mr. Sachin Gangadhar Magar  
Research Student

Prof. Dr. S. N. Waghule  
Professor & Head,  
Department of commerce  
Anandrao Dhonde Alias Babaji Mahavidyalaya  
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\*\*\*\*\*

### Abstract:

The researcher examines how physical infrastructure contributes to agricultural development in India. The importance of good infrastructure for agricultural development is widely recognized. Agriculture infrastructure, implies those facilities that help farmers in the processes of sowing to selling; namely- Road connectivity, Irrigation, Machinery, Electrification, Storage, Seeds, Agriculture research, etc. There is also a need to improve infrastructure in line with the ambitious objective of doubling the farmers income in India by 2022 and to make agricultural sustainable and prevent farmers suicides. Therefore invest on agricultural infrastructure will improve not only the agricultural production but also the agricultural productivity. Development of road infrastructure is imperative for agriculture and overall economic growth. Water is another basic factor in agriculture next only to land. Majority of the farmers uses old techniques of production and outdated machinery or equipment. Electricity is one of the important input in farming. Farmers are faces shortage of power. Cold storage





## **PUBLICATION CERTIFICATE**

**This publication certificate has been issued to**

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## Factors Affecting Job Satisfaction: Case Study on Poona College

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**Abstract:** The study aimed to study the factors that have an impact on the job satisfaction of employees. The study is based on primary data, which was collected from Poona College. The questionnaire was distributed to the employees in Poona College. According to H.R department, there are 300 employees in the college. They are taking place in every level and filed. In obtaining the sample size of the population, employees in Poona College were selected. The researcher further selected 15% of employees, it was counted in the formula of  $(300 \times 15 / 100 = 45)$ . Results revealed that satisfied employees have positive attitudes about their jobs. Satisfied workers are tend to work on time, loyalty and commitment to the job, tend to improve knowledge, willing to accept more responsibility, with a reduction of absenteeism. The positive attitudes will increase the quality and quantity of employees' performance. Therefore, such a situation is good for an organization but some organizations do not concern about satisfaction of employees.

**Key Words:** Attitude, Job Satisfaction, Factors, Human Recourse, Management.

### 1. INTRODUCTION:

Job Satisfaction is a very essential aspect in every organization. Jobs should be designed in such a way that the all the employees feel satisfied with their job. Job satisfaction plays a vital role in motivating the employees to perform their jobs more perfectly and in a good manner and also can achieve their goals and in turn, it increases the productivity, less attrition rates, absenteeism etc.

One of the main aspects of Human Resource Management is the measurement of employee satisfaction. Companies have to make sure that employee satisfaction is high among the workers, which is a precondition for increasing productivity, responsiveness, and quality and customer service. In fact, this is critical to organizational success.

The concept of job satisfaction have been explained in different ways via various scholars and experts. In Greenberg and Baron's words (2008), job satisfaction was exposed as a feeling that can produce a positive or negative effect toward one's roles and responsibilities at work and added that it is important to understand the concept of job satisfaction as there is no single way to satisfy all workers in the workplace. They realized that a positive feeling toward a person's job.

Employee satisfaction is of utmost importance for employees to remain happy and also deliver their level best. Satisfied employees are the ones who are extremely loyal towards their organization and stick to it even in the worst scenario. They do not work out of any compulsion but because they dream of taking their organization to a better level. Employees need to be passionate towards their work and passion comes only when employees are satisfied with their job and organization on the whole. Employee satisfaction leads to a positive ambience at the workplace. People seldom crib or complain and concentrate more on their work.

The first benefit of employee satisfaction is that individuals hardly think of leaving their current jobs. Employee satisfaction in a way is essential for employee retention. Organizations need to retain deserving and talented employees for long term growth and guaranteed success. If people just leave you after being trained, trust me, your organization would be in a big mess. Agreed you can hire new individuals but no one can deny the importance of experienced professionals. It is essential for organizations to have experienced people around who can guide freshers or individuals who have just joined. Employee attrition is one of the major problems faced by organizations. I don't think an individual who is treated well at the workplace, has ample opportunities to grow, is appreciated by his superiors, gets his salary on time ever thinks of changing his job. Retaining talented employees definitely gives your organization an edge over your competitors as they contribute more effectively. Moreover, no new individual likes to join an organization which has a high employee attrition rate. Employees who are not satisfied with their jobs often badmouth their organization and also warn friends and acquaintances to join the same.





# Exploring the Association between Job Satisfaction and Productivity: empirical evidence from India

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**Abstract:** The study aimed to study the impact of job satisfaction on employee's productivity. The study is based on primary data, which was collected from Poona College. The questionnaire was distributed to the employees in Poona College. According to H.R department, there are 300 employees in the college. They are taking place in every level and filed. In obtaining the sample size of the population, employees in Poona College were selected. The researcher further selected 15% of employees, it was counted in the formula of  $(300 \times 15/100 = 45)$ .

Results revealed that satisfied employees have positive attitudes about their jobs. Satisfied workers are tend to work on time, loyalty and commitment to the job, tend to improve knowledge, willing to accept more responsibility, with a reduction of absenteeism. The positive attitudes will increase the quality and quantity of employees' performance. Therefore, such a situation is good for an organization but some organizations do not concern about satisfaction of employees. Hence, if organizations can be more concerned about the job satisfaction of employees' better productivity can be expected, as the relationship between satisfaction and productivity is positive and significant. This aspect should be given more consideration by the managers in order to improve productivity.

**Keywords:** Job Satisfaction, Productivity, Loyalty, Commitment

## 1. Introduction

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नीतिविना गति गेली, गतिविना वित्त गेले  
वित्तविना शूद्र खचले, इतके अनर्थ एका अविद्येने केले

-महात्मा ज्योतीराव फुले

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किसी भी व्यवसाय को सुचारू रूप से संचालित किया जा सके ३. निगम द्वारा ऋण प्रदाय की औपचारिकता को कम करना चाहिए क्योंकि अधिकांश जनसंख्या अशिक्षित है ४. प्रशिक्षण की उचित व्यवस्था किया जाना चाहिए एवं ऋण राशि की वसूली के लिए भी उचित व्यवस्था हो ताकि हितग्राही निगम की योजनाओं से लाभान्वित हो सके।

**निष्कर्ष —**

निष्कर्ष रूप से हम कह सकते हैं कि राजनांदगांव जिले में अनुसूचित जाति अनुसूचित जन जाति वर्गों को छ०ग० अंत्यावसायी वित्त एवं विकास निगम से वित्तिय सहायता प्रदान कर स्वयं के रोजगार व्यवसाय प्रारम्भ करने में मदद कर रहा है निगम की योजनाओं के क्रियान्वयन से इन वर्गों का जीवन स्तर ऊँचा उठ रहा है और वे विकास की मुख्यधारा से जुड़कर आर्थिक सामाजिक व्यवहारिक रूप से सक्षम हो रहे हैं इस वर्ग के आर्थिक रूप से विकसित होने से समाज का गांव का जिले का राज्य का एवं राष्ट्र का भी आर्थिक विकास हो रहा है।

**संदर्भ सूची —**

१. जिला सांख्यिकी पुस्तिका राजनांदगांव
२. जिला अंत्यावसायी वित्त एवं विकास निगम का वार्षिक रिपोर्ट
३. जिला अंत्यावसायी वित्त एवं विकास निगम राजनांदगांव द्वारा प्रकाशित सामग्री
४. जिला राजनांदगांव की विकास झलक — २०१४
५. योजना पत्रिका

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## Social Entrepreneurship in India – Opportunities and Challenges in the Current Scenario

**Mr. Sachin Gangadhar Magar**  
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**ABSTRACT:** Social entrepreneurship is a topic of growing interest among academicians and practitioners. The potential of social problems in India is well known, but the degree of support and interest is hardly significant. An entrepreneurial mindset is re-emerging in India. Right from ancient times, India has been entrepreneurial. But the era of liberalization of late had released the genie from the bottle – the suppressed urge and natural instincts of our effervescent entrepreneurial class has once again been unleashed. The opening up of the industrial sector to foreign competition had created a flutter among the Indian industrial circles. The paper attempts to shed light on the comment state of affairs on the theme of challenges and opportunities facing the social entrepreneurship scene in India.

**Keywords:** social entrepreneurship, challenges, problems, opportunities.

### INTRODUCTION

The economic development of a Nation depends on its industrial development. The industrial development is based on the entrepreneurial competencies of the people. Entrepreneurs are innovative, highly motivated, and criti-



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**Dairy Production and Process In India****Dr. Aute P.N.**

Dept. of Commerce

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**Abstract:-**

As a Commerce Senior teacher I am going to write my research paper about the dairy farming, it's production and process especially in India. In my research paper I am going to present how the dairy production helps to Indian economy. How the Indian economy develop on dairy farming and it's production which kinds of new technology are using for increase the dairy production in India. Is India will became the first number of country in the world in the coming days. How many problems are coming to the farmers regarding the dairy farming, it's production and process. What are the major sources of dairy farming many researchers wrote about the dairy farming and it's production. But my present research paper is different from other papers because in my paper I am going to studying the actualy what is dairy farming, how it is more important, it's production and its distribution etc. in India.

Apart from low productivity of the animals, there are many other problems like large human and livestock population and it's pressure on land, degraded pasture lands, shortage of feed, in gredients and fodders, which need to be targeted. While the agriculture sector is witnessing a kind of stagnation or a decline in growth rate in areas where the green revolution earlier brought a new dawn for human survival against brought a new down for human survival against hunger and malnutrition, the dairy sector is showing better promise.

**Introduction:-**

Dairy farming in India has been a important part of the agriculture scenario for thousands of years. India's agrarian economy has about 70% of it's population living in villages, where livestock cheese, butter, ghee etc. India is not only one of the top producers of milk in the world, but also the largest consumer of milk and milk products in the world. Agriculture and animal husbandry have a symbiotic relationship, in which the agricultural sector providers feed and fodder for the livestock and animals provide milk, manure and draught power for various agricultural operations. Dairy sector is instrumental in bringing socio-economic transformation in India. It has created lot of employment opportunities in India and also provides improved nutritional benefits.

Animal husbandry is a major sub-sector of agriculture sector and contributes about 28.6% to the agriculture value output.

**Importance of Dairy farming:-**

Milk is a wholesome food among all the animal products. It contains in proper proportions the various essential food ingredients required by human body inclusion of milk in the human diet increases the digestibility of other types of food as well. The productivity of milk varies in different countries, as some countries are surplus in production, some are deficit in production and in some of the countries, availability matches their requirement. The annual milk production in India in 2015-16 was 155.5 million tonnes and the per capita availability of milk was 337 grams per day. In India, milk is produced by a vast number of



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## A STUDY OF PRADHAN MANTRI MUDRA YOJANA (PMMY)

**Dr. P. N. Aute**

Assist. Professor, Department of commerce,  
Anandrao Dhonde Alias Babaji Mahavidyalaya  
Kada, Tal-Ashti; Dist-Beed (MS)

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### Abstract:

Banks play a crucial role in the economic development of any country in the world. On a larger scale, national banks offer alike access to credit and financial services to larger business, local governments, and in some cases international customers. Most individual, especially those living in rural and interior parts of India have been excluded from the benefits of formal banking system. Therefore, they never had access to insurance, credit, loans and other financial instruments to help them establish and grow their micro business. So, most individuals depend on local money lenders for credit. The role of private sector is very much important in accelerating the pace of economic growth. The banks increase the participation of the private sector in economic development by making available loans easily on reasonable rate of interest. The expansion of financial sector encourages entrepreneurs to make investments by promoting entrepreneurship. An attempt has been made in this paper to analyze the necessity of MUDRA bank for micro as well as small level entrepreneurs.

**Key Words:** PMMY, Mudra bank, MFIs, self-employment.

### Introduction:

Pradhan Mantri Mudra (Micro Unit of Development and Refinance Agency) Yojana is a potential step of promotion of financial inclu-

sion in India. It was originally launched on 8<sup>th</sup> April, 2015 by hon'able prime Minister Narendra Modi under the guideline of Department Of Financial services (GOI). Under PMMY, Micro Units Development and Refinance Agency Ltd. (MUDRA), a new institution has been setup by Government of India for development and refinancing activities relating to micro units. It was announced by hon'able Finance Minister 'Arun Jaitley' while presenting the Union Budget for FY 2015-16. MUDRA Ltd will monitor the progress of Pradhan Mantri Mudra Yojana. Under this scheme, people can take three type of loan i.e. Loan up to Rs. 50,000 under Shishu; Rs. 50,000 to Rs. 5 lakh under Kishor; and Rs. 5 lakh to Rs. 10 lakh under Tarun.

In F.Y.2016-17, 39701047 accounts have opened in India. The Union Budget has announced a target of Rs. 2.44 lakh crore for Mudra Loans during 2017-18. At present, the scheme is applicable in all over India having 29 states and 7 union territories. The top three states getting biggest chunk of loan are tamilnadu, Karnataka, and Maharashtra. MUDRA Ltd. will also refinance Micro-Finance Institutions through Pradhan Mantri Mudra Yojana. The top three institutions that received refinance under the MUDRA scheme are: SKS Microfinance, Ujjivan Financial Services Pvt. Ltd. and Equitas Microfinance Pvt. Ltd.

### Objective of the Study:

1. To know the product offering PMMY.
2. To study the objective and role of PMMY in India.
3. To analysis the loan sanction under different Mudra product to small business units.

### Research Methodology:

The study is based on secondary data. Like different books, economic survey, newspapers and relevant websites have been consulted in order to make the study an effective one.

### Pradhan Mantri Mudra Yojana (PMMY):

PMMY aims to bank the unbanked. The objective of PMMY is to support the entrepre-

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वाणिज्य विभाग, आनंदराव धोंडे ऊर्फ बाबाजी महाविद्यालय, कडा ता. आष्टी जि. बीड

प्रास्ताविक :

मानवाचा इतिहास पाहिला असता असे लक्षात येते की, मानवी संस्कृतीच्या जवळजवळ ९५ % कालावधीत मानव निसर्गाचाच एक भाग म्हणून अस्तित्वात होता, परंतु इतर प्राण्यांच्या तुलनेत माणसाचे स्थान वेगळे ठरले. मानवाकडे असलेली बुद्धिमत्ता, कल्पनाशक्ती, स्मरणशक्ती व वाचाशक्ती याचमुळे कदाचित इतर प्राण्यांप्रमाणे निसर्गाशी मिळतेजुळते घेण्यापेक्षा मानवाने नैसर्गिक घटकांवर ताचा मिळवण्याचा सतत प्रयत्न केल्याचे दिसून येते.

मानवाने याच नैसर्गिक विविधतेचा उपयोग आपल्या विविध व्यवसायाच्या विकासासाठी केलेला दिसतो. पृथ्वीचा व पृथ्वीवरील साधन संपत्तीचा उपयोग वेगवेगळ्या पातळींवर केलेला आढळतो. काही ठिकाणी संपूर्णपणे निसर्गावर अवलंबून असलेली शेती तर दुसरीकडे अतिप्रगत तंत्रज्ञानाच्या सहाय्याने व्यावसायिक स्वरूपाची शेती आढळते. शेतीच्या क्रांतीनंतर अठराव्या शतकाच्या मध्यात औद्योगिक क्रांतीचे वारे जगभर धुमु लागले. याच सुमारास लोकसंख्या वाढीस सुरुवात झाली. वाढत्या लोकसंख्येबरोबरच मागणी वाढीस लागली. त्यामुळे अधिकाधिक मागणी पुरविण्यासाठी उद्योग वाढले. औद्योगिककरणामुळे साधनसंपत्तीचा वापर प्रचंड प्रमाणात वाढला. नगरे व शहरांचा विकास व वाढ झाली. मानवाचे राहणीमान उंचावले. गरजा संपून ऐश्वर्यसंपन्न आयुष्याकडे वाटचाल वेगाने होऊ लागली. या सर्व गोष्टी पुरविण्यासाठी नैसर्गिक संपत्तीचा अधिकाधिक वापर अविवेकी पद्धतीने सुरू झाला. निसर्गातील मूलभूत संपदा. उदा. मृदा, पाणी, हवा, वनस्पती, खनिजे इत्यादी वरील ताण अतिरेकी पद्धतीने वाढला. यामुळे नैसर्गिक चक्रामुळे कार्यरत असलेल्या पृथ्वीवरील जैविक परिस्थितिक व्यवस्थेवर मोठा तणाव निर्माण झाला.

अणुऊर्जा प्रकल्पामधून होणारे किरणोत्सर्जन सजीव सृष्टीला हानीकारक ठरत आहे. उदा. रशियातील चेर्नोबील येथील अणुऊर्जा केंद्रातून २८ एप्रिल १९८६ रोजी झालेले किरणोत्सर्जन. रसायन उद्योगातील तांत्रिक बिघाड किंवा मानवाचा निष्काळजीपणा यामुळे विपारी वायुगळती होऊन सजीव सृष्टीवर गंभीर परिणाम होतात. उदा. डिसेंबर १९८४ मध्ये भोपाळ येथील युनियन कार्बोइडच्या कारखान्यातून मिथिल आयसोसायनाइड या विपारी वायूची गळती होऊन त्याच्या प्रादुर्भावामुळे तेथील हजारो लोक मृत्युमुखी पडले. अनेकांना कायमचे अंधत्व किंवा अपंगत्व आले. औद्योगिक प्रदूषकांमुळे ऑक्सिजन चक्र, कार्बन चक्र, जलचक्र व पर्यावरण यांच्यात असंतुलन निर्माण झाले आहे. औद्योगिक



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## **“Social Entrepreneurship in India- Opportunities and Challenges in the Current Scenario.”**

**Dr.D.B.Borade**

Assist. Professor Department of commerce

Anandrao Dhonde Alias Babaji Mahavidyalaya Kada,Tal-Ashti;

Dist-Beed-414202 (MS)

### **ABSTRACT:**

Social entrepreneurship is a topic of growing interest among academicians and practitioners. The potential of social problems in India is well known, but the degree of support and interest is hardly significant. An entrepreneurial mindset is re-emerging in India. Right from ancient times, India has been entrepreneurial. But the era of liberalization of late had released the genie from the bottle – the suppressed urge and natural instincts of our effervescent entrepreneurial class has once again been unleashed. The opening up of the industrial sector to foreign competition had created a flutter among the Indian industrial circles. The paper attempts to shed light on the comment state of affairs on the theme of challenges and opportunities facing the social entrepreneurship scene in India.

(**Keywords:** social entrepreneurship, challenges, problems, opportunities.)

### **INTRODUCTION**

The economic development of a Nation depends on its industrial development. The industrial development is based on the entrepreneurial competencies of the people. Entrepreneurs are innovative, highly motivated, and critical thinkers. When these attributes are combined with a drive to solve social problems, a social entrepreneur is born. Social enterprises are the organizations which aim their efforts toward improving the general welfare of society and they apply market-based strategies to achieve a social purpose. Social entrepreneurs and social enterprises share a commitment of going ahead with a social mission of improving society. There is a great difference between social entrepreneurs and nonprofit organizations on the basis of their goals and objectives. Social entrepreneurs are driven by social as well as financial goals whereas non-profit organizations work purely for social purpose. An understanding of whether and how social entrepreneurship differs from processes and activities by political actors or social activists who also aim to bring about social change or alleviate social problems. In a nutshell, the concept of social entrepreneurship is still poorly defined and its boundaries to other fields of study are still fuzzy. While to some this may appear to be a problem, we see it as a unique opportunity for researchers from different fields and disciplines, such as entrepreneurship, sociology and organizational theory, to challenge and rethink central concepts and assumptions.

The entire mechanism of social entrepreneurship remains same as economic entrepreneurship, except few distinctions, which set apart this from conventional or economic entrepreneurship. India has been in need of social entrepreneurship for a very long time and could be benefited more. Some social enterprises which are established in India are changing the very face of society by balancing the social imbalance. Government of India also encourages such initiatives by motivating them and awarding them time to time along with





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→ Implementation of employed oriented plans.

The above mentioned suggestions can be accepted for minimizing urban population pressure and broken down being migration towards urban area. The present travelling government, for creating self employment there are many plans underlying as well as for this action ton system also implementing.

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□□□

08

## AGRI-ENTREPRENEURSHIP: A KEY FOR ECONOMIC DEVELOPMENT OF MARATHWADA

Dr.D.B.Borade

Assist. Professor, Department of commerce,  
Anandrao Dhonde Alias Babaji Mahavidyalaya  
Kada, Tal-Ashti, Dist-Beed(MS)

\*\*\*\*\*

### INTRODUCTION

Agriculture is historically seen as a low-tech industry with minimal complexities dominated by numerous small family businesses that are mostly focused on doing better things rather than doing new things. Due to economic liberalization, decreased regulation of agricultural markets and a rapidly changing, more sensitive, environment, this situation has changed drastically over the last decade. Agricultural industries are regularly being enforced to adjust to market vagaries, evolving consumer habits, improved environmental regulations, new product quality requirements, chain management, food safety, sustainability, and so on. Such developments have paved the way for investment in new entrants, creativity and the portfolio.

This research paper is aimed at understanding the concept of Agri- Entrepreneurship and its need for developing it in Marathwada. This paper describes the challenges involved in developing Agri- Entrepreneurship in Marathwada region and explains various entrepreneurial opportunities for developing it in Marathwada. It aims to study the role of Agri-Entrepreneurship in Economic Development of Marathwada.

#### Objective of the study:

1. To study basic concepts of Agri- Entrepreneurship.





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# A Study of impact of GST on Buying Decision of Customers with Special Reference to Electronic Goods.

Deepali Pagare, Dr. Dileep Borade Sir

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, Maharashtra Department of Commerce  
Assistant Professor, Department of Commerce, A.D College, Kada, District Beed.

Corresponding Author: Deepali Pagare

Date of Submission: 26-07-2020

Date of Acceptance: 06-08-2020

**ABSTRACT :** In this new era lots of electronic appliances have become part of basic needs. Every household has a fridge, washing machine, vacuum cleaner etc for basic need. In this research paper we studied the impact of GST on purchase decision of electronic goods. Consumer behavior is depending upon the consumer's choice and need. Consumer Buying behavior totally depend on consumer's attitudes, preferences, intentions and decision regarding the consumer's behavior in the market place while purchasing the product or service. This study examined the impact of GST on buying decision of customers of electronic goods after GST implication in India.

**Keywords:** Goods and Services Tax, Purchase Decision, Consumer Behavior, Behavior Perception, Electronic Goods.

## I. INTRODUCTION

Buying decision of consumer is depend on psychological process that consumer go through in recognizing need and then consumer find a way to solve these need and think about to purchase (whether purchase or not purchase) whenever a person have to purchase something he search lot's of thing and then select a think to purchase. The decision of purchase impact by different factors like age, mood, choice, time, social as well as physical factors. The implementation of GST Goods and Services Tax is definitely affecting the decision of purchase. Tax is big factor that a person considers before purchase. It has been 2 years since the implementation of GST, still there is difficulty in understanding the tax system as well as they have different perception on taxes on consumption. The GST made rates of goods and services cheaper. People still are not familiar with GST and are confused about the rates of GST.

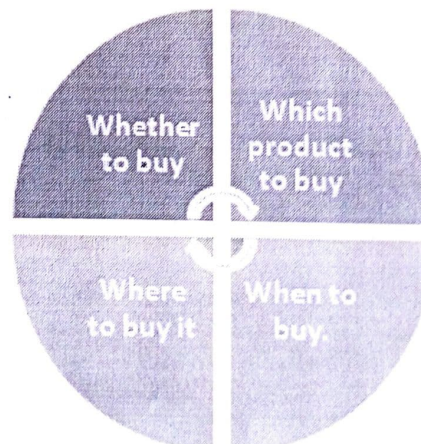
The following is the list of indirect taxes Before GST regime:

- Central Excise Duty

- Duties of Excise
- Additional Duties of Excise
- Additional Duties of Customs
- Special Additional Duty of Customs
- Cess
- State VAT
- Central Sales Tax
- Purchase Tax
- Luxury Tax
- Entertainment Tax
- Entry Tax
- Taxes on advertisements
- Taxes on lotteries, betting, and gambling

## Concept of Consumer Behaviour

Consumer behavior involves the psychological processes that consumers go through recognizing needs, finding ways to solve these needs, making purchase decisions (e.g., whether or not to purchase a product and, if so, which brand and where), interpret information, make plans, and implement these plans (e.g., by engaging in comparison shopping or actually purchasing a product).

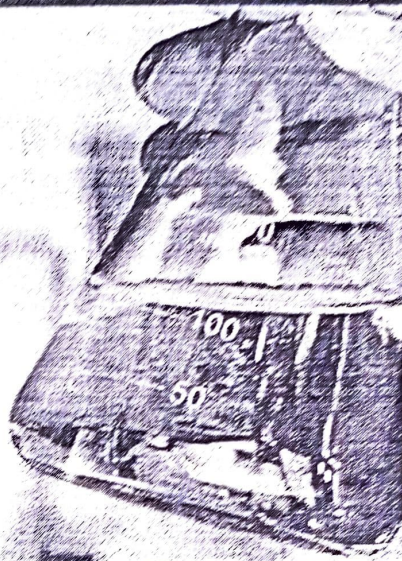






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## An Analytical Study of perception of consumer behavior after Corona (Covid-19) pandemic

Deepali Pagare, Dr. Dileep Borade

*Department of Commerce Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, Maharashtra  
Assistant Professor, Department of Commerce, A.D College, Kada, District Beed.  
Corresponding Author: Deepali Pagare*

Date of Submission: 10-08-2020

Date of Acceptance: 25-08-2020

**ABSTRACT:** The corona virus (Covid-19) disease first identified in Wuhan, China. Right now various countries in the world are dealing with corona. The total world has been stopped because of corona. As well as there are serious implication impose on people. Covid-19 is significantly impacting business, services, social life and economy. Corona stopped all economic activities as there is no vaccine or any other proper medicine.

**Keywords:** Corona, Covid-19, Pandemic, Purchase Decision, Consumer Behavior, Behavior Perception, sanitization, Medical Equipment, Disease, Electronic Gadgets, Occasion, Psychology, Demand.

### I. INTRODUCTION

#### Corona Virus Disease (Covid-19):

As per WHO corona virus disease (covid-19) is an infectious disease caused by newly discovered corona virus. Most of people infected with the Covid-19 virus will experience mild to moderate respiratory illness and recover without requiring treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness. The Covid-19 virus spreads primarily through droplets of saliva or discharge from nose when an infected person cough or sneeze, so it important that you also practice respiratory etiquette.

At this time, there is no specific vaccine or treatment for Covid-19. However, there are many ongoing clinical trials evaluating potential treatments.

#### Buying Decision

Every person has need and choice. Buying decision change or varies by person to person. It is depend upon the need. As some purchase decision are less important like purchasing of toothpaste, soap, Clothes, etc. And Purchase decision regarding Car, House, A.C, T.V, jewelry and other

Electronic Gadgets is more important and it take more time to choose. Buying decision of consumer is depend on psychological process that consumer go through in identify need and then consumer search a way to solve these need and think about to purchase (whether purchase or not purchase) whenever a person have to purchase something he search lot's of thing and then select a think to purchase. The decision of purchase impact by different factors like age, mood, choice, time, social as well as physical factors.

#### Factors affecting on Buying Decision

- ❖ Cost of Products
- ❖ Benefit of Products
- ❖ Discount Receive at the time of purchase
- ❖ Need or Requirement of Products
- ❖ Age of consumer as, Teenager, Young, Adult, Middle Age, Old Age
- ❖ Gender of consumer
- ❖ Choice of consumer
- ❖ Occasion like Diwali, Holi, Christmas, Eid, Makarsankranti etc.
- ❖ Life style of consumer
- ❖ Perception of consumer (person)
- ❖ Belief and attitude of consumer
- ❖ Psychological factor
- ❖ Social factors

#### Concept of Consumer Behavior

Consumer behavior involves the psychological processes that consumers go through recognizing needs, finding ways to solve these needs, making purchase decisions (e.g., whether or not to purchase a product and, if so, which brand and where), interpret information, make plans, and implement these plans (e.g., by engaging in comparison shopping or actually purchasing a product)

#### Stages of consumer decision making process



Al-Hakimi, Mohammed A.; Borade, Deleep B.

## Article

# The impact of entrepreneurial orientation on the supply chain resilience

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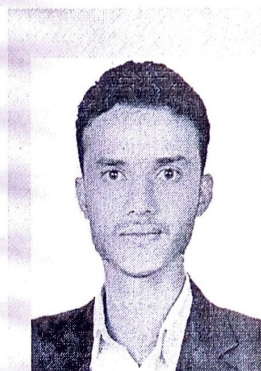
## MANAGEMENT | RESEARCH ARTICLE

# The impact of entrepreneurial orientation on the supply chain resilience

Mohammed A. Al-Hakimi<sup>1\*</sup> and Deleep B. Borade<sup>1</sup>

**Abstract:** Despite the great interest that the concept of Supply Chain Resilience (SCR) has received over the past few years, empirical research examining its antecedents still limited, especially, in the context of small and medium enterprises (SMEs) in developing countries, like Yemen. Based on the resource-based view (RBV) and dynamic capabilities theory (DCT), this paper examines the impact of entrepreneurial orientation (EO) on SCR. Based on a research framework, a self-administered questionnaire was used to collect data from a sample consisted of 217 SMEs owners/or managers. A structural equation model was used to test the relationships in the proposed model. The results obtained appear that EO has a positive and significant effect on SCR of SMEs through its dimensions represented by innovativeness, risk-taking, and proactiveness, as opposed to autonomy that demonstrated a negative impact on SCR, while the effect of competitive aggressiveness was insignificant. These findings provide advantageous insights for SMEs, especially in the Yemeni manufacturing sector, which pursuing to be resilient towards any disturbance that may lead to disruption in their supply chains by adopting EO.

**Subjects:** Development Studies; Economics; Business, Management and Accounting



Mohammed A. Al-Hakimi

## ABOUT THE AUTHORS

Mohammed A. Al-Hakimi is currently a PhD. scholar at the department of management, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, India. He is working as a senior lecturer in the department of Marketing & Production of Tamar University, Yemen. His research interests are supply chain management, production & operations management, innovation, and strategic management.

Dileep B. Borade is currently an assistant professor at the Department of Commerce, Dr. Babasaheb Ambedkar Marathwada University. His research interests are financial management, corporate accounting, entrepreneurship and innovation. He has published several papers. He has participated in several international and national conferences.

## PUBLIC INTEREST STATEMENT

Nowadays, the pursuit to adopt supply chain resilience for SMEs is a fateful issue and firms are making an effort to attain this goal. Hence, entrepreneurial orientation (EO) can be the best approach lead to improve supply chain resilience. EO not only mitigates environmental disruption and uncertainty but also enables the firms' to adapt to them. EO typically includes the decision-making status at the firm level, strategy-formulation process, and allocates resources to find out, invest new opportunities in order to grow. This study provided evidence showing that EO has a positive and significant impact on the supply chain resilience for SMEs, and also supported the argument that entrepreneurial activities play a critical role in the turbulent business environment in terms of anticipation, preparation, adapt to those disturbances, especially in light of the opportunities that constantly emerging in the market side by side with the uncertainty conditions, which may motivate SMEs to adopt EO.





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# A STUDY ON PRODUCT ADAPTAION PROCESS IN AUTOMOBILE INDUSTRY

**Dr. DILEEP BORADE<sup>1</sup> & NAMDEO K SHELKE<sup>2</sup>**

*<sup>1</sup>Professor and Head, Anandrao Dhonde Alias Babaji Mahavidyalaya Kada,*

*Dist- Beed, Maharashtra, India*

*<sup>2</sup>Research Scholar - Babasaheb Ambedkar Marathwada University (BAMU) Aurangabad,  
Maharashtra, India.*

## 1 Abstract

*Product adaptation involves changing the product to meet local conditions or preferences. There are several levels of adaptation. Although, products are frequently adapted to local tastes, in some instances they must be adapted to local superstitions or beliefs, too. Governmental regulations, Technological considerations, Cultural imperatives acceptable to Consumers, Measurement standards like volume, length, weight, quantity aesthetics and dimensions of vehicle are some of the very significant factors affecting product adaptation process in automobile manufacturing companies.*

*Developing new innovative products within the automotive industry means investing huge sums beforehand. Companies doesn't know if the merchandise are going to be successful on the market after launch. Hence, companies have an interest in knowing and measuring the critical success drivers within the event steps. This research is aimed to understand the product adaptation process and its impact on the operating cost and revenue of the automobile manufacturing companies. The study will highlight the relationship between importance give for product adaptation practices and its impact on operating cost and revenue growth of automobile companies.*

**Keywords:** *Product Adaptation, Revenue Growth, Operating Cost, Automobile Companies.*

## 2 Review of Literature

World trade and investment have grown rapidly, with many attractive markets opening up. The number of global companies also grows dramatically. To compete in foreign market, companies that operate in global markets need to broaden the sources of competitive advantage relentlessly over time.

Although most of the multinational companies using global marketing have been highly successful, it does not mean that all elements of the marketing mix, that is product, pricing, promotion and distribution are standardized. In contrast, business can make some elements of marketing more global and others less so.

Accordingly, the global organization needs to evaluate and provide possible adaptations related to product, promotion, price, and distribution when they enter through the foreign markets.





## Research Article

### PHYTOCHEMICAL, ANTIMICROBIAL ACTIVITY OF DIFFERENT EXTRACT OF *DALBERGIA SISSOO* LEAVES

Ghumare Pramila, Dattatraya Jirekar \*

Anandrao Dhonde Alias Babaji Mahavidyalaya Kada, India

\*Corresponding Author Email: dattajirekar1@gmail.com

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#### ABSTRACT

Traditional system of medicine consists of a greater number of plants with different medicinal and pharmacological benefits and hence represents a valuable tank of new bioactive molecules. In the present investigation, *Dalbergia sissoo* plants were collected from kada, District Beed, which is used widely as traditional medicine in the treatment. The study was carried out to evaluate the phytochemical and potential antimicrobial activity against five types of bacteria (*Staphylococcus aureus*, *Salmonella typhimurium*, *Proteus vulgaris*, *Pseudomonas aeruginosa* and *megaterium*) and two fungi (*Aspergillus niger* and *Aspergillus flavus*) of five extracts. To assess the antimicrobial activity of five extracts by using Cylinder plate or cup plate method. The obtained results showed a potential effect as maximum zone of inhibition was 8 mm, 7mm and 6 mm in aqueous, ethanol and acetone extract respectively.

**Key words:** *Dalbergia sissoo*, phytochemical, antibacterial activity.

#### INTRODUCTION

From old days to recent civilization, human beings are depending on nature for running their life smoothly from day to day. Plants remain a main source of drugs and now a day's much emphasis have been given to nutraceuticals. The role of traditional medicines in the solution of health problems is invaluable on a world level. Medicinal plants continue to supply valuable therapeutic agents, both in modern and in traditional medicine<sup>1</sup>. The side effects of the modern medicine as well as traditional medicines are gaining importance and are now being studied to find the scientific basis of their therapeutic actions<sup>2</sup>. Research work on medicinal plants has more intense and information on these plants has been exchanged. Research work will go a longer way in the scientific exploration of medicinal plants for the benefit of man and is likely to decrease the dependence on synthetic drugs<sup>3</sup>. Herbal drugs are used in traditional methods of treating the diseases worldwide. Several types of medicinal plants are existing in the nature and are effective in treating different type of diseases<sup>4</sup>. Herbal medicine is a success of popular therapeutic diversity. In recent times there has been a tremendous increase in the use of plant-based health products in developing as well as developed countries, resulting in an exponential growth of herbal products globally<sup>5</sup>. Many species of *Dalbergia* are important timber trees, valued for their decorative and often fragrant wood, rich in aromatic oils<sup>6</sup>. The most famous of these are the rosewoods, so named because of the smell, but several other valuable woods are yielded by the genus<sup>7</sup>. The scientist's Swedish brothers Nils and Carl Dalberg, who lived in the 18<sup>th</sup> century gives generic name *Dalbergia* honors. The plant is native to India; it is the state tree of Punjab (India). The plant is used in treatment of leprosy, jaundice, gonorrhea and syphilis etc.

#### TRADITIONAL USES

Different parts of *Dalbergia sissoo* are traditionally used in treating different diseases. Sissoo oil extracted from seeds is used to treat blue itching, burning on the skin, and scabies. Leaves: Finely ground paste of 8-10 leaves of sissoo and 25 g of palm candy taken in the morning alleviates profuse menstruation. 50-100 ml decoction of the leaves taken thrice in a day is useful in Painful micturition and to cure boils and pimples. 10-15 ml juice (leaves) taken thrice in a day helps in eliminating pus in urine and in treating jaundice. The leaves warmed and tied on breast and consuming the decoction of the leaves removes swelling of the breast. The 3 to 6 g. bark powder or decoction of the leaves is most useful in gonorrhea. Decoction of the bark and leaf is used in leprosy. Make a decoction of 10gm sissoo bark with 500 g of water and it should be boiled till the liquid reduces to half. Mix the juice of the bark and consume for forty days every morning which helps in leprosy<sup>8</sup>.

#### MATERIAL AND METHOD

The fresh leaves of *Dalbergia sissoo* are collected from Kada, District Beed. The fresh leaves were dried under shade, powdered and pass through 40 mesh sieve and stored in closed bottle for further use. The powder was extracted with water, ethanol, chloroform, and acetone and petroleum ether by Soxhlet apparatus. Phytochemical analyses were carried out for all the extract as per the standard methods<sup>9</sup>.

#### ANTIMICROBIAL ACTIVITY

Bacterial and fungal strains: The test organisms were purchased from NCIM, NCL Pune. Bacteria were incubated at 37°C in incubator for 24 hrs. They were further stored at 4 °C in the refrigerator to maintain stock culture. Here qualitative



## Comparative study of adsorption capacity of matki seed husk for the removal of congo red, crystal violet, and methylene blue from aqueous solution

Dattatraya Jirekar<sup>1</sup>, Pramila Ghumare<sup>2</sup>

<sup>1,2</sup> Anandrao Dhonde Alias Babaji College, Kada. (INDIA)

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### ABSTRACT:

Many industries such as paper, food, cosmetics, textiles etc. use dyes in order to colour their products. The presence of Congo red, Crystal violet and Methylene blue dyes in water even at very low concentration is highly visible and undesirable. The degradation by-products of organic dyes have dangerous impacts on the environment. The ability of the low cost materials viz. matki seed husk (MtSH) powder to remove Congo Red (CR), Crystal Violet (CV), and Methylene Blue (MB) dyes in aqueous solution was studied by using batch adsorption process. Effect of contact time, adsorbent dosage (g/L), pH, salt and effect of temperature were studied in batch technique and results showed that amount of the dye adsorbed increases with increase in contact time and adsorbent dosage studied. The extent of adsorption was strongly depends on pH of solution, free energy of adsorption ( $\Delta G^\circ$ ), enthalpy ( $\Delta H^\circ$ ), and entropy ( $\Delta S^\circ$ ) changes were calculated. Equilibrium adsorption isotherms and kinetic were investigated. The experimental data were analyzed by the Langmuir and Freundlich models and the isotherm data fitted well to the Freundlich isotherm. The kinetic data obtained were analyzed using a pseudo-first order and pseudo-second-order equation. The experimental data fitted very well the pseudo second-order kinetic model.

**Key words:** Adsorption, Matki seed husk, Dyes, Adsorption isotherm, Equilibrium kinetics, etc.

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## Review Article



## A Review on Pharmacological Properties of *Aegle marmelos*

Ghumare Pramila, Dattatraya Jirekar\*

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\*Corresponding author's E-mail: [dattajirekar1@gmail.com](mailto:dattajirekar1@gmail.com)

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*Aegle marmelos* (Rutaceae) may be a vital ayurvedic tree plant referred to as Bael. *Aegle marmelos* is best referred to as the wooden fruit tree. It's a medium-sized tree that grows throughout the Indian forest at 1200 feet. It's found throughout India, from the Himalayan forest to Bengal, central and southern India. The varied components of this plant contain variety of coumarins, alkaloids, sterols and essential oils. Various parts of this plant like leaves, roots, seeds, bark and fruit, contain antioxidant, antimicrobial, antiviral, anti-micro filarial, antiarthritis, antithyroid, analgesic, anti-inflammatory, anticancer, antidiabetic, antiulcer, wound healing and contraception. Various pharmaceutical properties are reported in these books on the important skills of *Aegle marmelos*.

**Keywords:** *Aegle marmelos*, Pharmacological properties.

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hepatoprotective activity, haemolytic activity, larvicidal activity and anti-inflammatory activity etc.

**Table 1:** Scientific classification of *Aegle marmelos*<sup>3</sup>.

<b>Kingdom:</b> Plantae
<b>Order:</b> Sapindales
<b>Family:</b> Rutaceae
<b>Subfamily:</b> Aurantioideae
<b>Genus:</b> <i>Aegle</i>
<b>Species:</b> <i>A. marmelos</i>
<b>Nomenclature:</b> <i>Aegle marmelos</i> (L.) Corr. Serr.

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6	Modjo	Javanese
7	Oranger du Malabar	French
8	Ohshit, opesheet	Burmese
9	Mapin, Matum, Tum	Thai
10	Shreephala, Bilva, Bilwa	Sanskrit
11	Bel, Shreefal	Bengali
12	Kaveeth	Marathi
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## Phytochemicals and Antioxidant Activity Investigation of *Butea monosperma* Lam. Leaves Ethanol Extract

Bhimraj Gawade I<sup>1\*</sup>, Samreen Fatema II<sup>2</sup> and Digambar D. Gaikwad III<sup>3</sup>

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### Abstract

The aim of this study was to investigate phytochemicals and antioxidant activity of plant *Butea monosperma* Lam. leaves ethanol extract. The different extracts of this plant were reported the rich source contents of bioactive phytochemicals in the leaves and afford for various pharmacological activities. The ethanol extract of leaves was subjected to investigate phytochemicals and antioxidant activity by using DPPH in vitro system. The provided evidence of results concluded that the ethanol extract of *Butea monosperma* Lam. leaves are potential sources of natural bioactive phytochemicals and showed potent in vitro antioxidant activity with their IC<sub>50</sub> value of 44.16 µg/ml. Therefore phytochemical investigation of plant leaves ethanol extract was noted various bioactive phytochemicals, which may serve as a potent source of natural antioxidants.

**Keywords:** *Butea monosperma* Lam., phytochemical, pharmacological, antioxidant.

### Introduction

The antioxidant activity has been reported to prevent oxidative damage caused by free radicals generated due to metabolic action of body and it is used in curing various human diseases related to disorders of oxidative stress. The potent antioxidant activities exhibited by traditionally used medicinal plants due to the presence of phenolic compounds and flavonoids. This type of medicinal plants can act as effective source of natural scavengers in preventing oxidative damages caused by the free radicals [1].

Widely distributed phenolic compounds in medicinal plants [2] have been gained much attention, due to their radical scavenging activity. The presence of bioactive phytochemicals in the ethanolic extract of *Butea monosperma* Lam. plant showed potential antioxidant activity [3]. The broad information about bioactive phytoconstituents, ethnopharmacology along with the traditionally claimed medicinal use different parts of *Butea monosperma* Lam. plant [4] has been widely used as curative agents for variety of ailments [5]. Physicochemical analysis of leaves has been reported presence of sterols, triterpenes, glycosides, flavonoids and proteins [6]. Hence this plant shows various types of pharmacological activities, which may be due to the presence of the investigated active chemical constituents [7].

When antioxidant agents added in foods, it reduces rancidity, retard the formation rate of toxic oxidation products and increases life of patients. These antioxidants may help to relieve from oxidative stress. The antioxidant activity of *Butea monosperma* Lam. medicinal plants extracts has been extensively studied by researchers and reported significantly. This plant might be helpful in preventing and slowing the process of diseases involved as result of oxidative stress related disorders [8].

Therefore, traditional uses and medicinal importance of medicinal plant system, the present study was carried out to investigate phytochemicals and the antioxidant activity of leaves ethanol extracts of *Butea monosperma* Lam.





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## RESEARCH ARTICLE

### EVALUATION OF ANTIOXIDANT POTENTIAL AND PHYTOCHEMICALS OF *BALANITES AEGYPTIACA* (LINN.) LEAF EXTRACT

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#### ABSTRACT

Leaf of *Balanites aegyptiaca* (Linn.) plant have been used as traditional folk medicines especially in Africa and southern Asia in the form of juice to treat diarrhea, curing anthrax, dysentery, cuts and clean malignant wounds. So this study is intended to evaluate the antioxidant potential and phytochemical contents in *Balanites aegyptiaca* (Linn.) leaf ethanol extract with GC-MS analysis and qualitative method according to standard protocol. Antioxidant potential of ethanol extract was found to be significant with IC<sub>50</sub> value  $37.61 \pm 0.64$   $\mu\text{g/mL}$  using DPPH (2, 2-Diphenyl-1-picryl hydrazyl) free radical scavenging assay method. The presence of various bioactive phytochemical contents in *Balanites aegyptiaca* (Linn.) leaf ethanol extract like carbohydrate, protein, amino acids, glycoside, tannins, saponin, flavonoids and phenolic compounds were found to be positive. The GC-MS analysis was carried out for the identification of active compounds in the extract and reported 12 phytochemicals, which are responsible for antioxidant activity. This evaluation revealed the antioxidant potency of leaf extract and its content active compounds role in reducing of oxidative stress related complications.

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## INTRODUCTION

*Balanites aegyptiaca* (Linn.) is a drought tolerant perennial tropical ever green plant belongs to family Zygophyllaceae (Balanitaceae) and traditionally known as desert date. The *Balanites* name originally derived from the Greek word which means fruit resemble acorn (Gupta S.C. et al., 2012) and also known by different vernacular names in various countries. It is native to arid and sub arid part of Africa and Middle East especially Arabian Peninsula, but most widely in various parts of Africa and South Asia (Al-Thobaiti & Abu Zeid, 2018). *Balanites aegyptiaca* (Linn.) is multipurpose plant used for food and fodder in different regions of Africa and South Asia (Elseed et al., 2002). Among the various parts of *Balanites aegyptiaca* (Linn.) plant, fleshy pulp of the fruit is eaten and also used as a food, beverage, & medicines (National Research Council, 2008). All part of *Balanites aegyptiaca* (Linn.) has several bioactive phytochemical contents, which possess miscellaneous medicinal properties by possessing an effect on causes of a reaction or trigger of a response in the living tissue (Abdelkarim et al., 2014).

The bark, fruit and oil of tree have been widely used to treat various disease or disorders such as cancer, tuberculosis, malaria, diabetes, sleeping sickness, wounds, colds, syphilis, liver and spleen disorders, jaundice, yellow fever, snake bite and aches (Al-Thobaiti S. A. and Abu Zeid I. M., 2018; Mohamed Hussain S.A. et al., 2019). The extract of root bark has been used in diarrhoea, haemorrhoid and also acts as a fish poison (Bukar A. et al., 2004). *Balanites aegyptiaca* (Linn.) fruits have various primary and secondary metabolites such as alkaloids, tannins, steroids, glycosides, flavonoids, furanocoumarin, saponins, fixed oil protein, fat, carbohydrates and vitamin C (Datti Y. et al., 2020). Along with this it has various electrolytes or minerals such as calcium ions, iron, magnesium, phosphorus, zinc, copper and potassium ions (Stadlmayr B. et al., 2013). Though already some traditional information is available about the *Balanites aegyptiaca* (Linn.) plants and review has been intended on various aspects of ethnopharmacology and phytochemistry of *Balanites aegyptiaca* (Linn.). Almost all the parts of *Balanites aegyptiaca* plant are traditionally used in several folk medicines (Yadav J. P. and Panghal M., 2010; Chothani D. L. and Vaghasiya H. U., 2011; and Saboo et al., 2014). This evaluation study focus on the antioxidant potential and phytochemicals present in leaf extract of *Balanites aegyptiaca*

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## STUDIES ON COMPOSITION AND COMPONENTS OF ASCOSPORES BELONGING TO ASCOMYCETS OVER SUNFLOWER FIELDS

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### Abstract

Present paper deals with the aerobiological investigation over Sunflower fields by using Volumetric continuous Tilak Air Sampler was employed for exploring fungal ascospores over a Sunflower field at Kada, Taluk-Ashti and District-Beed. 5<sup>th</sup> July to 30<sup>th</sup> September 2003 for second kharif season and 10<sup>th</sup> November 2003 to 29<sup>th</sup> February 2004 for rabi season. During the present studies composition & component of the ascospores belonging to ascomycetes over the Sunflower field was studied. For this study of spore catches were prepared, mounted and spore scanning was carried out regularly. Fifteen types of fungal spores belonging to the ascomycetes were trapped during second Kharif and First Rabi season. Apart from these various dust particles were also seen in abundance.

**Keywords:** Airspora, Ascomycetes, Air Sampler, Sunflower field.

### Introduction

Aerobiology is an interdisciplinary science which deals with the study of biological component like pollen grains, fragments of fungal spores, hyphal fragments, bacteria, viruses, algae, lichens, minute insects & insect parts, protozoanycyst, etc. In the atmosphere a biotic particulates & gases affecting living organisms have been recently included in the concept of aerobiology. The aerobiological studies are mainly concern with interrelationship between the biological component in the atmosphere, source of biological component, their release in the atmosphere, their deposition & impact on health of plants & animals including human beings. Airborne infections & the resulting diseases threaten the lives & productivity of plants. Airborne diseases still pose a challenge to mankind. The role of fungi in causing diseases to crop plants, man, domestic animal, in bringing deterioration of food grains in storage, valuable monuments has been subject of great interest for long time. Standing vegetation has a great influence of aerospora of any place and it changes with changes in weather. Aerobiological survey conducted in various part of India revealed richness of aerospora. Sunflower (*Helianthus annuus* L.) is one of the most important oil seed crops being grown all over the world. It is mainly grown for its oil, which is generally for culinary purposes in preparation of vanaspati and in manufacture of soaps and cosmetics. The sunflower oil is chemically a triglyceride. It contains 68% linoleic acid, so it is especially recommended for patients having heart troubles. Sunflower seed cake or meal is a protein rich feed and is used as a concentrate for cattle, animals like pig, sheep, goat and poultry feed. Sunflower is native of North America. In

Germany and Russia it is grown on large scale. Now a day's sunflower crop cultivation has become more popular among the farmers of Marathwada region. As considering survey of this crop that since last few years sunflower is subjected to various type of fungal diseases which may be soil borne, seed borne, airborne. However detail studies on Aerospora over the sunflower field in respect to the seasonal conditions are meagre. Considering these facts studies on Aerospora belonging to ascomycetes over the sunflower field is carried out.

### Materials and Methods

Continuous Volumetric Tilak air sampler (Tilak and Kulkarni 1970) was installed in the sunflower fields of a constant height at 1.5 meters above the ground level at Kada, Taluk-Ashti, District-Beed. From 5<sup>th</sup> July to 30<sup>th</sup> September 2003 for second Kharif season and 10<sup>th</sup> November 2003 to 29<sup>th</sup> February 2004 for Rabi season. The air was sampled at the rate of 5 liters/minute which left traces of deposition over the cellophane tape, affixed on the outer surface of drum. The slides were prepared after eight days and scanned regularly. The identification of spores was done which was based on visual characteristic of spores such as shape, size, colour, wall structure and ornamentation etc. The daily record of meteorological data was regularly maintained.

### Results and Discussion

Analysis of spore catches from the result presented in table I revealed that fifteen types of fungal spores belonging to the ascomycetes were trapped on the cellophane tape fixed on the drum of the sampler during second kharif and first rabi season.

**Table :** Total spore concentration and percentage contribution of during two different seasons

Sr. No.	Spore Type	Season's total fungal spore conc/m <sup>3</sup> in air		% contribution of fungal spores in season's total airspora	
		Kharif	Rabi	Kharif	Rabi
	<b>Ascomycotina</b>				
1)	Chaetomium	434	630	0.08	0.11
2)	Claviceps	210	350	0.04	0.06
3)	Didymospharia	6272	1414	1.23	0.26
4)	Hypoxyton	1400	2296	0.27	0.41



5)	Hysterium	1316	1484	0.26	0.27
6)	Lecanidion	168	42	0.03	0.01
7)	Leptosphaeria	3794	10654	0.74	1.92
8)	Massarina	168	140	0.03	0.03
9)	Melanospora	1064	1218	0.21	0.22
10)	Parodiella	322	280	0.06	0.05
11)	Pleospora	742	1106	0.15	0.20
12)	Pringsheimia	70	-	0.01	-
13)	Rossellinia	-	28	-	0.01
14)	Sporomia	532	28	0.10	0.01
15)	Teichospora	434	154	0.08	0.03

Enumeration of the identified spores of fungi belonging to the ascomycetes over the sunflower field for Second Kharif season and First Rabi season.

**(1) Chaetomium Kunz ex Fr.**

Spores are dark one celled, lemon shaped, tapering at both ends. Their contribution to the total airspora was recorded as 0.08% and 0.11% during the second Kharif season and first Rabi season. The Maximum Monthly Mean Concentration ( $224/m^3$  and  $154/m^3$ ) was recorded in the month of August 2003 & December 2003.

Gaikwad (1974) reported 0.04% spores from Ahmedpur. Mane (1978) reported 0.15% spores from Vaijapur; Jogdand (1987) reported the spores over the Jowar field at Aurangabad. Mali (2002), Gopan (2004) and Pathare (2005) recorded these spores at Beed & Kada. To trace the Source, the fungus was collected on decaying dead branches of different plant around the crop fields during Kharif season.

**(2) Claviceps Tul.**

Spores elongated filiform with many transverse septa, slightly curved, hyaline spores occurred frequently. Their contribution to the total airspora was recorded as 0.04% during second Kharif season and 0.06% during first Rabi season. The Maximum Monthly Mean Concentration ( $196/m^3$  and  $252/m^3$ ) was recorded in the month of September 2003 and January 2004. Pande (1976) reported 0.11% spores over orange fields at Nanded. Pawar (1997) recorded of these spores over Bajara field at Aurangabad.

**(3) Didymosphaeria Fuck :**

Spores two celled with single transverse septum, brown elliptic or cylindrical spores occurred continuously. Their contribution to the total air spora was recorded 1.23% during the second Kharif season and 0.26% during first Rabi season. Spores were collected from sampling sites in saprophytic form on stem of Cajanus. The maximum monthly mean concentration ( $2828/m^3$  and  $574/m^3$ ) was recorded in the month of August 2003 & December 2003. The occurrence of this spore's type could be correlated with prevailing weather parameters like rainfall & humid conditions. Pande (1976) reported 2.41% from Nanded, Mane (1978) reported 0.94% from Vaijapur. Reddy (1987) reported 0.85% from Aurangabad, Tuljapurkar (2000) & Garje (2000) at Aurangabad.

**(4) Hypoxylon Bull. Ex. Fr.**

Spores elliptic fusiform to bean shaped, dark brown in colour. Their contribution to the total airspora was recorded as 0.27% during the second Kharif season and 0.41% during first Rabi season. Spores are saprophytic on bark of Acacia. The maximum monthly mean concentration ( $700/m^3$  and

$1218/m^3$ ) was recorded in the month of August 2003 & December 2003.

Mane (1978) reported 0.72% spores to the total airspora at Vaijapur & recorded high concentration during night hours & pointed out its "night spora" pattern. Bhalke (1981), Babu (1983) reported 1.72% & 0.45% over Jowar & Banana field at Aurangabad.

**(5) Hysterium Tode. Ex Fr**

Spore three septate, elliptic, cylindrical, uniformly brown. Their concentration to the total airspora was recorded as 0.26% and 0.27% during the second Kharif season and first Rabi season. The maximum monthly mean concentration ( $658/m^3$  and  $546/m^3$ ) was recorded in the month of July 2003 & November 2003.

Tilak & Srinivasulu (1967) reported Hysterium spores from the air spora of Aurangabad for the first time. Mali (2002) & Pathare (2005) reported these spores at Kada.

**(6) Lecanidion Endl.**

Spores fusiform, clavate usually slightly curved 7-11 septate, hyaline. Spores eventually saprophytic form on stem of Ipomea and Lantana. The spores contributed 0.03% and 0.01% during the second Kharif season and first Rabi season. The maximum monthly mean concentration ( $98/m^3$  and  $42/m^3$ ) was recorded in the month of August 2003 & November 2003. Earlier these spores were also reported from Aurangabad (Tilak, 1989), Kotwal (1992) at Nashik, reported 0.05%, Pawar (1997) reported 0.46% of these spores over bajara fields at Aurangabad.

**(7) Leptosphaeria Ces. And de Not**

Spores yellow to yellowish-brown, elliptic to fusiform, generally three septate. Their contribution to the total airspora was recorded as 0.74% and 1.92% during the second Kharif season and first Rabi season. The maximum monthly mean concentration ( $1372/m^3$  and  $6762/m^3$ ) was recorded in the month of August 2003 & November 2003. Tuljapurkar (2000) reported these spores over sunflower field at Aurangabad. Mali (2002) and Banswadkar (2002) also recorded this spores at Kada and Udgir respectively.

**(8) Massarina Sacc.**

Spores elliptic, fusiform, dark brown, three septate, septum surrounded by thick, hyaline, gelatinous sheath. The spores contributed 0.03% during second Kharif season and first Rabi season. The maximum monthly concentration ( $112/m^3$ ) was recorded in the month of September 2003 & December 2003. Spores occurred frequently. Meghraj (1989) reported 0.02% of these spores to the total Aerospora at Aurangabad. Aher (1993) recorded these spores from Ahmednagar. Garje (2002) recorded 0.03% spores over bajra fields at Aurangabad.



**(9) *Melanspora Corda***

Spores one celled, oval discoid, often in equilateral with prominent germ pores at both ends, brown to blackish green. Their contribution to the total airspora was recorded as 0.21% & 0.22% during the second Kharif season and first Rabi season. The maximum monthly mean concentration ( $574/m^3$  and  $504/m^3$ ) was recorded in the month of August 2003 & November 2003.

Wankhede (1983) Meghraj (1989) recorded incidence of these spores over different field at Aurangabad. Kotwal (1992) recorded 0.27% incidence of these spores over grapevine yards at Nasik. Garje (2000) recorded 0.23% to the total airspora over jowar fields at Aurangabad.

**(10) *Parodiella* (Speg.) Thesis & Syd.**

Spores two celled, elliptic, distinctly striated. Their contribution to the total airspora was recorded as 0.06% & 0.05% during second Kharif season and first Rabi season. The maximum monthly mean concentration ( $168/m^3$ ) was recorded in the month of September 2003 and November 2003. Sreeramulu and Ramalingam (1966) reported these spores over the paddy fields at Visakhapatnam.

Venugopalchari (1986) recorded 0.22% to the airspora over cotton field at Nanded. Narsimha (1996) reported these spores over paddy fields at Siddipet

**(11) *Pleospora* Rash**

Spores oblong, fusiform or ovoid, yellowish brown or golden brown, with several cross & one or usually 2 longitudinal Septa. Their contribution to the total airspora was recorded as 0.15% and 0.20% during the second Kharif season & first Rabi season. The maximum monthly mean concentration ( $308/m^3$  and  $448/m^3$ ) was recorded in the month of July 2003 & December 2003.

Dye & Vernon (1952) reported these spores from New Zealand. Richard (1956) from England, Paddy & Kapica (1956) from Canada. The occurrence of these spores in air was favoured by high humid conditions. Ahuja (1991) recorded these spores at Aurangabad. Garje (2000) recorded 0.49% incidence of these spores to the total airspora over bajara field at Aurangabad.

**(12) *Pringsheimia* Schultz.**

Spores hyaline, 3-5 septate, septa horizontal but in mature spores a vertical septum in each cell. Their occurrence was rare. The spores contributed 0.01% during second Kharif season only. The maximum monthly concentration ( $56/m^3$ ) was during second Kharif season only. The maximum monthly mean concentration ( $56/m^3$ ) was recorded in the month September 2003. Tilak and Srinivasulu (1967), reported this spore type for the first time from the airspora at Aurangabad. Mane (1978), reported their occurrence in airspora of bajra fields at Vijapur. Mali (2002) also reported these spores at Kada.

**(13) *Rosellinia* Ces and de Not.**

Spores one celled, elliptical, dark brown to black, flattened, bearing longitudinal furrow with oil globule often

with minute colourless appendages at each end spores occurred rarely.

Their contribution to the total airspora was recorded as 0.01% during Rabi season only. The maximum monthly mean concentration ( $28/m^3$ ) was recorded in the month of November 2003. Bhalke (1981), Shastri (1981), & Patil (1983) reported these spores from Aurangabad with 0.67%, 0.13%, & 0.06% to the total airspora over different fields respectively.

**(14) *Sporormia* de Not:**

Spores dark brown, uniseriate, dull colored, three septate. Spores occurred frequently. Their contribution to the total airspora was recorded as 0.10% & 0.01% during and second Kharif season & first Rabi season. The maximum monthly mean concentration ( $308/m^3$  and  $28/m^3$ ) was recorded in the month of September 2003. & January 2004.

Tilak & Kulkarni (1972) reported 1.3% spores to the total airspora at Aurangabad. Babu (1983) pointed to count it peak at 10.00 hours. Goud (1993) recorded 0.22% incidence of these spores over groundnut fields at Narayankhed (A.P.) Garje (2002) 1.08% incidence of these spores over bajra fields at Aurangabad.

**(15) *Trichospora* Fuck.**

Spores oblong - fusiform, yellowish brown up to 7 transverse Septa & one - two longitudinal Septa. Spores occurred frequently. Their contribution to the total airspora was recorded as 0.08% & 0.03% during the second Kharif season & first Rabi season. The maximum monthly mean concentration ( $196/m^3$  and  $112/m^3$ ) was recorded in the month of September 2003 & November 2003. Babu (1983), Patil (1983), Wankhade (1983) over Jowar fields at Aurangabad.

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**\*REVALENCE OF CLADOSPORIUM SPORES OVER SUNFLOWER FIELDS****G.M. Pathare**

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**ABSTRACT**

Present paper deals with the aerobiological investigation over Sunflower fields by using Volumetric continuous Tilak Air Sampler was employed for exploring fungal airspora over a Sunflower field at Kada, Tal. Ashti and Dist. Beed. 5<sup>th</sup> July to 30<sup>th</sup> September 2003 for second Kharif season and 10<sup>th</sup> November 2003 to 29<sup>th</sup> February 2004 for first Rabi season. The present paper deals with airborne concentration of *Cladosporium* spores over sunflower fields. The concentration of airborne *Cladosporium* spores was assessed and the roles of the metrological parameters over the spore concentration were discussed. The spore concentration was maximum (58030/m<sup>3</sup> and 46270/m<sup>3</sup> of air) in the month of September 2003 and December 2003 during second Kharif season and first Rabi season respectively.

**Key words:** - Aerobiology, *Cladosporium*, Air Sampler, Sunflower field.

**INTRODUCTION:**

Aerobiology is an interdisciplinary science which deals with the study of biological component like pollen grains, fragments of fungal spores, hyphal fragments, bacteria, viruses, algae, lichens, minute insects & insect parts, protozoan cyst, etc. In the atmosphere a biotic particulates & gases affecting living organisms have been recently included in the concept of aerobiology. The aerobiological studies are mainly concern with interrelationship between the biological component in the atmosphere, source of biological component, their release in the atmosphere, their deposition & impact on health of plants & animals including human beings. Airborne infections & the resulting diseases threaten the lives & productivity of plants. Airborne diseases still pose a challenge to mankind.

The role of fungi in causing diseases to crop plants, man, domestic animal, in bringing deterioration of food grains in storage, valuable monuments has been subject of great interest for long time. Standing vegetation has a great

influence of Aerospora of any place and it changes with changes in weather. Aerobiological survey conducted in various part of India revealed richness of Aerospora.

Sunflower (*Helianthus annuus* L.) is one of the most important oil seed crops being grown all over the world. It is mainly grown for its oil, which is generally for culinary purposes in preparation of vanaspati and in manufacture of soaps and cosmetics. The sunflower oil is chemically a tri-glyceride. It contains 68% linolic acid, so it is especially recommended for patients having heart troubles. Sunflower seed, cake or meal is a protein rich feed and is used as a concentrate for cattle, animals like pig, sheep, goat and poultry feed. Sunflower is native of North America. In Germany and Russia it is grown on large scale. Now a day's sunflower crop cultivation has become more popular among the farmers of Marathwada region. As considering survey of this crop that since last few years sunflower is subjected to various type of fungal diseases which may be soil borne, seed borne, airborne etc. The aim of present study



was to find out the atmospheric concentration of *Cladosporium* and its correlation with meteorological parameters. It was with the aim to find out the important airborne pathogens, their distribution and seasonal variation in the concentration these investigations were undertaken, the prediction of airborne fungal disease could be attempted. If well in advance information of airspora of this crop is made timely available. In view of the above fact using by continuous Volumetric Tilak Air Sampler carried out an agro mycological survey over sunflower field for Kharif and Rabi season.

#### MATERIAL AND METHODS:

In the present investigation an exploration of airborne spores of *Cladosporium* (Tilak and Kulkarni 1970) was undertaken over the fields of sunflower field for Kharif and Rabi season. Tilak Air Sampler was installed at a constant height of 1.5 meters above the ground level at Kada Tal. Ashti. Dist. Beed (M.S.) for one Kharif and one Rabi season i.e. 5<sup>th</sup> July 2003 to 30<sup>th</sup> September 2003 for second Kharif season and 10<sup>th</sup> November 2003 to 29<sup>th</sup> February 2004 for first Rabi season. The air was sampled at the rate of 5liters/minutes which left traces of deposition over cellophane tape, affixed on the outer surface of drum. The slides were prepared every offer eight days. Before the scanning, the slides were marked with a ball pen point pen in the six equal parts, each part, indicating the spore catch of two hours of sampling period. Area of 9600sq.micron of the total area of the trace obtained was scanned under 10Xx45X eye piece objective combination of binocular research microscope. The transformation of spore was done which was based on visual characteristics of spore such as size, shapes. The metrological data was recorded during period of investigation.

#### RESULT AND DISCUSSION:

The spores of *Cladosporium* were variable in shape and size, ovoid to cylindrical or irregular, dark sub hyaline to pale brown, one or two celled or lemon shaped. These spores were found to be the most abundant as compared to other airborne micro biota in order of their concentration and hence dominated aerial population.

The high incidence of the spores of *Cladosporium* in air was due to their capability of producing the spores directly on hypha and copious fruiting ability with passive mechanism of spore liberation. Besides, the gentle wind currents, natural or artificial mechanical disturbances force the spores of *Cladosporium* to liberate in the air in an enormous amount, as it was already suggested by Gregory (1961). The spores contributed 26.02% and 24.62% during second Kharif season first Rabi season respectively.

In second kharif season, the highest monthly concentration (58030/m<sup>3</sup>) was recorded in the month of September 2003, when there was record of moderate range of temperature between 21.4 to 29.7°C, 61.8 to 92.47% relative humidity, 2.8km/h wind velocity and 77.5 mm rain fall. The day on which there was record of rain and high wind velocity, the concentration *Cladosporium* spores was found to be considerably reduced, which may be due to the washing effect. Nevertheless, during the second kharif season the maximum concentration (6300/m<sup>3</sup> of air) was recorded on 9<sup>th</sup> September 2003, when there was record of 25.5°C of mean temperature, 75% relative humidity and 4.4km/h wind velocity. In first Rabi season the highest monthly concentration (46270m<sup>3</sup>) was recorded in the month of December 2003. The maximum daily mean concentration (4200/m<sup>3</sup>) was recorded on 16<sup>th</sup> December 2003.

The spores of *Cladosporium* have been found to be always dominant in many parts of the world. The occurrence of these spores in large number has been recorded by Hara and Durhan (1939), Turner (1966) from Japan, Rees (1964) from Australia, DeMeena (1955) from New Zealand, Gregory and Hirst (1957), Harvey (1967), Meredith (1962) from Jamaica, West Indies. Pady (1966) recorded these spores in bulk during summer period. Sreeramulu (1962) recorded very high concentration of these spores in the month of December. Gaikwad (1974), Tilak and Vishwe (1975), Pande (1976), Mane (1978), Bhalke (1981), Shastri (1981), Bhagwan (1983), Pillai (1983), Patil (1983), Venugopalachari (1986), Ramakrishna Reddy (1987), Minhaj (1988), Meghraj (1989). Kavishwar (1990) at Dhule, reported 73.06%. Shinde (1996) at Nanded, reported 8.47%. Thite (1998) and Pawar (1998), Tuljaputkar (2000) and Garje (2000) also recorded these spores from airspora at Aurangabad. Mali (2002) and Banswadkar (2002) also reported these spores at Kada and Udgir respectively. Gopan (2004) and Pathare (2004) reported these spores over sunflower fields at Beed and Kada respectively. During the period of present investigation, the spores of *Cladosporium* were almost continuously found in the atmosphere over the sunflower field. The dominance of the spores of *Cladosporium* may be regarded as a universal dominant because earlier workers from India and abroad also reported this spore type as the dominant type. In air *Cladosporium* spores showed their clumps and hence called "Conidial units of dispersals." The high incidence of *Cladosporium* spore type in air was due to their high saprophytic ability. However, there spore liberation was passive. The air turbulence and mechanical disturbances were the main factors to bring about the release of enormous amount

of spores, the climatic factors generally are, responsible to influence the sporadic outbreak at certain disease, however during the period of present investigation did not occur. Thus, the regional climate not only determines the profitable growth of crop but also influences the dangerous of disease to which crops are prone. The relation between the development of disease and weather is the basis on which incidence and occurrence of diseases can be predicted. As matter of fact, plant disease forecasting is the natural corollary of plant disease epidemiology. These findings have clearly brought out that there was a close relationship between environmental parameters, availability of the substratum for the copious growth and the dispersal of the spores in the atmosphere. Thus, the atmospheric microbial population in relation to phytopathology has an ample scope for further investigations. Such studies would bring many useful results like disease forecasting which would ultimately help in protecting our crop.

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## Method of Solving Fractional Differential Equations By Sumudu Transforms

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### Abstract

Our aim is to obtain solution of fractional differential equation of order  $\alpha$  ( $0 < \alpha < 1$ ) with initial conditions by Sumudu transform method. The methods are well illustrated by many examples.

**Keywords:** Euler Gamma function, Mittag-Leffler function, Riemann-Liouville fractional derivative, Fractional differential equations, Sumudu transform method.

## 1 INTRODUCTION :

The origin of fractional calculus goes back to 1695 when Leibniz considered the derivatives of order  $\frac{1}{2}$ . Since then, many famous mathematicians which includes Laplace, Fourier, Abel, Liouville, Riemann, Grunwald, Letnikov, Levy, Marchaud, Erdelyi, and Riesz have worked on this and related questions. However, for three centuries, the theory of fractional calculus was developed mainly as a purely theoretical field of mathematics. Many applications have been found for fractional calculus, some of which are discussed in Debnath [15], [7] and Podlubny [1].

Fractional calculus plays a vital role in the analysis of scientific problems in a broad array of fields such as physics, engineering, biology and economics[18]. There is no doubt that fractional calculus has become an existing new mathematical method of solution of diverse problems in Mathematics, Science and Engineering[8, 17]. Many researchers attracted towards fractional differential equations and obtained the solutions of fraction differential equations by using the different transform method. Miller and Ross [3] and Oldham and Spanier [14] provided historical details on the fractional calculus Bodkhe and Panchal [9, 10, 11, 12] have developed new methods for obtaining solutions of linear fractional partial differential equations.

In section 2, definitions of Euler Gamma function, Mittag-Leffler function and Riemann-Liouville fractional derivative and some properties are considered. Also



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# The Solution of Miller-Ross sequential Fractional Differential Equations By Sumudu Transform

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## Abstract

In this paper, we make use of the Sumudu transform method (STM) a type of Miller-Ross sequential fractional differential equations. We apply STM to fractional ordinary differential homogenous equations. We obtain the exact solutions of fractional ordinary differential homogenous equations in terms of Mittag-Leer functions. Some illustrative examples are also given.

AMS 2010 Subject Classification : 44A15; 44A99:

Keywords: Sumudu transform; Mittag-Leer functions; Fractional derivatives; Fractional differential equations..

## 1 INTRODUCTION

The fractional calculus is a generalization of differentiations and integrations to non-integers orders. There are many problems in physics and engineering formulated in terms of fractional differential and integral equations, such as diffusion, signal processing, electrochemistry, viscosity etc. The solution of fractional equations are investigated by many authors using different method in obtaining exact and approximate solutions. The Sumudu transform method is applied to obtain the solution of ordinary differential equations [7]. The Sumudu transform was first defined by Watugala in 1993, which is used to solve engineering control problems [17]. He extended the Sumudu transform two variables in 2002 [18]. The first applications to differential equations and inversion formulae were done by Weerakoon in 1994 and 1998 [15], [16]. The application dealing with the convolution-type integral equations were done by Asiru in 2001, 2002 and 2003 [1], [2], [3]. The fundamental properties and applications of Sumudu transform were seen in the paper 2006. Moreover the Sumudu transform was also used to solve the fractional differential equations [5], [6]. In this paper, we can find an explicit solution of fractional ordinary homogenous differential equations with Miller-Ross sequential fractional derivative by using the Sumudu transform method.

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## On Solution of Homogeneous Liouville Fractional Differential Equations by Sumudu Transform

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### Abstract

In this paper, we study the homogeneous Liouville fractional differential equations with constant coefficients. The solutions in terms of Mittag-Leffler and Wright functions of homogeneous Liouville fractional differential equations with constant coefficients are obtained by Sumudu transform method (STM). The results obtained by STM are illustrated by examples.

**Subject Classification:** 44A15, 44A99.

**Keywords:** Sumudu transform, Mittag-Leffler functions, Wright functions, Fractional differential equations.

## 1 Introduction

Many problems in physics, engineering and biology etc. are modeled via fractional differential equations such as diffusion, signal processing, electrochemistry, viscoelasticity [24, 27]. In literature numerous methods are available to solve fractional differential equations like power series method, iterative method, adomain decomposition method, transform method, monotone method etc. [1, 7, 9, 15, 18, 21, 26, 28]. Integral transform methods such as Fourier, Laplace, Mellin, and Hankel etc. were extensively used to study fractional differential equations [5, 6, 14, 16, 25]. In 1993, Watagulla [30, 31] introduced Sumudu transform and applied it to solve ordinary differential equations in control engineering problems. The complex inversion formula for Sumudu transform was proved by Weerakoon [28, 29] in 1994 and applied it to solve partial differential equations. Asiru studied the properties of Sumudu transform [1, 2, 3] and solved integral equations of convolution type [4] and

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## Exact Solution of Linear Fractional Differential Equations by Sumudu Transform

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### ABSTRACT

In this paper, the operational transform formulae corresponding to Sumudu transform of Riemann-Liouville, Caputo and Miller-Ross sequential fractional derivatives are derived by direct application of Sumudu transform. These formulae are applied to solve certain homogenous and non-homogenous fractional differential equations with non-zero initial conditions.

**Keywords :** Sumudu transform; Mittag-Leffler; fractional derivatives; fractional differential equations.

## 1 INTRODUCTION

The fractional calculus has very important role in the physical model and engineering process which are found to be best described by partial differential equations. The standard mathematical models of integer-order derivatives including linear and non-linear models do not work adequately in many cases. In recent years fractional calculus is useful in various fields. An excellent literature of this can be found in [4]. However the solutions of these equations can be found by using the Sumudu transform. It transforms linear fractional differential equation into algebraic equation and then by solving this algebraic equation, we can obtain the unknown function by using the inverse Sumudu transform.

The Sumudu transform is an integral transform similar to Laplace transform which is introduced by G. K. Watugala in the year 1990 to solve the differential equations and control engineering problems. Its applications to differential equations are studied by Weerakoon [14, 15]. Further the fundamental properties of this transform are studied by Asiru[7]. Relation between Laplace transform and Sumudu transform is proved by Kilicman[10]. The detail properties of the Sumudu transform can be seen in [3, 13].

The paper is organised as follows. In Section 2, we list some necessary definitions, notations and preliminaries of the fractional calculus. In section 3, the Sumudu transform and its inverse for some functions. In Section 4, the proposed Sumudu transform method is applied to several examples. In the last section a conclusion is given.

## 2 Preliminaries, Basic Definitions

We list some definitions, basic results, notations and terminology which are used in the paper.

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# Method of Cryptography by Applying Laplace Transform To Tangent Trigonometric Function

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**Abstract:** In this paper we introduced method of cryptography i.e. encryption and decryption by applying Laplace transform and their inverse using tangent trigonometric function by considering series of the form  $Gy^m \tan ny$ .

**Key-words:** Laplace transform, Inverse Laplace transform, Expansion of tangent trigonometric function, Cryptography, Encryption, Decryption.

**Introduction:** In mathematics an integral transform plays an important role in the conversion of a function from one function into another function. In this paper we apply Laplace transform to trigonometric tangent function for the method of Cryptography. The Cryptography is the process of converting ordinary plain text into unintelligible text and vice-versa. In present age the network and electronic communication is very important. The use of Cryptography facilities the provision of cash withdrawal from banking, from ATM, pay TV, online purchasing, banking transactions cards, computer passwords, e-commerce transactions, e-Governing, SMS service, e-mails etc. In human life the security of financial information is an essential part. The purpose of using this method is for more security in communication as compared to other methods because cipher text obtained by this method could not be cracked by other persons easily. In the first part we apply Laplace transform to tangent trigonometric function  $y \tan y$  then we apply  $y^2 \tan 2y$  for the same purpose. Finally we conclude by comparing these two functions.

## Preliminaries:

**Definition: Laplace Transform:** The Laplace transform of a function  $f(y)$  defined for all real numbers  $y \geq 0$ , is the function  $F(s)$ , which is a unilateral transform defined by

$$L[f(y)] = F(s) = \int_0^{\infty} f(y)e^{-sy} dy \text{ where } s \text{ is a complex number frequency parameter}$$

**Definition: Inverse Laplace Transform:** If  $F(s)$  is the Laplace transform of  $f(y)$  then the inverse Laplace transform of  $F(s)$  is given by  $f(y)$  and we write  $L^{-1}[F(s)] = f(y)$ .

## Formula:

$$1) \text{ If } f(y) = y^n \text{ then } L[y^n] = \frac{n!}{s^{n+1}} \text{ and } L^{-1}\left[\frac{1}{s^{n+1}}\right] = \frac{y^n}{n!}$$

## Main Results:

**Encryption:** Suppose we want to send the message “KADA”

In this method we can convert the given plain text in to such a hidden text which could not be possible to crack without key by operating Laplace transforms. Suppose that we are given A



## USE OF LAPLACE TRANSFORM &amp; SUMUDU TRANSFORMS IN CRYPTOGRAPHY

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**Abstract:** In real life mathematics plays an important role in the process of cryptography. In this paper we introduced cryptographic method i.e. encryption and decryption method by using Laplace transform & Sumudu transform and their inverses. For operating online facilities password is required for confidentiality. Also in military services at every stage services, Indian police confidentiality are required.

**Key-words:** Laplace transform, Sumudu transform, Inverse Laplace transform, Inverse Sumudu transform, Cryptography, Encryption, Decryption.

**Introduction:** Cryptography is associated with the process of converting ordinary plain text into unintelligible text and vice-versa. The cryptography is based on mathematical concept and used in many applications like online banking, online purchasing, banking transactions cards, computer passwords, e-commerce transactions, e-Governing, SMS service, e-mails, ATM cards etc. In human life the security of financial information is an essential part. The purpose of using this method is for more security in communication as compared to other methods because cipher text obtained by this method could not be cracked by other persons easily. In the first part we apply Laplace transform to exponential function for Sumudu transform for the same purpose. Finally we conclude by comparing these two methods.

**Preliminaries:**

**Definition: Laplace Transform:** The Laplace transform of a function  $f(t)$  defined for all real numbers  $t \geq 0$ , is the function  $F(s)$ , which is a unilateral transform defined by

$$L[f(t)] = F(s) = \int_0^{\infty} f(t)e^{-st} dt \text{ where } s \text{ is a complex number frequency parameter}$$

**Formulae:**  $L[t^n] = \frac{n!}{s^{n+1}}$

**Definition: Inverse Laplace Transform:** If  $F(s)$  is the Laplace transform of  $f(t)$  then the inverse Laplace transform of  $F(s)$  is given by  $f(t)$  and we write

$$L^{-1}[F(s)] = f(t).$$

**Definition: Sumudu transform:** Consider a set  $A$  defined as

$$A = \left\{ f(t) \mid \exists M, T_1, T_2 > 0, |f(t)| \leq Me^{\frac{|t|}{T_1}}, \text{ if } t \in (-1)^j \times [0, \infty) \right\} \text{ For all real } t \geq 0.$$

the Sumudu transform of a function  $f(t) \in A$ , is denoted by  $F(u) = S\{f(t)\}$  and is denoted as

$$F(u) = S[f(t)] = \int_0^{\infty} \frac{1}{u} e^{-\frac{t}{u}} f(t) dt, u \in (-T_1, T_2)$$

**Definition : Inverse Sumudu transform:** If  $F(u)$  is the Sumudu transform of  $f(t)$  then the inverse Sumudu transform of  $F(u)$  is  $f(t)$  and we write  $f(t) = S^{-1}[F(u)]$



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## SOLVING SIMULTANEOUS DIFFERENTIAL EQUATIONS BY USING LAPLACE TRANSFORM

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**Abstract:** In mathematics an integral transform plays an important role in the conversion of a function from one function into another function. The Laplace transform method can be used for finding solution of system of ordinary differential equations. In this paper we have to discuss the method of solution of simultaneous differential equations using Laplace transform.

**Key-words:** Laplace transform, Inverse Laplace transform, Simultaneous Differential equations, Properties, Cramer's rule.

**Introduction:** The system of simultaneous linear differential equations which contain a single independent variable and two or more dependent variables. In general the number of will be equal to the number of dependent variables i. e. if there are  $n$  dependent variables there will be  $n$  equations. Operations such as differentiation and integration can be replaced by algebraic operations in the complex plane. Thus the linear differential equation can be transformed into algebraic functions of a complex variable  $s$ . For finding the solution of simultaneous differential equation the system described by ODE the solution is difficult. Hence we consider system described by Transfer Function. The method is very easy to explain. Apply the Laplace transform on both sides of the given differential equation. This will transformation the differential equation into algebraic equation. If we solve this equation for dependent variables then taking the inverse Laplace transform on both sides. The result is the solution of given differential equation.

### Preliminaries:

**Definition: Laplace Transform:** The Laplace transform of a function  $f(y)$  defined for all real numbers  $y \geq 0$ , is the function  $F(s)$ , which is a unilateral transform defined by

$$L[f(y)] = F(s) = \int_0^{\infty} f(y)e^{-sy} dy \text{ where } s \text{ is real or complex number frequency parameter}$$

### Properties of Laplace Transform:

Property	Laplace Transform
$f(y)$	$L[f(y)] = F(s)$
Linearity property	$L\{C_1 f_1(y) + C_2 f_2(y)\} = C_1 F_1(s) + C_2 F_2(s)$
First translation property	$L[e^{ay}f(y)] = F(s-a), \quad s-a > a$
Second translation property	$L[g(y)] = e^{-as}F(s), \text{ where } g(y) = \begin{cases} F(y-a), & y < a \\ 0, & y > a \end{cases}$
Change of scale property	$L[f(ay)] = \frac{1}{a} F\left(\frac{s}{a}\right), \quad a > 0$
Derivatives	i) $L[f'(y)] = s L[f(y)] - f(0), \quad s > 0$ ii) $L[f^{(n)}(y)] = s^n L[f(y)] - s^{n-1}f(0) - s^{n-2}f'(0) - \dots - f^{(n-1)}(0), \quad s > 0$
Multiplication of y	i) $L[yf(y)] = -F'(s)$

## RESEARCH ARTICLE

# USE OF LAPLACE TRANSFORM IN DIFFERENTIAL EQUATIONS

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#### Key words:

Laplace transform,

Inverse Laplace transform,

Differential equation, Properties.

### ABSTRACT

The concept of Laplace transform plays an important role in various fields of science, engineering and technology such as control engineering, communication, signal analysis and design, system analysis, solving differential equations, system of modeling, etc. In this paper we have to discuss the method of solution of differential equations using Laplace transform.

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## INTRODUCTION

In mathematics an integral transform plays an important role in the conversion of a function from one function into another function. The Laplace transform method can be used for finding solution of system of ordinary differential equations, partial differential equations and integral equations. It can be used to convert many common functions such as exponential functions, sinusoidal functions and damped sinusoidal functions into algebraic functions of a complex variable  $s$ . Operations such as differentiation and integration can be replaced by algebraic operations in the complex plane. Thus the linear differential equation can be transformed into algebraic functions of a complex variable  $s$ . For finding the solution of differential equation the system described by ODE the solution is difficult. Hence we consider system described by Transfer Function. The method is very easy to explain. Apply the Laplace transform on both sides of the given differential equation. This will transformation the differential equation into algebraic equation. If we solve this equation for roots then taking the inverse Laplace transform on both sides. The result is the solution of given differential equation.

### Preliminaries

**Definition: Laplace Transform:** The Laplace transform of a function  $f(y)$  defined for all real numbers  $y \geq 0$ , is the function  $F(s)$ , which is a unilateral transform defined by

$L[f(y)] = F(s) = \int_0^{\infty} f(y)e^{-sy} dy$  where  $s$  is real or complex number frequency parameter

### Properties of Laplace Transform:

1) **Linearity property:** If  $C_1$  and  $C_2$  are any constants,  $f_1(y)$  and  $f_2(y)$  are functions with Laplace transform  $F_1(s)$  and  $F_2(s)$  respectively

i.e.  $L[f_1(y)] = F_1(s)$  and  $L[f_2(y)] = F_2(s)$ , then

$$L\{C_1 f_1(y) + C_2 f_2(y)\} = C_1 L\{f_1(y)\} + C_2 L\{f_2(y)\} \\ = C_1 F_1(s) + C_2 F_2(s)$$

2) **First translation property:** If  $L[f(y)] = F(s)$  then

$$L[e^{ay} f(y)] = F(s-a), \quad s-a > a$$

3) **Second translation property:** If  $L[f(y)] = F(s)$  and  $g(y) = \begin{cases} F(y-a), & y < a \\ 0, & y > a \end{cases}$  then

$$L[g(y)] = e^{-as} F(s)$$

4) **Change of scale property:** If  $L[f(y)] = F(s)$  then  $L[f(ay)] = \frac{1}{a} F\left(\frac{s}{a}\right)$

5) **Laplace transform of Derivatives:** If  $L[f(y)] = F(s)$  then

$$i) L[f'(y)] = s L[f(y)] - f(0)$$

In general ii)  $L[f^{(n)}(y)] = s^n L[f(y)] - s^{n-1}f(0) - s^{n-2}f'(0) - \dots - f^{(n-1)}(0)$





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## RESEARCH ARTICLE

### SEASONAL VARIATION OF MOSQUITOES IN RELATION TO ABIOTIC ENVIRONMENTAL FACTORS IN BEED DISTRICT OF MAHARASHTRA, INDIA

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##### Key words:

Mosquito, diversity *Culex*, *Aedes*,  
*Anopheles* *Armigeres*, *Mansonia*,  
Beed District, India.

#### ABSTRACT

The present study gives an overview of data on the biodiversity of mosquitoes. The distribution pattern of mosquitoes is related to habitat preference. These habitats may be natural or man-made. Mosquitoes are carriers of number of diseases. The study was carried out for one year during August 2019 to July 2020. Collection of mosquito species from different nine geographical regions of Ashti tehsil, District Beed (M.S.). Mosquitoes were collected at different habitats. A total number of 3274 mosquitoes were collected from nine different localities. A diverse collection of Mosquitos reveals the presence of Seventeen species belonging to five genera i.e. *Anopheles*, *Aedes*, *Culex* *Armigeres* and *Mansonia*. *Anopheles* genus dominated with seven species. The highest population of mosquito species observed in the rainy season in the month of September. Whereas density of mosquito species was observed least in the summer, in the month of February. Genus wise Contribution (percentage) of Mosquitos was dominated by *Anopheles* sp. (33.87%), followed by *Aedes* sp. (28.68%), *Culex* sp. (26.66%), *Armigeres* sp. (8.77%) and *Mansonia* Sp (2.02%). The most dominant species collected from study areas was *Culex quinquefasciatus* (18.7%) followed by *An. subpictus* (9.8%), *Aedes aegypti* (9.32%) and *An. culicifacies* (8.86 %) and the least collected species was *Anopheles gigas* (1.68%).

**Citation:** Khaire B. S. 2020. "Seasonal variation of mosquitoes in relation to abiotic environmental factors in beed district of Maharashtra, India", *Asian Journal of Science and Technology*, 11, (12), 11392-11396.

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## INTRODUCTION

Now a day's mosquito is most problematic arthropod regarding human health. It is not only nuisance but also vector parasites for number of diseases. So for the better and healthy human health worldwide number of workers are working on "mosquito and mosquito borne diseases" but till today we are not got satisfaction. More than half of the world's population live in areas where this mosquito species is present. Globally mosquito borne diseases causes 2.5 million deaths per year viz. Malaria, Dengue, Yellow fever, Elephantiasis etc. Sustained mosquito control efforts are important to prevent outbreaks from these diseases. There are several different types of mosquitoes and some have the ability to carry many different diseases'. The distribution pattern of adult mosquitoes is related to habitat preference of the immature stages. These habitats may be natural or man-made, temporary or permanent. Climate change, infrastructural disabilities and availability of breeding beds result in surveillance of mosquitoes (Episton, 1998; Gubler, 1998; Reiter, 2001). It provides favorable condition for mosquito distribution and their abundance. It is main cause for spreading of infectious diseases like Malaria, Chikungunia, Yellow, Fever, Elephantiasis, Dengue etc.

Day by day global change is occurring across a wide range of fields and those changes affect almost every aspect of human societies. There are a number of drivers of global change that are changing the physical and social environment on planate to such an extent that they have the potential to influence the status of many vector-borne diseases. These complex global phenomenon and natural as well as infrastructural disabilities are favorable for mosquito development and mosquito borne diseases. In India the major mosquito vectors of these diseases belong to the genera *Anopheles*, *Culex*, *Aedes* and *Mansoni*. The knowledge on biodiversity of mosquitoes in an area provides adequate information on population diversity, distribution pattern and preferential habitat selection which will help to evolve a suitable strategy and implement the same for the meaningful suppression of the mosquito population and in turn to reduce the mosquito menace. In last few decades cases of dangerous diseases like Malaria, Chikungunia, Dengue, Elephantiasis, Yellow fever and other Viral fever were reported from villages in Marathwada region of Maharashtra. Hence the present investigation was carried out to morphological identification of mosquito species and their prevalence for planning of mosquito vector control measures in Ashti taluka of Beed district of Maharashtra (India).

## MATERIALS AND METHODS

The study was carried out for twelve months during August 2019 to July 2020. Collection of mosquito specimens from

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Research Article

# A study on biology and larval behaviour of fruit piercing moth of *Othreis (Eudocima) materna* (L.) (Lepidoptera: Noctuidae) on pomegranate, *Punica granatum*

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## Abstract

Among different fruit piercing moths, the genus *Othreis* are the most harmful, causing widespread damage to pomegranate, citrus and mango fruits causing fruit fall in tropical and subtropical countries. The present communication deals with the study on the biology of *Othreis materna* (L) from egg to adult's death which was carried out at room temperature of the laboratory to investigate the delicate and vulnerable stages of its life cycle. The life cycle of the moth was completed within 45-61 days, with an average 55.03 days in case of male and within 47-63 days with an average 57.07±4.92 in case of female. Eggs hatching started at night or early in the morning and duration of hatching was 2.72 days. The eggs measured were about 0.95 to 0.03 mm in diameter. The freshly emerged first instar larvae were light yellowish coloured and translucent. The first instar larvae were very active after hatching and they moved 4 to 6 feet for searching the food. The larvae were fed with the leaves of *Tinospora cordifolia* (Giloy or Guduchi). The total larval duration in days from first, second, third, fourth and fifth instar varied from 2.12±0.01, 1.81±0.05, 2.87±0.02, 3.90±0.11, 4.74±0.38 in days respectively and total larval period was 15.44±0.57. Pupae were dark brown in colour and total pupation period was of 13.81±0.12 days and total adult duration for male and female was 23.08±0.70 and 25.20±0.66 days respectively. The adult of *O. materna* was bright orange in colour and of medium size. The male was small than the female. This is first study of this type from Marathwada, which will help to trace the vulnerable and delicate stage of the life cycle of this *O. materna*.

**Keywords.** Behaviour, Biology, Fruit piercing moth, Life-cycle, *Othreis materna* (L), Pomegranate

## INTRODUCTION

The moth of *Othreis spp.* is a destructive pest of various fruits in tropical and subtropical countries including India, Southeast Asia, Africa, Australia and South Pacific (Waterhouse and Norris, 1987). It is polyphagous pest feeding at night by piercing the skin of the ripening fruits with their strong proboscis and sucking the juice. Internal injury consists of a bruised dry area beneath the skin resulting in the development of secondary rots at the puncture site (Atachi *et al.*, 1989). In India four

species of *Othreis (Eudocima)* such as *O. materna*, *O. fullonia*, *O. homaena* and *O. cajeta* are serious pest on various fruits such as pomegranate, citrus, guava, papaya, grapes, tomato and mango, etc. (Sundra Babu and David, 1973). The larvae feed on *Tinospora cordifolia* which belongs to family Menispermaceae. According to Ramkumar *et al.* (2010) the Menispermaceae creepers were supported well for the survivability of the larvae, whereas presence of sclerotized blades and erectile barbs in the proboscis suggested that the moth can capable of piercing the hard-skinned fruits. So,



# Histopathological Damage By Cestode *Uncibilocularis Dasyatisii* Sp. Nov. In The Intestine Of *Dasyatis Walga* (Muller And Henley, 1841)

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## ABSTRACT

*The marine water fish Dasyatis walga collected from Ratnagiri district during the period of June 2018 to May 2019. After dissection their intestinal passage was examined for tapeworm parasite. The genus Uncibilocularis was established by Southwell (1925) with its type species U. trygonis (Shipley et Hornell 1906), the histopathological studies were carried out and observation clearly shows that the parasite, Uncibilocularis dasyatisii Sp. Nov. was approaching to the intestinal villi, embedded in the fibroblast cell and is attached to the intestinal villi. The histopathological studies of tapeworm Uncibilocularis dasyatisii Sp.Nov. Have been studied to find the pathological changes and extend of damage of the intestinal layers of Dasyatis walga.*

**Keywords:** *Dasyatis walga, Histological Damage, Uncibilocularis dasyatisii Sp .Nov, intestinal villi.*

## 1. INTRODUCTION

The study of different types of the diseases to the tissues of host is known as "Histopathology". During the life cycle of cestode, it is accomplished twice in different host. In fishes the mechanism of parasites establishment varied from species to species and it also depends on the stage of parasite, host tissue and environmental conditions. The physiological conditions in a particular host gut (fishes) with regard to pH or other physiological characters may provide favourable or unfavourable site for metabolism of particular species. The various forms of cestode scolex or head bears hold fast organs, which are beautifully adapted for attachment to the mucosa of specific hosts, but in some species Scolex are poorly developed; hence they cannot specifically adapted to any particular intestine, and have a wide host spectrum. The extensive study on the host parasite relationship has been carried out by Ahmed, A.T.A. and Sanaullah, M.1975. The pathogenicity of cestodes of various orders, R. M. and DE. SA, L. M. 1962. Described host parasite relationship of *Phyllobothrium*, *Acanthobothrium*, *Echinobothrium*, Sircar and Sinha(1980) have also studied the histopathology of *Lytocestus indicus* occurring in fresh water fishes. Hayunga, E. G. 1977. Comparative histology of thses colices of three caryophyllaeid tapeworms: Relationship to pathology and site selection in host intestine. Diss. Abs. Int. Murlidhar and Shinde (1987), Amlacher (1961), Hayunga E. G. (1977) and Mackiewilz (1972) has studied the histopathology of intestine of fish caused due to cestodes. Boruclnska and Caira (1993) observed a comparison of mode of attachment and histopathogenicity of tapeworm

# Correlations of Zooplankton Population with Some Physico-chemical Parameters of Chandani Dam, Maharashtra (India).

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**Key words :-** *Correlation Coefficient (r) Zooplankton population, , Physico-chemical Factors, Chandani Dam, Maharashtra.*

**Abstract :** Present paper deals with study of monthly variations in the zooplankton population and their correlations with some physicochemical characteristics of Chandani Dam in Osmanabad district, Maharashtra during June 2018 to May 2019. Parameters like, Water temperature, transparency, Sp. Conductivity, pH, TDS, dissolved oxygen, carbon dioxide, alkalinity, hardness, Chlorides etc. have been studied. The diversity and population dynamics of zooplankton is under the control of numerous physic-chemical factors. The population of zooplankton fluctuates along with the physicochemical factors. A study revealed that 20 genera of zooplanktons belonging to 4 groups viz. Rotifera, Cladocera, Copepoda and Ostracoda were observed. Highest zooplankton populations were recorded in the month of December and January. The present investigation showed positive correlations with parameters like DO, CO<sub>2</sub>, transparency, conductivity whereas water temperature, TDS, pH, Chlorides, alkalinity showed negative correlations with zooplankton population.

## **Introduction:**

Freshwater ecosystems are highly diversified and having with wide range of physicochemical conditions, which greatly influences the aquatic life. The quality of water is described by its physical, chemical and microbial characteristics. The Zooplankton is an important group of micro-organisms which indicates the trophic status of water body. Some of them are also acting as bio-indicators of organic and inorganic pollution of water body. The diversity and population dynamics of the zooplankton in fresh water ecosystem is controlled by several physico-chemical factors such as water temperature, pH, DO, free CO<sub>2</sub>, alkalinity, chlorides etc. The occurrence and abundance of zooplankton in the water body depends on its productivity which in turn is influenced by the physicochemical parameters and level of nutrients. Seasonal changes in physicochemical conditions in aquatic bodies influences the plankton dynamics, Bhowmick et.al. (1993). The seasonal fluctuations of zooplankton in relation to physico-chemical factors and their correlations have been studied by many workers in India including Tonapi (1980). Trivedy and Goel (1988)Kulshekhara et.al (1989), Adholia (1991), Chandrashekhar and Kodarkar (1996), Asif Khan et. al. (1996), Sayestehfer, Salaskar and Yeragi (2003), Surve P. R. et. al.(2004), Lendhe and Yeragi (2004), etc.

The Present paper deals with study of monthly variations in the zooplankton population and their correlations with some physicochemical characteristics of Chandani



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## MOSQUITO BORNE DISEASES AND CONTROL INNOVATIONS IN 21ST CENTURY

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### ABSTRACT

*India is a democracy with the second-largest population in the world. Vegetable-borne diseases (VBDs) may flourish in a wide range of geographical and ecological settings in the United States. Diseases transmitted by insects are listed below: malaria, Lymphatic Filariasis (LF), Dengue, Dengue Fever and Chikungunya (CHIK). However, infections of Kyasanur Forest Diseases, Plague, and Chandipura virus (CHPV) need to be addressed. Zika and Crimean-Congo Hemorrhagic Fever (CCHF) have just arrived in India and should be dealt with urgently. All of these illnesses are within the purview of the National Vector Borne Disease Control Program (NVBDCP). Numerous diseases, including malaria, chikungunya, dengue fever, chikungunya and zika, are spread by various mosquito species. Shad flies transmit KA, CHPV, KFD, CCHF, and plague; fleas carry plague. Transmission of AES-causing scrub typhus (ST) occurs through Leptotrombidium mite species. In light of the diverse biodiversity, it needs a focused and planned action strategy. The primary methods of intervention include on developing new technologies aimed at improving public health responses. Draconculiasis, a disease spread by many species of Cyclops, and polio have already been effectively removed from India. The eradication of malaria, LF, and KA would greatly benefit from this kind of expertise.*

### 1. INTRODUCTION

Nearly one-third of the Asian continent's population lives in the northern hemisphere's only democratic republic. In this multiethnic country, there are a wide variety of ethnicities, religions, languages, customs, and cuisines. Dravidians (25 percent), Indo-Aryans (72 percent), and other ethnicities make together a civilisation that is one of the oldest in the world. The Dravidians were the first people to settle in this land. The Indus Valley

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*Review Paper*

**CLIMATE CHANGE, MOSQUITO DIVERSITY AND EPIDEMICS OF  
MOSQUITO BORNE DISEASES IN INDIA**

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India.

**Abstract**

Mosquitoes are important vectors responsible for spreading various diseases in human population. They belong to family *Culicidinae* of order Diptera. Mosquito fauna in the world 3700 species belong to 112 genera. In India 393 species of mosquitoes are occurring. Mosquitoes are very efficient vector of human diseases today. It has been estimated that worldwide 7 to 8% economy is spend only for control of mosquito borne diseases. Mosquitoes are potential vector of malaria, dengue and other diseases. Environmental factors impact on mosquito species diversity. The key findings of the research is that only 10% species of female mosquito species act as vector of different pathogen that spread diseases like dengue, malaria, elephantiasis, lymphatic filariasis etc. India rank fifth in terms of mosquito biodiversity after Brazil, Indonesia, Malaysia and Thailand. The study of mosquito diversity is essential to understand species abundance and species variation. It is evident that climate change, mosquito diversity and epidemics of mosquito borne diseases are interrelated with each other.

Key words: Mosquito, Species diversity, Climate change, Epidemics.

**INTRODUCTION**

Today vector borne diseases is big problem for the world. Mosquitoes act as harmful vectors for various diseases. Mosquitoes transfer diseases to about 700 million peoples annually. India is one of the countries where incidence of mosquito borne diseases are more Mosquitoes belongs to the orders Diptera in the family Culicidae. The British government studies the taxonomy of mosquito of the world which resulted in the publication of the monograph of the Culicidae in 1910. Only female mosquito can cause Chikungunya, yellow fever, Filariasis, Japanese encephalitis and other serious diseases

# Histopathological Damage By Cestode *Uncibilocularis Dasyatisii* Sp. Nov. In The Intestine Of *Dasyatis Walga* (Muller And Henley, 1841)

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## ABSTRACT

*The marine water fish Dasyatis walga collected from Ratnagiri district during the period of June 2018 to May 2019. After dissection their intestinal passage was examined for tapeworm parasite. The genus Uncibilocularis was established by Southwell (1925) with its type species U. trygonis (Shipley et Hornell 1906), the histopathological studies were carried out and observation clearly shows that the parasite, Uncibilocularis dasyatisii Sp. Nov. was approaching to the intestinal villi, embedded in the fibroblast cell and is attached to the intestinal villi. The histopathological studies of tapeworm Uncibilocularis dasyatisii Sp. Nov. Have been studied to find the pathological changes and extend of damage of the intestinal layers of Dasyatis walga.*

**Keywords:** *Dasyatis walga, Histological Damage, Uncibilocularis dasyatisii Sp .Nov, intestinal villi.*

## 1. INTRODUCTION

The study of different types of the diseases to the tissues of host is known as "Histopathology". During the life cycle of cestode, it is accomplished twice in different host. In fishes the mechanism of parasites establishment varied from species to species and it also depends on the stage of parasite, host tissue and environmental conditions. The physiological conditions in a particular host gut (fishes) with regard to pH or other physiological characters may provide favourable or unfavourable site for metabolism of particular species. The various forms of cestode scolex or head bears hold fast organs, which are beautifully adapted for attachment to the mucosa of specific hosts, but in some species Scolex are poorly developed; hence they cannot specifically adapted to any particular intestine, and have a wide host spectrum. The extensive study on the host parasite relationship has been carried out by Ahmed, A.T.A. and Sanaullah, M.1975. The pathogenicity of cestodes of various orders, R. M. and DE. SA, L. M. 1962. Described host parasite relationship of *Phyllobothrium*, *Acanthobothrium*, *Echinobothrium*, Sircar and Sinha(1980) have also studied the histopathology of *Lytocestus indicus* occurring in fresh water fishes. Hayunga, E. G. 1977. Comparative histology of fishes colices of three caryophyllaeid tapeworms: Relationship to pathology and site selection in host intestine. Diss. Abs. Int. Murlidhar and Shinde (1987), Mlacher (1961), Hayunga E. G. (1977) and Mackiewilz (1972) has studied the histopathology of intestine of fish caused due to cestodes. Boruclnska and Caira (1993) observed a comparison of mode of attachment and histopathogenicity of tapeworm



A New Species of *Anthobothriumambadasii* In *Rhynchobatusdjeddensis*, from Ratnagiri District, of Maharashtra State, India.

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## ABSTRACT

Thirteen parasite collected from *Rhynchobatusdjeddensis* from Mirya, Ratnagiri District, West co The scolex is flower like with four bothridia. The scolex is 3.11 (4.57-4.65) in length and 7.53 (7.34-7.73) in width. The bothria 3.03 (3.12-2.93) in length and 2.88 (2.81-2.96) in width. The mature proglottids are longer than broad and measures 13.94 (13.9-13.9) in length and 7.73 (7.65-7.81) in width. These cestodes were flattened preserved in 4% formalin, stain with Harris haematoxylin passed through the various alcoholic grades, cleared in xylene, mounted in DPX and whole mount slides were prepared for further anatomical studies. Sketches are drawn with the help of Camera Lucida and all measurements are in millimeters.

**Keys** – New record *Anthobothriumambadasii* Sp. Nov. (Cestoda-Lecanicephalidae) in *Rhynchobatusdjeddensis*, from Mirya, Ratnagiri District.

## INTRODUCTION

Benden in the year 1850 erected the genus *Anthobothrium* cornucopia recovered from *Galeuscaimustelus* collected from the Belgian water. Mola (1908) synonymised *Anthobothrium* with *Phyllobothrium*. but (1943) redescribed *A. auriculatum* Rhydolphi, (1891) and gave his opinion that the name of genus given by Benden is corrected. Linton (1819) described *A. variable* from *Trygoncentura* from Massachusetts. *A. crispum* molin described in (1858), in (1890) *A. laciniatum* described linton, *A. variable* (Linton, 1889) southwell, 1925 and *A. panjaji* Shipley and hornell, 1906 from rays of Ceylon waters. southwell, (1912) from *Rhynchobatusdjeddensis* collected from ceylon water described *A. lintoni*, Yamaguti (1934) established *A. parvum* from *Alopiasvulpinus* collected from Japan. *A. karuataylwoodland* described in 1934, in 1947 *A. hickmanini* described in (1974). Yamaguti in (1952) three species described *A. rajat*, *A. Pteroplateae*, *A. bifidum*, later on subhpradha (1955) described three more species *A. septum* from *Rhynchobatusdjeddensis* and *Trygonimbricatus*, *A. crenulatum* *Rhinobatus*, *haivi* and *A. spinosum* from *carachariasacutus* collected from the Madras coast saoud described species *A. taeniuri* is (1963), in (1968), *A. veravalensis* is another new species described by shinde et. Al in (1981) from *Rhinobatusdjeddensis* collected from veraval, India. Butter (1987) described *A. amulatum* from *Rhinobatuarmatus* collecting from Australia srivastava and srivastava (1988) found a new species *A. sassonense* from *Rhinobatu granulates* in (2002) *A. altavela* species described by Lassadnaifar another species in the same year *A. galeornini* described by suriano in (2002), Ruhnke & Caira two new species *A. caseyi*, and *A. lyndoni* described in (2009).

## MATERIAL AND METHODS

Cestode parasites were collected from the intestine of *Dasyatiswalga* at Burundi Ratnagiri district (M.S.) India during the period of June. 2016 to May. 2018. These cestodes preserved in hot

**Influence Of Cisplatin On Glycogen Contents In Freshwater Bivalve, *Indonaiacaeruleus* In Godavari River, Maharashtra.**

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**ABSTRACT**

The present paper deals with the effect of Cisplatin on glycogen contents in freshwater bivalve, *Indonaiacaeruleus*. Cisplatin is one of the ingredients of anticancer drug. *Indonaiacaeruleus* were exposed to acute dose of Cisplatin one of the ingredients of anticancer drug (1.884 PPM). Acute toxicity studies for 96 h showed that *I. caeruleus* more sensitive to Cisplatin in summer, at times of high temperature, pH and total carbonate content of the water used, than in monsoon and winter. The various tissues such as the mantle, gills, foot, ovary, testis, digestive glands and whole body of the bivalves were separated, dried in the oven and their glycogen contents were estimated. Most of the tissues except the gills of *I. caeruleus* observed reduction in the glycogen. The digestive gland observed most affected tissue.

**Key words:** *Indonaiacaeruleus*, Cisplatin, Glycogen content, Godavari river.

**INTRODUCTION**

Godavari is second longest river in India. Pravara Sangam is located 65 kms north of Ahmednagar. Contamination of fresh water due to increased population density, heavy industrialization and agricultural activities with a wide range of pollutants has become a matter of concern over last few decades. (Vutukuru, 2005). Heavy metals bring adverse effects on diversity of aquatic organisms. Fresh water bivalve shell fishes play an important role as bio-indicators of bio-detectors to detect various environmental fluctuations and aquatic characteristic changes due to natural and manmade calamities. In order to evaluate the adverse effect of the pollutants on aquatic organisms, there is a worldwide trend to complement physical and chemical parameters with bio markers in aquatic pollution monitoring (Abdel *et al.* 2012).

Cisplatin is the anticancer chemotherapy drug used to treat various types of cancer. The excess dose of Cisplatin are harmful or injurious to molluscs, induced nephrotoxicity is well-known side effect. The evaluation of LC<sub>50</sub> concentrations of anticancer drugs or toxicant is the first step before carrying further studies on physiological changes in animals. Cisplatin, cis-diamminedichloroplatinum II (Cis- DDP), Platinum containing co-ordination complex are effective antitumor agents utilized in the treatment of a wide variety of malignancies but antibiotics and anticancer drugs affect the bivalve or increase the death rate because they deplete the physiological ions and glycogen and other content.

**MATERIALS AND METHODS**

Attempts will be made in this study to select fresh water bivalves, *Indonaiacaeruleus*. These were collected from Godavari River at Pravara Sangam which is about at the distance of 65 kms away from Ahmednagar. Mollusc shells were collected by hand picking methods. First they are made acclimatized to laboratory conditions and then washed with cold tap water. The cleaned



## Effect Cisplatin On Glycogen Contents In Freshwater Bivalve, *Lamellidens Marginalis* in Godavari River

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### ABSTRACT

The present paper deals with the effect Cisplatin on glycogen contents in freshwater bivalve, *lamellidens marginalis*. Samples were collected from the Godavari river at Pravara Sangam district Ahmednagar, Maharashtra. Biochemical estimation of cisplatin induced nephrotoxicity well known side effects in freshwater bivalve *Lamellidens marginalis* were exposed to acute dose of cisplatin one of the ingredients of anticancer drug. Acute treatment of 24 and 96 hours and chronic treatment 7, 14 and 21 days. Tissues such as the mantle, gills, foot, digestive glands testis, ovaries, and whole body were separated, then dried in the oven and their glycogen contents were estimated. Except gills, cisplatin reduced the glycogen contents from most of the tissues of *lamellidens marginalis*. Overall reduction in the glycogen depot was observed. The most affected tissue in which the great depletion observed was digestive glands.

**Key words:** Glycogen, Cisplatin, *lamellidens marginalis*;

### INTRODUCTION

Godavari is second longest river in the country measuring 1465 Km long and flows from western to southern India. Pravara Sangam is located 65 kms north of Ahmednagar. Contamination of fresh water due to increased population density, heavy industrialization and agricultural activities with a wide range of pollutants has become a matter of concern over last few decades. (Vutukuru, 2005). Heavy metals bring adverse effects on diversity of aquatic organisms. In order to evaluate the adverse effect of the pollutants on aquatic organisms, there is a worldwide trend to complement physical and chemical parameters with bio markers in aquatic pollution monitoring (Abdel *et al.* 2012). Bivalves occur in various habitats. Many of them are proven food for aquatic animals and man. These are also been used to produce pearls. Shells of some of the bivalves are used for making buttons (Subba Rao & Dey, 1989). The freshwater bivalves also play a significant role in aquatic ecosystems. These are used in monitoring programmes due to their ability to concentrate pollutants to several orders of magnitude above ambient levels in sea water.

Biochemical modulation is a special type of combination chemotherapy which aims to selectively improve the therapeutic index by increasing the antitumor effect and protecting against toxic side effects. Cisplatin is the anticancer drug induced nephrotoxicity is well-known side effect which is excess dose are harmful or injurious molluscs. The evaluation of LC50/10 concentrations of anticancer drugs or toxicant are the first step before carrying further studies on physiological changes in animals. Cisplatin, cis-diamminedichloroplatinum II (Cis-DDP), Platinum containing co-ordination complex are effective antitumor agents utilized in the treatment of a wide variety of malignancies but antibiotics and anticancer drugs affect the bivalve or increase the death rate because they deplete the physiological ions and glycogen and other content.

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Attempts will be made in this study to select fresh water bivalves, *Lamellidens marginalis*. These were collected from Godavari River at Pravara Sangam which is about at the distance of 65 kms away from Ahmednagar City of Maharashtra state. First they are made acclimatized to laboratory conditions and then washed. The cleaned animals were then kept for depuration for 12 hrs in laboratory conditions under constant aeration. For biochemical analysis, bivalves were dissected and soft body tissues like mantle, gill, foot, digestive glands ovaries, testis, whole body etc. were removed. 100mg of each wet tissues were taken for biochemical analysis. Glycogen was determined by the anthrone reagent. Impact of Cisplatin on glycogen content of *Lamellidens marginalis* were calculated after acute as well as chronic dose of exposure.

#### a) Acute exposure to Cisplatin:

The healthy bivalves, *Lamellidens marginalis* were exposed to acute treatment (LC50/10) of Cisplatin (1.884 PPM).

#### b) Chronic exposure to Cisplatin:

After the acclimatization, bivalves, *Lamellidens marginalis* were divided into two groups with equal numbers of animals. The acclimatized *Lamellidens marginalis* were exposed to LC50/10 concentration of Cisplatin (1.884 PPM) up to 21 days. During exposure periods, no special food was provided and the water with required concentration of Cisplatin was changed daily in the experimental set and also from control. Control set was provided with dechlorinated water only without addition of any antibiotics. After 24 and 96 hours of acute and after 7, 14 and 21 days of chronic

PREVALENCE OF *TYLOCEPHALUM GOVINDII* SP. NOV. IN *TRYGON SEPIHEN* FROM ALIBAG, RAIGAD DISTRICT (M.S.), INDIA.

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ABSTRACT

The present communication deals with the Prevalence of cestode parasite in *Trygon sepihen* from different places of Alibag, Raigad District (West coast of Maharashtra, India) During the period of June 2016 to May 2018. Total 170 cestode parasites were recorded from 291 fishes. The collected parasites were of *Tylocephalum* genus. This report summarizes the data incidence, index of infection of cestode parasites with effect of environmental factors.

**Keywords:** Seasonal Prevalence of *Tylocephalum govindii* Sp. Nov, *Trygon sepihen*, Alibag, Raigad District (M.S.) India

INTRODUCTION

Fish is an important human food as well as the source of income of a segment of the population. India's present total annual fish production is about 5.7 million tonnes. Prevalence of cestode parasite from *Trygon sepihen* was undertaken to investigate the innate factor and morphological character such as season, temperature, humidity, age and sex of the host. The present investigation included application of the statistical method to understand the distribution of cestode parasite of population levels for three seasons i.e. rainy, winter and summer during the period of June 2016 - May 2018. The influence of different seasons on the infection with different groups of parasites was carried out by many workers on different hosts. Hanck et. al. (1978), Dogiel et al (1961), Hopkan (1959), Anderson (1978), Batra, V.A. (1994), Holmes, J.C. (1983), Anderson (1976), Crofton (1971a), Amano omar (1978, 1997) Pennvuick, K.L. (1971a) Peterson (1971), Murlidhar, A. (1991), Sushella (1987) have clearly shown that geographical distribution of cestode parasites is affected by Seasonal changes. Parasite can have wide range of impact on the ecology of their hosts, in terms of health (Alme and Owen, 1967) behaviour (Milinski 1984 more 1984) sexual selection (Howard and Minchella, 1990) Watve and Sukmar, 1997) and regulation of the host populations (Freeland, 1983). This makes it interesting to examine the ecological factors determining parasite loads. potential factors determining the transmission of parasites include environmental conditions that affect the viability behaviour of parasite propagules (Rogers and Sommerville, 1963) and feeding movement and defection patterns of the host. Parasitologic investigations of large patient populations are rarely conducted in the India. Where the illusion of freedom from parasitic infections still predominates, such investigations are considerable more common in third world countries where endemic parasites are more readily documented. Gastrointestinal parasite infections are world-wide problem for both small and large scale farmers, but their impact is greater in and the availability of a wide in India due to range of agro-ecological factors suitable for diversified hosts and parasite



# PREVALENCE OF TYLOCEPHALUM GOVINDII SP. NOV. IN TRYGON SEPHEN FROM ALIBAG, RAIGAD DISTRICT (M.S.), INDIA.

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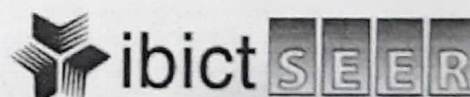
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Substituted Yttrium Iron Garnet

Authored by:

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## Study of XRD and Dielectrical Properties of Indium ( $\text{In}^{3+}$ ) Substituted Yttrium Iron Garnet

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### Abstract

The garnet series having the general formula  $\text{Y}_3\text{In}_x\text{Fe}_{5-x}\text{O}_{12}$  ( $x = 0.0, 0.2$  and  $0.4$ ) were synthesized by using double sintering solid state reaction method. The samples were characterized by X-ray diffraction technique (XRD). The X-ray diffraction studies of compositions revealed the formation of single phase cubic structure with lattice constant ranging from 12.37 to 12.43 Å up to  $x = 0.4$ . The dielectric properties were investigated using LCR-Q meter (hp HEWLETT) in the frequency range 100 Hz to 1 MHz. The dielectric constant ( $\epsilon'$ ), dielectric loss ( $\epsilon''$ ) and dielectric loss tangent ( $\tan \delta$ ) were measured as a function of frequency by using LCR-Q meter. The frequency dependence of dielectric measurements was carried out for given samples.

**Keyword:** garnet, YIG, XRD, dielectric.

### 1. Introduction

Ferrites represent an important category of materials, which are in great demands due to their numerous applications in many fields. The electrical and magnetic properties of ferrites are strongly dependent on their chemical composition and their method of preparation [1, 2]. It is important to optimize the electrical and magnetic properties of ferrites, for desired applications. Due to their interesting properties scientists, researchers and engineers are still interested in designing the various types of ferrites material substituted with different cations with different valences and prepared by different techniques.

Among the various types of ferrites rare earth garnet especially yttrium iron garnet (YIG) is of great importance for scientist and technologist because of their applications in microwave communication devices such as circulators, gyrators and phase shifters because of its small ferromagnetic resonance line-width, high electrical resistivity and low dielectric loss in microwave regions in many fields [3]. Yttrium iron garnet (YIG) is microwave ferrite, which in polycrystalline form has specific characteristics. The magnetic and crystallographic properties of the magnetic iron garnet have been studied by many workers [4-7]. Substituted iron garnets have found extensive use in wide band non reciprocal microwave devices [8].

### 2. Experimental:

The samples of  $\text{In}^{3+}$  substituted  $\text{Y}_3\text{In}_x\text{Fe}_{5-x}\text{O}_{12}$  garnets with  $x = 0.0, 0.2$  and  $0.4$  were prepared by well known double sintering ceramic method in which a molar ratio of analytical  $\text{Y}_2\text{O}_3$ ,  $\text{Fe}_2\text{O}_3$  and  $\text{In}_2\text{O}_3$  (all 99.99% pure AR grade chemicals, Mumbai) were mixed thoroughly in stoichiometric proportions and then ground to very fine powder by using agate mortar for about 3 hr. These mixtures in powder form were pre-sintered in a Indfur Programmable muffle furnace at  $1200^\circ\text{C}$  for 24 h and cooled to room temperature





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## The Influence of Substitution of Jahn-Teller $\text{Cu}^{2+}$ Ions on the Structural and Magnetic Properties of Nickel Ferrite.

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### Abstract

The polycrystalline samples of copper substituted nickel ferrite having the generic formula  $\text{Ni}_{1-x}\text{Cu}_x\text{Fe}_2\text{O}_4$  ( $x = 0.0, 0.2, 0.4, 0.6, 0.8$  and  $1.0$ ) have been synthesized by standard double sintering ceramic method using AR grade oxides. The formation of mono phase cubic spinel structure of all the samples under investigation have been carried out using X-ray diffraction technique at room temperature. The lattice constant, X-ray density, bulk density and porosity were obtained as a function of copper content. It is found that lattice constant increases with copper content  $x$ . The variation in lattice constant has been explained on the basis of difference in ionic radii. The magnetic properties like saturation magnetization ( $M_s$ ), magneton number ( $n_B$ ), coercivity etc. of mixed Ni-Cu ferrite were obtained from magnetization ( $M$ ) versus applied magnetic field ( $H$ ) plots. The saturation magnetization decreases from  $54.725 \text{ emu/gm}$  to  $37.14 \text{ emu/gm}$ . The values of structural and magnetic parameters of mixed Ni-Cu spinel ferrite shows strong influence of Jahn Teller  $\text{Cu}^{2+}$  ion.

**Keywords:** Ni-Cu spinel ferrite, Jahn-Teller ion ( $\text{Cu}^{2+}$ ), magnetic properties.

### 1. Introduction:

Spinel ferrites are commercially important materials because of their excellent electrical and magnetic properties. Interesting physical and chemical properties of ferrites arises from ability of these compounds to distribute cations amongst the available tetrahedral A-site and octahedral B-site and magnetic A-A, B-B and A-B interactions. Ferrites fulfill the wide range of applications from microwave to radio frequencies and are of importance from both fundamental and applied research point of view. [1,2]. The twin property of electrical insulator and magnetic conductor makes ferrites useful in many devices such as transformer cores, antenna rod, and memory chips, microwave devices, magnetic recording etc. Compared to other magnetic materials ferrites can be easily prepared, low cost and highly stable. The important electrical and magnetic properties of ferrites depend on various factors which include method of preparation, type, nature and number of dopants etc. [3, 4].

The mixed ferrites are studied by number of workers because they have low eddy current loss, high resistivity good magnetic property and therefore they are more important commercially. Nickel ferrite ( $\text{NiFe}_2\text{O}_4$ ) has been an important spinel ferrite material due to its high Curie temperature, low microwave loss, low magnetic anisotropy and low magnetostriction. According literature nickel ferrite is a inverse spinel ferrite whose degree of inversion depends on sintering temperature and other processing parameters. Copper ferrite ( $\text{CuFe}_2\text{O}_4$ ) is a distinguished among other spinel ferrites by fact that it under goes structural phase transition accompanied by a reduction crystal symmetry to tetragonal due to cooperative Jahn-Teller effect. However, there are differences about the phase transition temperature of  $\text{CuFe}_2\text{O}_4$  [5, 6]. The mixed ferrite of nickel and copper has not been studied for its structural and



## Structural and Magnetic Studies of Copper Substituted Nickel ferrite

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### Abstract

In this present work, compositions of copper substituted nickel spinel ferrites samples with the general formula  $Ni_{1-x}Cu_xFe_2O_4$  (with  $x = 0.0, 0.4$ , and  $0.8$ ) prepared by standard ceramic technique is investigated. The structural properties of these ferrite samples have been studied using X-ray diffraction technique. X-ray diffraction studies of compositions revealed the formation of single phase cubic structure. Magnetization measurements were carried out using pulse-field hysteresis loop technique at room temperature. The saturation magnetization ( $M_s$ ), magneton number ( $n_B$ ), and coercivity ( $H_c$ ) obtained from pulse field magnetization technique decreases with Cu substitution  $x$ .

**Keywords** -XRD, lattice constant, x-ray density, magnetization.

### 1. Introduction

In recent years, nano-sized spinel ferrite particles have attracted considerable attention of scientists and technologists due to their interesting and unusual properties both from the fundamental and academic point of view which is altogether different from their bulk counterpart [1]-[3]. The ability to produce nano-sized particles has opened new applications for magnetic materials, such as magnetic media, high density recording, drug delivery, magneto caloric refrigeration etc. [4]-[6].

Among the different spinel ferrites, nickel ferrite ( $NiFe_2O_4$ ) is a well-known soft magnetic material and having inverse spinel structure, whose degree of inversion depends on the thermal heat treatment. The high electrical resistivity and moderate magnetic properties makes nickel ferrite an excellent core material for various applications in electronic and telecommunication. Nickel ferrite has been successfully synthesized by various methods and studied for its structural and magnetic properties by many researchers [7]-[11]. Copper ferrite ( $CuFe_2O_4$ ) is distinguished among other spinel ferrites by fact that it undergoes structural phase transition accompanied by reduction crystal symmetry to tetragonal due to cooperative Jahn-Teller effect. However there are differences about the phase transition temperature of  $CuFe_2O_4$  [12], [13]. In this work we report our results on structural and magnetic properties of mixed Ni-Cu spinel ferrites.



## “Structural Properties of Vanadium Substituted Yttrium Iron Garnet”

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### Abstract

The garnet having the general formula  $Y_3V_xFe_{5-x}O_{12}$  ( $x = 0.0, 0.2$  and  $0.4$ ) were synthesized using double sintering ceramic technique. The samples were characterized by X-ray diffraction technique. The X-ray diffraction studies of compositions revealed the formation of single phase cubic structure with lattice constant ranging from 12.364 to 12.381 Å up  $x=0.0$  to  $x=0.4$ .

The IR spectra of all samples are taken in the range of  $300-800\text{cm}^{-1}$ . IR spectra show typical absorption bands indicating the garnet nature of samples.

**Keyword:** Garnet, Vanadium, structural, IR study.

### Introduction:

Yttrium iron garnet (YIG)  $Y_3Fe_5O_{12}$  belongs to a group of magnetic oxides and has received a great deal of attention in laser, microwave devices and ultrasonic devices field. They are characterized by magnetic and magneto-optical properties. Yttrium iron garnet (YIG) is a microwave ferrite, which in polycrystalline form has specific characteristics.

Garnets are cubic oxides with space group  $O_h^{10}$  and they are characterized by the chemical formula  $\{A_3\}[B_2]X(C_3)O_{12}$ , where the different brackets reflect the various oxygen coordination of the A cations while the [ ] and ( ) indicate six fold and four fold coordination of the B and C cations, respectively. A can be one of the fourteen well known rare earth ions or Yttrium while B and C are the cations like Al, Ga, Cr, etc [1]. Yttrium iron garnet is one of the well known family of ferrimagnetic oxide magnetic materials. In the present study, we report our results on the structural properties of vanadium substituted yttrium iron garnet ( $Y_3Fe_{5-x}V_xO_{12}$ ) ( $x = 0.0 - 0.4$ ) through X-ray diffraction, infrared spectroscopy.

Pure and substituted yttrium iron garnet has been studied intensively by several researches with a view to understand their basic properties. Substituted yttrium iron garnets have been extensively used in wide band non reciprocal devices [2,3]. Non-magnetic substitutions in yttrium iron garnet have provoked great interest for scientific studies of the effects caused by the magnetic dilutions [4,5]. In general, non-magnetic cations occupy two non-equivalence sites with more or less pronounced preference for one site [6]. Non-magnetic ions usually occupy octahedral or tetrahedral site.



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## Low temperature synthesis and investigations of magnetic properties of cobalt ferrite nanoparticles

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## Low temperature synthesis and investigations of magnetic properties of cobalt ferrite nanoparticles

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**Abstract.** In the present study we report the synthesis of cobalt ferrite nanoparticles using one of the well-known wet chemical method i.e. sol-gel auto combustion technique. The synthesis was carried out at sufficiently low temperature of 100°C. Citric acid was used as a fuel in the synthesis process. The obtained nanoparticles were sintered at 550°C for 4 h and then used for structural and magnetic investigations. The phase pure nature and nano crystalline nature was investigated through X-ray diffraction technique. Room temperature X-ray diffraction pattern show well defined reflections oriented at different Bragg's angle corresponding to Miller indices (220), (311), (222), (400), (422), (511) and (440). All this reflections belongs to cubic spinel structure. Thus, XRD analysis confirms the formation of single phase compound. The particle size was obtained through Scherrer's equation and found to be 21 nm, indicating the nanocrystalline nature. The magnetic properties were investigated using pulse field hysteresis loop tracer at room temperature. The saturation magnetization show increased values as compared to the bulk cobalt ferrite. The coercivity found to be less which exhibits the superparamagnetic behaviour. The obtained structural and magnetic parameters are useful in biomedical applications.

### 1. Introduction

Over the past decades ferrites have proved a prominent magnetic material used in many applications due to their excellent magnetic as well as electrical properties [1, 2]. They have the applications in the field of antenna rods, transformer cores, magnetic data storage, high frequency devices etc [3, 4]. In the recent decades, ferrites in nanocrystalline form have attracted many researchers as these nanoparticles exhibit smaller size, large surface to volume ratio and superparamagnetic behaviour [5, 6]. These characteristics of nanoparticles are useful in targeted drug delivery, hyperthermia, magnetic sensors, catalyst and many other areas [7]. Ferrite crystallizes in cubic spinel structure, cubic garnet structure and hexagonal structure. Spinel ferrite structure is very much attractive and show better



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## Analysis of Structural, Electrical and Cure Temperature Measurements of $\text{In}^{3+}$ Substituted Yttrium Iron Garnet

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**Abstract:**  $\text{In}^{3+}$  was added in to yttrium iron garnet (YIG). Samples, with a nominal composition of  $\text{Y}_3\text{In}_x\text{Fe}_{5-x}\text{O}_{12}$  with  $x = 0.0, 0.2$  and  $0.6$  were prepared by a solid-state sintering method. The samples were characterized by X-ray diffraction technique. The X-ray diffraction studies of compositions revealed the formation of single phase cubic structure with lattice constant ranging from  $12.37$  to  $12.44 \text{ \AA}$ .

The FTIR spectra of typical samples are taken in the range of  $500\text{-}4000\text{cm}^{-1}$ . IR spectra show typical absorption bands indicating the garnet nature of samples. The D.C. electrical resistivity  $\rho_{dc}$  Was measured in the temperature range  $300\text{-}725 \text{ K}$ .

**Keywords:** Yttrium iron garnet, indium, structural and electrical study.

### Introduction:

Mixed metal oxides with iron (III) oxides as their main component are known as ferrites. Historically ferrites represent an important category of materials, which are in great demands due to their numerous applications in many fields. The electrical and magnetic properties of ferrites are strongly dependent on their chemical composition and their method of preparation [1, 2]. It is important to optimize the electrical and magnetic properties of ferrites, for desired applications. Due to their interesting properties scientists, researchers and engineers are still interested in designing the various types of ferrites material substituted with different cations with different valencies and prepared by different techniques.

In the various types of ferrites rare earth garnet especially yttrium iron garnet (YIG) is of great importance for scientist and technologist because of their applications in microwave communication devices such as circulators, oscillators, gyrators and phase shifters because of its

## Investigation of Structural and Magnetic Parameters of Ni-Cu Spinel Ferrites

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**Abstract:** The polycrystalline samples of ferrite having the general formula  $\text{Ni}_{1-x}\text{Cu}_x\text{Fe}_2\text{O}_4$  with  $x = 0.0, 0.5, 1.0$  were synthesized using solid state reaction technique. The X-ray diffraction patterns revealed the formation of single phase cubic spinel structure for  $x = 0.0$  and  $x = 0.5$ . The lattice constant increases with copper content and shows tetragonal structure for  $x = 1.0$  ( $\text{CuFe}_2\text{O}_4$ ) with lattice constant  $a = 5.8489 \text{ \AA}$  and  $c = 8.6385 \text{ \AA}$ . X-ray intensity ratios were calculated for selected planes (220), (311), (440), (422), (333) were compared with the observed intensity ratios in order to obtain cation distribution. The results of the cation distribution indicate that  $\text{Cu}^{2+}$  and  $\text{Fe}^{3+}$  occupy both sites whereas  $\text{Ni}^{2+}$  occupy octahedral B site. The saturation magnetization ( $M_s$ ) and magneton number ( $n_B$ ) both decreases with copper substitution. The behaviour of magnetic properties was also studied using Neel's collinear model.

**Keywords:** X-ray diffraction, cation distribution, magneton number

### Introduction:

Spinel ferrites are commercially important materials because of their excellent electrical and magnetic properties. Interesting physical and chemical properties of ferrites arises from ability of these compounds to distribute cations amongst the available tetrahedral A-site and octahedral B-site and magnetic A-A, B-B and A-B interactions. Ferrites fulfill the wide range of applications from microwave to radio frequencies and are of importance from both fundamental and applied research point of view. [1,2]. The twin property of electrical insulator and magnetic conductor makes ferrites useful in many devices such as transformer cores, antenna rod, and memory chips, microwave devices, magnetic recording etc. Compared to other magnetic materials ferrites can be easily prepared, low cost and highly stable. The important electrical and magnetic properties of



## Study of Structural and Magnetic Properties of Copper Substituted Nickel ferrite

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**Abstract:** In this present work, compositions of copper substituted nickel spinel ferrites samples with the general formula  $\text{Ni}_{1-x}\text{Cu}_x\text{Fe}_2\text{O}_4$  (with  $x = 0.0, 0.4$ , and  $0.8$ ) prepared by standard ceramic technique is investigated. The structural properties of these ferrite samples have been studied using X-ray diffraction technique. X-ray diffraction studies of compositions revealed the formation of single phase cubic structure. Magnetization measurements were carried out using pulse-field hysteresis loop technique at room temperature. The saturation magnetization ( $M_s$ ), magneton number ( $n_B$ ), and coercivity ( $H_c$ ) obtained from pulse field magnetization technique decreases with Cu substitution  $x$ .

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### Introduction:

In recent years, nano-sized spinel ferrite particles have attracted considerable attention of scientists and technologists due to their interesting and unusual properties both from the fundamental and academic point of view which is altogether different from their bulk counterpart [1]-[3]. The ability to produce nano-sized particles has opened new applications for magnetic materials, such as magnetic media, high density recording, drug delivery, magneto caloric refrigeration etc. [4]-[6].

Among the different spinel ferrites, nickel ferrite ( $\text{NiFe}_2\text{O}_4$ ) is a well-known soft magnetic material and having inverse spinel structure, whose degree of inversion depends on the thermal heat treatment. The high electrical resistivity and moderate magnetic properties makes nickel ferrite an excellent core material for various applications in electronic and telecommunication. Nickel ferrite has been successfully synthesized by various methods and studied for its structural

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## Low temperature synthesis and investigations of magnetic properties of cobalt ferrite nanoparticles

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# Low temperature synthesis and investigations of magnetic properties of cobalt ferrite nanoparticles

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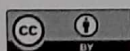
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**Abstract.** In the present study we report the synthesis of cobalt ferrite nanoparticles using one of the well-known wet chemical method i.e. sol-gel auto combustion technique. The synthesis was carried out at sufficiently low temperature of 100°C. Citric acid was used as a fuel in the synthesis process. The obtained nanoparticles were sintered at 550°C for 4 h and then used for structural and magnetic investigations. The phase pure nature and nano crystalline nature was investigated through X-ray diffraction technique. Room temperature X-ray diffraction pattern show well defined reflections oriented at different Bragg's angle corresponding to Miller indices (220), (311), (222), (400), (422), (511) and (440). All this reflections belongs to cubic spinel structure. Thus, XRD analysis confirms the formation of single phase compound. The particle size was obtained through Scherrer's equation and found to be 21 nm, indicating the nanocrystalline nature. The magnetic properties were investigated using pulse field hysteresis loop tracer at room temperature. The saturation magnetization show increased values as compared to the bulk cobalt ferrite. The coercivity found to be less which exhibits the superparamagnetic behaviour. The obtained structural and magnetic parameters are useful in biomedical applications.

## 1. Introduction

Over the past decades ferrites have proved a prominent magnetic material used in many applications due to their excellent magnetic as well as electrical properties [1, 2]. They have the applications in the field of antenna rods, transformer cores, magnetic data storage, high frequency devices etc [3, 4]. In the recent decades, ferrites in nanocrystalline form have attracted many researchers as these nanoparticles exhibit smaller size, large surface to volume ratio and superparamagnetic behaviour [5, 6]. These characteristics of nanoparticles are useful in targeted drug delivery, hyperthermia, magnetic sensors, catalyst and many other areas [7]. Ferrite crystallizes in cubic spinel structure, cubic garnet structure and hexagonal structure. Spinel ferrite structure is very much attractive and show better



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# WOMEN EMPOWERMENT STRATEGIES FOR DEVELOPMENT

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## ABSTRACT:

Women's empowerment and economic development are closely interrelated. Does this imply that pushing just one of these two levels would set a virtuous circle in motion? This article reviews the literature on sides of the empowerment-development nexus, and argues that the inter-relationships are probably too weak to be sustaining, and that continuous policy commitment to equality for its own sake may be needed to bring about equality between men and women. In view of the critical role of women in the agriculture and allied sectors, producers, concentrated efforts will be made to ensure that benefits of training, extension and various programmes will reach them in proportion to their numbers. The programmes for training women in 'Women and Economy' are connected with each other. Women's perspectives will be included in designing and implementing macro-economic and social policies by institutionalizing their participation in such processes. Their contribution to socio-economic development as producers and workers will be recognized in the formal and informal sectors (including home based workers) and appropriate policies relating to employment and to working conditions will be drawn up. In order to enhance women's access to credit for consumption and production, the establishment of new, and strengthening of existing micro-credit mechanisms and micro-finance institution must be undertaken so that the outreach of credit is enhanced. Other supportive measures would be taken to ensure adequate flow of credit through financial institutions and banks, so that all women below poverty line access to credit.

## Education for women

Equal access to education for women and girls will be ensured. Special measures will be taken to eliminate discrimination, universalize education, eradicate illiteracy, create a gender-sensitive educational system, increase enrolment and retention rates of girls and improve the quality of education to facilitate life-long learning as well as development of occupation/vocation/technical skills by women. Reducing the gender gap in secondary and higher education would be a focus area. Sectoral time targets in existing policies will be achieved, with a special focus on girls and women, particularly those belonging to weaker sections including the Scheduled Castes/Scheduled Tribes/Other Backward Classes/Minorities.

Sensitive curricula must be developed at all levels of educational system in order to address sex stereotypes as one of the causes of gender discrimination. A holistic approach to women's health which includes nutrition and health services must be adopted and special attention will be given to the needs of women and girl at all stages of the life cycle. The reduction of infant mortality and maternal mortality, which are sensitive indicators of human development, is a priority concern. To effectively meet problems of infant and maternal mortality, and early marriage the availability of good and accurate data at micro level on deaths, births and marriages is required. Strict implementation of registration of births and deaths would be ensured and registration of marriages would be made compulsory. In accordance with the commitment of the National Population Policy (2000) to population stabilization, this Policy recognizes the critical need of men and women to have access to safe, effective and affordable methods of family planning of their choice and the need to suitably address issues of early marriages and spacing of children.



Women's traditional knowledge about health care and nutrition will be recognized through proper documentation and its use will be encouraged. The use of Indian and alternative systems of medicine will be enhanced within the framework of overall health infrastructure available for women.

### **Poverty Eradication-**

Since women comprise the majority of the population below the poverty line and are very often in situations of extreme poverty, given the harsh realities of intra-household and social discrimination, macroeconomic policies and poverty eradication programmes will specifically address the needs and problems of such women. There will be improved implementation of programmes which are already women oriented with special targets for women. Steps will be taken for mobilization of poor women and convergence of services, offering them a range of economic and social options, along with necessary support measures to enhance their capabilities.

### **Turning Oppression into Opportunity for Women Worldwide-**

Three priorities will guide our work on gender equality. These are connected and mutually reinforcing and apply across many contexts. We will consider funding explicit investments or streams within investments to address these priorities. We will create opportunities to engage on them in our foreign policy and economic diplomacy work and report regularly against them. In multilateral context we can take a lead to provide opportunities for women's leadership and active participation. Our human resource development programs will promote equal employment opportunities and our investments in trade and economic sectors can implement a zero tolerance approach to violence Context.

Women's participation in decision-making, leadership and peace-building is important as a right in itself. Women also bring particular perspectives, priorities and strengths resulting from their life experiences, which are often different from men's. This means they are likely to make different decisions, with women leadership responding more strongly to women's policy priorities. Private sector businesses that have female Promoters, women's economic empowerment Context, Women's economic participation helps to drive growth at a national level and reduce poverty within communities and households. Societies that make better use of the skills, talents and time of all members will more likely prosper. Women are often more likely than men to use income to support development outcomes within their families. Increasing women's earnings can strengthen their hard decision making in their households. Women remain poorer than men globally, so in promoting economic growth internationally, work is needed to ensure women can participate in economic life and benefit equitably from doing so. This can promote equality and lead to empowerment, although often it merely increases women's time burdens and contributes to increased exploitation and violence. Careful analysis and consistent interventions are needed so women's economic participation is empowering and does not exacerbate inequality or place unfair burdens on women and their children. Accelerating women's participation in the paid workforce reflects the G20 commitment to close the gap between women's and men's participation rates by 25 per cent by 2025. A focus on women's formal sector workforce participation in Australia's development program, economic diplomacy and global and regional sector is important to support this and ensure that developing nations do not fall further behind. Investing in women's employment is not only the right thing to do—it's also essential business. Companies that learn to effectively develop and retain women employees will gain a huge competitive advantage.

Women comprise nearly half of the world's agricultural workers but have less access than men to productive resources and opportunities. Improving women's access could increase women's agricultural productivity by 25 to 30 per cent and increase agricultural output in developing countries between 2.5 and four per cent. Women's priorities, needs and interests are often overlooked and so more needs to be done. For example,



electrification programs could lessen women's unpaid work burdens by facilitating their access to time and labour-saving electrical devices. Providing access to modern, improved fuels, such as gas and renewable (rather than wood), would free up women's time for productive work.

**Ending violence against women and girls Context-** Violence against women and girls is pervasive and persistent throughout the world and a significant human rights violation. Violence against women and girls takes many forms including: violence in the home, sexual abuse of girls at school, sexual harassment at work and in the streets, rape by husbands or strangers, child marriage, acid attacks, trafficking of women and female genital mutilation. In conflict situations, rape is often used as a tactic of war and women and girls can be over-represented among displaced populations. Women and girls with disabilities are more likely to experience violence and face additional barriers in seeking justice and support. Boys are also at increased risk of certain types of gendered violence and exploitation, such as through labour involving significant risks to their health and safety. Violence or the fear of violence restricts women's lives and opportunities and constrains development. It causes trauma and limits women's social, political and economic participation. It can have a lifelong impact on women's children. It creates significant strain on national economies with escalating costs in health care, social services, policing and the justice system. In the aftermath of natural disasters and during conflicts, rates of sexual and gender-based violence are often higher. Everyone has a responsibility to prevent and end violence against women and girls, starting by challenging the culture of discrimination that allows it to continue. We must shatter negative gender stereotypes and attitudes, introduce and implement laws to prevent and end discrimination and exploitation, and stand up to abusive behaviour whenever we see it. We have to condemn all acts of violence, establish equality in our work and home lives, and change the everyday experience of women and girls. An effective response to ending violence against women is based around improved quality services and responses, access to justice, and prevention. Integrated responses that account for diverse forms of violence against women and girls are crucial. In any response, it is paramount to focus on the safety of survivors of violence and their children. Ensuring protection during humanitarian responses is also participation to transformation. Even where the three priorities that guide our work on gender equality are not the focus, we will still contribute to gender equality and women's empowerment.

#### **Create confidence-**

At a minimum, we will ensure that women and men benefit from our interventions, to avoid exacerbating gender inequalities. This means designing infrastructure programs to meet women's as well as men's needs and priorities, that aid for trade programs engage specifically with women entrepreneurs and that women can participate at all stages of conflict resolution, peace-building and reconstruction. We will focus on enrolment and retention in education, on the gender norms imparted in curricula and teaching materials and on ensuring women are recruited and promoted in the education system. In health, we will consider work to help empower women to have control over the number and spacing of the children they have. A focus of health programming will support universal access to sexual and reproductive health and rights. Beyond ensuring that women can participate in and benefit from our work, we need to encourage a shift in norms, legal frameworks and policies towards greater acceptance of gender equality, to give women more equal control over resources and assets and more control over their lives and futures. We will not succeed if we do not take into account, and address, unequal gender norms - the social rules and expectations of men and women. We often hesitate to press for gender equality for fear of imposing western cultural norms and undercutting the important development principle of partner government ownership. Yet governments around the world are committed to gender equality, and each country we work with has a women's movement pressing for progress. It is therefore sensible to be strategic and sensitive in our gender equality work, but to remain a firm and consistent advocate.



**Gender equality**- is a politically and culturally sensitive area that requires careful gender and political economy analysis. It requires us to commit to do no harm and take into account challenges faced by countries in or emerging from fragility and conflict. We will think politically so we address the binding constraints to equality. We must be realistic about what we can achieve and where we can add value, and avoid inadvertently undermining local efforts. We will identify local champions and follow their lead. All of this means taking a long-term and strategic approach to all our work, for lasting and transformative change. For example, it is important to challenge assumptions that violence against women is acceptable, and support the reduction or redistribution of women's unpaid work burdens wherever opportunities arise. There is an inescapable truth – we cannot transform our world unless the place of women within it is transformed

It is important that we inform our diplomatic efforts with a sound understanding of the context of gender equality. We will scan consistently for gender issues and report on these, so we promote equality and speak with one voice. Overlooking gender equality can put effective outcomes at risk or exacerbate. Each year during implementation, Reporting must include results achieved. This is particularly important in the context of the development program targets specified in Making Performance Count. One such target is that more than 80 per cent of investments, regardless of their objectives, will effectively address gender issues in their implementation. This ambitious target is measured by an aggregate of ratings in the annual quality checks. Ratings need to be robust, credible and based on real progress that can be reported on. This means maintaining strong efforts in health and education, and increasing efforts in the aid for trade and governance sectors, which have poorer performance. Unsurprisingly, investments that have a principal or significant gender equality objective at implementation perform more strongly during annual quality checks. Increasing the number of new investments that have gender equality as a principal or significant objective will enhance performance. This means building gender equality into new investments at the start. Measuring the commitment More than 80 per cent of investments, regardless of their objectives, will effectively address gender issues. Commitment to practical action In implementing this strategy, we must take practical action.

### Conclusion-

1. Work with partner governments and regional organisations to advance their own gender equality priorities
2. Work sensitively within the local context
3. Support women's organisations and coalitions, including women entrepreneurs, associations and service providers for women, wherever possible and appropriate, recognising the lead role of these organisations in creating change
4. Work in partnership with the private sector, civil society organisations and other donors, and engage the media, schools, parliamentarians and local government as gender equality champions wherever possible
5. Work with men and boys as advocates for gender equality and women's empowerment where that is appropriate, including to address forms of masculinity that hinder progress • closely scrutinise our funding for multilateral organisations, including the multilateral development banks, to ensure effective integration of gender equality
6. Recognise that women are not a homogeneous group, paying particular attention to girls, those with disabilities, indigenous women and disadvantaged women
7. Apply gender equality considerations across the full range of funding mechanisms, including core funding, grants and funding through partner government systems
8. Seize opportunities as they arise to promote gender equality and women's empowerment, keep in mind the 'do no harm' principle and identify and mitigate risks
9. Be prepared to work for the long term—while progress towards gender equality can be rapid when circumstances are right, we need to be aware that this is the work of decades; short term programing is unlikely to be effective.



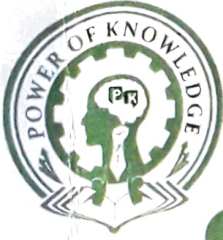
Thus to integrate gender equality across all sectors and all investments, we will apply these steps.also offer financial support to women in India and encourage and teach them how they can bernaking their own money by starting various business activities.

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## **"Poetry, A Purifying Force : A Study Of Sidney's Concept"**

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### **ABSTRACT :**

Poetry is a purifying and humanizing force. It enhances the beauty and glory of the world. Writing poetry is an execution of a high-flying fancy that transcends the limitations of dry reality, and changes the real into an ideal world. The poet as maker is blessed with a power to make goodness highly pleasant and highly alluring.

Sidney's concept of "other nature" in *Apology for Poetry* (1595), expounds a philosophical justification for all imagination writing that nourishes the seeds of civility in man. Art is not an imitation, but an invention of a new nature, the creation of a "speaking picture" (Sidney 25). It stirs the streams of sublimity in man and "turns into gold all poisonous waters" (Shelley 252). Like Emerson, Sidney feels that the poet combines surface reality with the divinely perceived sublime ideas. However, the nature created by the poet, is not a "picture postcard" but an unbidden, unseen, uplifting force that by purifying the unfathomable regions of mind, enters into the practical experience of the reader. "Poetry is a world of which poets are articulate and readers the inarticulate part" (James Reeves 71). It is an educational and uplifting world, both ideal and eternal, both instructive and entertaining.

### **Introduction :**

Yet the world created by the poet is never in contradiction with the real world. It is not completely imaginative and incongruous; it is not a free play of bizarre fancy that offends the pleasant curiosity of the reader. Poetic invention is strictly confined to what is proper, probable and pleasant. It seems new and fine only because the moral standards revealed in it are better than we generally apply in practical life. 'The second nature' comes out of the first "as a leaf out of a tree". The urgency and seriousness of mission and the vitality of delightful expression are so intensely interfused that one fails to resist his allurements to the images of perfection.

### **Visions of Sublime :**

Sidney's doctrine of "other nature" is indeed, a brief term but like a small prism it reflects the colours of classical volumes. Platonic idea of divine inspiration, Aristotle's concept of imitation, and Horatian norm of poetry to teach and delight, has been assimilated in a compact way. Sidney's elaborate presentation of the lofty notion of poetry as pure inspiration, is Platonic in origin. The poet according to Plato is a "light and winged holy thing ... simply inspired to utter that which the Muse impels" Sidney also develops this view. The poet is presented as possessing great passion and lofty heavenly inspiration. He receives and imparts sublime visions. Beauty and truth are combined by him to compose a world of grandeur and divine wisdom. Sidney's doctrine of poetic creation is colored throughout by Platonic teaching for "the world conjured up by the poet is the world of Ideal that world present in the mind of



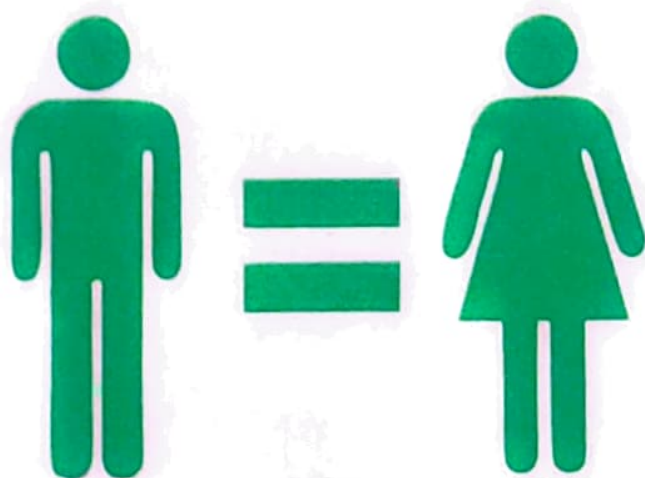
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## Indian Literature and Women Empowerment

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India has been producing various types of literary works. Modern writers are contributing innovative literary pieces to the world literature. Indian writers like Arundhati Roy, Rohinton Mistry, Vikram Seth, Jhumpa Lahiri, etc. have created wonderful novels having themes of quest for identity, alienation, nostalgia, etc. Indian writers have created their own place in world literature.

Palace of women in India has been the sensitive issue. Man is a social animal. He can not live a good life alone. He needs companion for every step of life. So he lives in a family, families make a society. Thus, man becomes one of the factors of society. Woman is important part of society as well. There is difference between the social position of Man and woman. Both of them have to follow certain rules of society. They have to live in the boundaries decided by the society.

As men and women are biologically different, they are socially, politically and religiously. Nature has created them with different features and their natural difference forces them to follow certain rules created by the society. Society in itself is human being. So the rules are decided by the members of society i.e. men and women. Though, both men and women are the members of society, they have different rules. Now-a-days these social rules are changing. And in the country like India, where so many social problems are being faced, the rules become more serious and important.

Women's contribution at various levels has been proved successful and it has been appreciated by the world. Still in India, where education for women was not allowed, people are not yet able to accept that women can get out of home and lead a successful career. Not only at social level but also at political and religious level women are facing struggle. Though women have proved their ability, they have to struggle.

History has witnessed that there are few fields where men also face difficulties, it becomes more difficult for women. Since the struggle for women's right for voting in 1921, when Chennai first granted women's suffrage, women have been struggling hard. Women finally could participate in voting as well as the right to participate every field.

Position of women in any field has always been the topic of discussion. And this discussion has always been reached to the common

man through one or the other way. Literature is one of the ways through which position of women is known and understood.

History in itself tells the position of woman in India through the life stories of women who proved their ability and created history. Rani Lakshmibai's story is the inspiration for any woman. Rajmata Jijau also inspires women to get the spirit of growing up their children. Not only historical characters but also some historical books, novels, plays and poems present the contemporary women and her position at various levels.

Literature has always been the mirror of society and a powerful tool of presenting the contemporary issues. Problem Play is one of the examples through which some social problems are discussed. Literature very powerfully works among the common people and affects their social or traditional thinking and forces them think powerfully.

Various types of stories were written in English literature. K. S. Ramamurthi in his book *Rise of the Indian Novel in English*, states about the early Indian novelists that they "were by no means imitators but conscious experimenters who adopted an alien form and medium to socio-cultural situation and sensibility which were specifically Indian". (15) Some of the early Indian novelists use English language by translating Indian words into English. This style colours the language with Indianness. Earliest Indian English fictions were tales rather than novels. During the period of 1930 to 1980 Indian English fiction faced a sudden flowering. It is seen that earlier Indian English fictions were tales rather than novels. Thus the storytelling was one of the most important aspects of novel writing. The reflection of ancient Indian tradition and India's great past is seen in the fiction written in those days.

Kamala Markandaya uses the first person in *Nector in a Sieve*. Rukmini narrates her own story in a flashback. Asides used in the novel reveal the character's real feelings. In this way Markandaya has presented a woman's real emotional world in her novel.

Nayantara Sahagal's *The Day in Shadow* has the third person narrative. But with the omniscient narration, inside views reveal the inner thoughts of the characters. Anita Desai uses past and future events to reveal a woman's thoughts to the readers. In her novel *Where Shall We Go This Summer?* heroine's past is revealed through the flashback and the future is mentioned through her thoughts, her unconscious mind. She also uses letter to precede the story in *Fire on the Mountain*, where the letter informs Nanda Kaul about the arrival of her great-grand-child. Her novels express the feelings of the woman characters.

Shashi Deshpande expresses character's inner feelings through stream of consciousness. The narrator goes back in time and again comes in the present to narrate the events.



Shobha De is one of the modern Indian novelists who deal with the world of fashion and glamour. Her stories generally revolve around the life of Mumbai high society women. She presents women as the central characters. They are independent, bold and modern to handle their own problems alone. They take their own decisions. They do not care for the society and the people around them.

Rama Mehta's *Inside the Haveli* is written in the third person omniscient point of view. Protagonist Gita's feelings and thoughts are revealed through inside views. Some of the paragraphs describe the inner feelings of the heroine. Besides the conversation keeps on informing the readers about the story. The novel actually deals with the women's place in society. It is the story of a woman's journey from a underperveleged dependant woman to a responsible decision maker. Jhumpa Lahiri is concerned about a woman's assault against the injustice she faced in her novel *The Namesake*. Both Rama Mehta and Jhumpa Lahiri deal with oersonal and social injustice and how women handle it.

Kiran Desai's *Hullabaloo in the Guava Orchard*, Arundhati Roy's novel *The God of Small Things* represent the place of Indian women in the society in one or the other way. All of these female novelists present the characters with the intensity that the readers easily are introduced to the women problems and the solutions are suggested. The woman characters behave in such a way that the readers think about the society and the women facing social problems in society.

Thus the Indian literature depicts the characters and incidents representing place of women in society. Women authors choose the themes related to women and leading woman characters. Indian literature has always been helped to make women empowered with the presentation of themes revolving around women.

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# Role of Language and Literature in Empowering Rural Women

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Woman has been the 'subject-matter' of various social, political and religious issues in India. Especially, the Indian woman and more especially, Indian rural woman has been considered as a 'corrupt and burning issue'. May it be the matter of entering the core of the temple or the reservation for women. Indian woman has always been the matter of interest. India has been facing various problems regarding society, economy, politics and religion. Rural woman's development is among such social problems. Social workers and the government has been trying to demolish or at least reduce these problems. For that the government has been planning various schemes in order to develop the Indian society. Indian society has different aspects. Those aspects being rural Indian society, rural Indian woman, rural economy, religious factors and so on.

It is said that India is the country of villages. Much of the part of the country consists of rural area. Villages in India are not developed and so India also comes under the undeveloped countries. It is necessary to develop the rural area in order to develop the nation. Rural area has social, economic and religious problems. Indian farmer belongs to the rural area. He works hard but couldn't get a good life. There is no educational facilities in villages. So there is lack of education and consequently, unawareness about health. Woman has always given a secondary place in family, in religious ceremonies and in society. It was accepted by everyone. But some social reformers like Raja Rammohan Roy, Jotiba Phule realized that the place of Indian woman should not be secondary, it should be as similar as men.

The unnecessary limitations for women were tried to be demolished by the reformers. They had to face a lot of wrath of the society. But they finally could succeed in changing society's mentality about woman. She could learn and make the family learn. But it was not that simple. The society never allows woman and the lower caste people to have the access of various facilities for the them. They always create hinderance in one or the other way. Some times religion, some times society and some times some political issues stop to take further steps.

Development of rural community depends on various factors. These factors include education, health as well as social reforms. And this is not possible for any one person to change the society and develop the villages



People have to work in groups and change the mindset of the rustic people. It can be done with various means - language and literature are among them!

Language is the means of exchanging thoughts and expressions. With the help of language good thoughts can be exchanged and necessary changes are done. Language is the literature written in that particular language. So the literary works are also the means of exchanging thoughts and expressions. Various literary forms are the thoughts expressed about particular subject. The written work becomes literature if it has literary value. Newspapers have no literary value. So it is read only once. But the literary works have aesthetic as well as literary value. So it lasts long and has the power of social reform. The more effective is the writing the more effective is the social change. So language and literature are the tools of social change if used properly.

Literature includes dramas, novels and poetry. Through these literary pieces social reform is possible with its main aim that is - entertainment. Entertainment is one of the aims of the literature. It is one of the tools of the social change as well. Right from the times of independence Gandhiji and Pandit Jawaharlal Nehru have used this tool of writing for social awareness. Patriotism was the feeling and sense which was to be arisen in the minds of people in those days. Gandhiji and Nehru could succeed in changing the mindsets in some extent. Even Sarojini Naidu, Swatantryaveer Sawarkar, Raja Rammohan Roy wrote to make people aware of their rights about independence.

Rural woman is one of the neglected factors of the Indian society. Woman is, in fact one of the major factors of the society. As the young generation is the future of the nation, woman is also important for the nation building. Woman's development is the nation's development. Rural woman is not allowed to go out of her house. She is kept away from education and economic stability. So it is difficult to make these ladies get connected with literature. Literature has the great power to change the world. But it should reach to the people first. Educated people who have the knowledge about literature have to pass on their knowledge to the people.

There are so many ways to pass on the literature to the society. Literary pieces should be selected which are entertaining as well as informative. Play can be played on the stages. Subjects like gender equality, education, child labour, woman health should be handled through these plays. The fiction can also be discussed on the stage as a story. The story related to woman's position in society can be explained through the stories. Poetry is easy to present as a song. Music always attracts the people. Poems like *Night of The Scorpion* by Nissim Ezakiel, *Hunger* by Jayanta Mahapatra should be chosen to present before the people, specially the women in rural area. Each part of the society should be introduced to them. The fact that educated and working women are economically independent and are able to solve their problems on their own should be shown to the rural women.

One more hindrance in reaching the literary forms to the rural areas is that the language. English literature is great, but English language is not understood by the rural people. But the translation of these literary pieces in their native language can make these forms understood easily. Main themes of education, eradication of superstition, etc. should be chosen and should be conveyed to the rural society.

Literature helped freedom fighters to awake people and let the Britishers leave our country. Poetry is one of the literary forms which does not only give the aesthetic pleasure to the listener but also the sentimental attachment about the theme. Poets choose the proper theme and present the subject in such a way that it touches the readers' heart. Drama also plays the same purpose of entering the readers' heart with its dialogues and the characters. Novel, being a new literary form is also helpful to convey the message the novelist intended to. Thus, all the literary forms are tools of conveying the social messages to the society.

Rural areas can be developed through literature as it is one of the effective tools of social reform. Indian society has been facing various social problems. Eradication of these problems needs a well organised plan. Literature should be used initially as to introduce a social problem. Then it should be used as a promoter of that problem. Literature is the means of entertainment so it can be easily reached to and accepted by the common people.

Common man in a rural area has limited expectations and limited facilities. But sometimes they face problems like superstition, child labour, child marriage etc. These problems play a role of hindrance in any type of development. So these problems have to be removed. Through street plays such issues can be presented to the rural people and make them aware of the consequences these issues can be responsible for. Not only plays, poetry also has its role in the development of the rural area. Ballads are effective literary form through which people can be aware of the social issues and its effects on the society. Marathi novelist and poet Annabhau Sathe has composed ballads and tried to make low caste people aware of their rights.

Position of women in rural India is also one of the issues which affects the development of India. Rural women are not allowed to get education and be independent. They have so many limitations in personal as well as social life. Lack of education and influence of superstition makes them face health problems as well as economic problems. There are some novels depicting women's position and her inner conflict. Rama Mehta's *Inside the Haveli* presents a woman's loneliness and the journey towards the completeness as she overcomes the problem.

Not only social problems but the inner conflicts of human mind are also represented through literature. Right from Virginia Woolf and James Joyce the inner conflict of the human mind has been presented through literature. Anita Desai also concerns a loneliness of a woman in her novel *Cry the Peacock*.

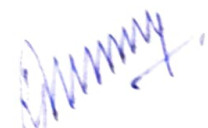


The literary works help to put forth the problems the rustic people come across. People who have the ability to understand, think about the situation and they try to solve the problems on their levels. In fact, a problem presented through literature is the first step towards the problem solving. Rural areas are not given much importance for the development. Limitations for social, political, economical as well as cultural areas become hindrance in the development. So it becomes necessary to know about the hindrances. Literature plays an important role of making responsible people aware of the situation and take the proper step towards problem solving.

India's social, cultural, economical and political development is closely associated with the rural area. Development of rural area is the development of India. Poets and writers have tried to make people aware of their rights and their duties at various levels. So literature has great responsibility of shaping people's mindset as well as shape the society.

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## COMPARATIVE STUDY OF INNOVATIVE NARRATIVE TECHNIQUES IN SHASHI THAROOR AND CHETAN BHAGAT'S NOVELS

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### ABSTRACT:

*Modern Indian English literature has produced some of the intelligent and creative writers. They have created their own place not only in Indian literature but also in the world literature. Since the beginning of novel writing, the Indian writers have tried their hands in various aspects of novel writing. Initially, Indian writers wrote the novels with no much emphasis on its aspects. Its themes, characterization, plot construction, methods of presentation and narration, etc. were conventional. But then the Indian writers began to adopt European writers. So the modern methods and techniques were being used. Today, Indian writers have included every modern and innovative aspect in their writings. Modern writers are choosing innovative techniques and methods in order to make their writing more interesting. Shashi Tharoor and Chetan Bhagat represent modern India by showing contemporary Indian issues in their novels. Both the authors have used innovative techniques to narrate the story. Tharoor has chosen almost all the areas as the subject matter. Bhagat has his interest especially in youth. With their chosen subject matters and themes the novelists have presented the image of India at various levels. Both of them have used innovative and suitable narrative techniques. Technological devices are also used as the method of narration. Both the authors have produced wonderful literary pieces with innovative narrative techniques.*

Indian English writers have been creating wonderful literary pieces since the beginning of novel writing. Bankimchandra Chatterjee's *Rajmohan's Wife*, published in 1864 is said to be the first Indian novel. It was written in third person point of view with conventional methods like description and conversation. Being the first Indian novel it has no innovative methods. In those days focus was not on the technical aspect. Though simple, the plot construction and character presentation made it worth reading.

In India novel writing began from Bengal since the publication of Bankimchandra Chatterjee's *Rajmohan's Wife*. Initially Bengali writers translated their works from their mother tongue into English. Then they began to write in English. Rabindranath Tagore produced English novels. Thus the tradition of novel writing began from Bengal.





In modern period fiction writers are experimenting in this area. They are including different innovative methods of presentation. Techniques like stream of consciousness, flashback, flash forward, interior monologues have been used by the Indian writers. R. K. Narayan, Raja Rao began the tradition of using innovative narrative techniques. They used third person narration, first person narration, flashback, flash forward, interior monologue, etc.

Contemporary Indian fiction writers are creating innovative literary pieces with their imagination. Their writings are helping in making their own image in the world literature. They are experimenting in the area of novel writing, focusing on various aspects of the novel. In conventional fiction writing focus was not on technical aspect. This study deals with the technical aspect of novel. The way of presenting story and the point of view of narration are very important in novel writing. Contemporary Indian writers are focusing on these aspects. They are employing different techniques and methods to narrate their stories.

Shifting point of view is one of the interesting features of the modern Indian writers. They keep on changing the point of view and keep on changing the narrative techniques throughout the novel. They have applied very innovative ideas in this area. In Jhumpa Lahiri's novel *The Namesake*, story is told in past but it shifts to the present and again to the past. The narrative goes back and then comes in the present. Arvind Adiga's *The White Tiger* begins with the description of a pamphlet. Thus the innovative narrative techniques are being used in contemporary Indian fictions.

Shashi Tharoor and Chetan Bhagat are among the modern Indian writers. They have created wonderful novels with innovative story-telling methods. The stories they have presented are interesting because of the way they have narrated them. Employing the new techniques of **narration makes to raise the curiosity of the readers. And that is the most important thing about the narration.** Narration should be in such a way that the readers' curiosity rises to the height.

Being a modern Indian writer Tharoor has inserted every necessary element in his novels. His innovative narrative techniques are also making his writings interesting. He deals with the politics, history, mythology, national and international issues in his novels. He has employed innovative narrative techniques to narrate the stories. He has used flashback, poetry, cable messages, prologue, speech sessions, articles in magazine, movie stories, epilogue, news updates, diary entries, scrapbook, dialogues, dialogue-monologues and interview transcripts.

Very interesting and innovative technique Tharoor has used in *Show Business* is articles in magazine. Story of the movie is narrated which also informs about Ashok's life. The story of the movie *Dil Ek Qila* explains Ashok's unwillingness to live without Mehanaz and her painful condition to be away from him. During the interval of the movie, magazine pages are shown. The article explains Ashok's marriage, his affairs and relationships. Thus the articles are also used to develop the story.

Tharoor's novel *Riot* has very unusual beginning. It begins with news. The title of the news is 'The Death of an Idealist'. This line introduces the subject matter of the novel. The story revolves around this news. Priscilla Hart has died and the reason behind her death is not clear. **And if she is killed, her killers are unknown. But the novel opens with the news and it raises**



the curiosity of the readers. Next news items inform about Priscilla's personal details, her physical and behavioral features, her family background, family members etc. Here, in this novel news is used as a method of storytelling. News is in the third person point of view. However, diary entries are in first person point of view. Priscilla's mother Katherine Hart writes her diary, through which the necessary information about Priscilla and her death are revealed. Katherine's inner thoughts and feelings about other characters, her concern about her daughter's death are presented. Scrapbook is also a kind of diary. But it is a secret personal diary. It is also written in first person, expressing the inner most feelings of that character. Tharoor uses scrapbook to create curiosity in the readers' mind. It is a secret diary, so he makes use of 'a secret' which is kept secret from all the characters, revealing it to only one or two characters and the readers. Thus, with an unusual beginning novel introduces innovative and interesting techniques.

Modern writers have been experimenting in their writings. Tharoor has used dialogue-monologues to narrate the story. Actually, dialogue or conversation is one of the conventional methods. But he has used it differently. He presents monologues in such a way that it seems that these are dialogues between two people. Only one person is speaking but the presentation gives the impression that one person is speaking to the other. He also shows that the other person is reacting to his speaking. It is not the one way track. Both the characters are involved in the dialogues and giving expressions. In this way the author has used conventional method but in an innovative way.

Tharoor has used interview transcripts as narrative techniques. He has made use of the interviews which provide necessary information for the development of the story. The questions asked in the interview and the answers given to those questions contain the issues which are necessary and helpful for construction of story.

However, Chetan Bhagat chooses the issues like crisis in the field of science and technology. For that he includes the characters from the world of technology. Central characters in his novels are generally young people and they fight for the betterment of the human being. He employed the techniques like one-sided telephonic conversation, foreshadowing, notice, SMS, FAX, email, song, pamphlet, public speech, inside views, interior monologue, flashback in flashback, scrapbook and news updates.

Both the authors have used innovative techniques to narrate the story. They have employed the techniques suitable to the themes and characters. Being the modern writers they have used technological devices as narrative techniques. Tharoor's characters belong to various fields and different social classes. Bhagat's characters are also from different areas but they represent typical young India. The characters are young and modern, so the technology and the technological devices are inserted in his novels.

Tharoor's *Riot* and Bhagat's *The Three Mistakes of My Life* deal with Hindu-Muslim conflict, castism and other issues that India has been facing. Themes of both the novels deal with an individual's life and other sub-themes are interwoven with the main story. In *One Night @ the Call Center* Bhagat presents an interesting story revolving around a group of people working in a call centre. So the story has the technological devices and the techniques related to it.





Bhagat presents young India and the issues they are facing today. Tharoor's presentation is about image of India at religious, social and political levels. His characters represent India in past as well as in present. But the main theme of the novels they write is presentation of India at various levels.

Though both of the writers deal with the image of India, there is a difference between their presentations. Tharoor presents India thoroughly, including various aspects of India; on the other hand Bhagat deals only with contemporary India. Tharoor in *The Great Indian Novel* combines India's history and present political issues. He also uses Mythological characters but Bhagat's writing revolves only with present young India.

Some of the incidences in Bhagat's novels are unrealistic and unbelievable. In *One Night @ the Call Center* a group of young people got involved in a situation from where they are unable of getting out of the danger and even their cell phones are not working. Here Shyam receives a call from God. It is not acceptable for the readers. There is one more situation in the same novel wherein Chetan Bhagat met a girl on his train journey and disappears after having some talk with him. This situation is also like a movie scene dealing with supernatural powers.

On the contrary, no situations in Tharoor's novels are unreal or unacceptable. His characters seem very much like people we met in our day to day life. There is no exaggeration, no supernatural powers. So, the reading of Tharoor's novels gives a feeling that it is a story about people around me. And Bhagat's stories seem the stories which are 'out of this world'. Bhagat has to make his readers comfortable and make believe that the stories and the characters are very common. For that, he tries to show that one of the characters in the story is in contact **with the author himself. That helps readers believe that the story is real. But though he shows that his characters and the incidences are real, readers doesn't accept some of the parts of his novels as reality. And Tharoor doesn't try any such thing, yet characters and stories are accepted and the novel is liked.**

Tharoor and Bhagat have used innovative and suitable narrative techniques. It is also observed that they have presented India at various levels. Tharoor's characters and the stories are used to present the current issues as well as issues in the past. However, Bhagat's stories and themes represent current issues related to the youth and the technological fields.


Novels written by Tharoor and Bhagat are read all over. Both the authors present perfect picture of Indian issues. Their characters and stories represent India at various levels. Choosing different themes and suitable narrative techniques they have created wonderful literary pieces, which also helps to create their own place in the world literature.

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प्रा. डॉ. गोपीनाथ बोडखे

आनंदराव धोंडे उर्फ बाबाजीमहाविद्यालय, कडा, ता. आष्टी जि. बीड

**प्रस्तावना:-**

वर्तमान कालखंडात कोरोना विषाणूच्या संसर्गामुळे संपूर्ण जग हादरून गेले आहे. दुसऱ्या महायुद्धामुळे अनेक संकटे निर्माण झाली होती अन्नधान्याचा तुटवडा निर्माण झाला होता आरोग्यविषयक अनेक समस्या निर्माण झाल्या परंतु यातून पुढे अनेक देशांनी विज्ञानाच्या आधारे अन्नधान्याच्या बाबतीत स्वयंपूर्ण निर्माण केली आरोग्यविषयक सुविधा निर्माण केल्या त्या प्रमाणे आजच्या कोविड-१९ महामारीतही विज्ञानाच्या जोरावर मानव यावर मात करत आहे पण आज जग थांबले आहे. सामाजिक, धार्मिक, शैक्षणिक सांस्कृतिक, क्रीडा व साहित्य क्षेत्रावर याचा परिणाम झालेला दिसून येत आहे.

साहित्य क्षेत्रावर या महामारीचा झालेला परिणाम येणाऱ्या काळामध्ये आपल्या निदर्शनास येईलच. विज्ञान साहित्यात या परिणामांचे प्रतिबिंब निश्चितच उमटेल. विज्ञान साहित्य मराठीत कमी प्रमाणात लिहिले गेले असले तरी अलीकडील काळात नव्या दमाचे लेखक कवी यांकडे वळले आहेत. नवी वैज्ञानिक दृष्टी साहित्यकृतीतून अभिव्यक्त होत आहे. नवनवीन संशोधनाचा समावेश होत आहे. यामुळे निर्माण झालेल्या वैज्ञानिक संशोधनाची माहिती लोकांपर्यंत पोहोचत असून नवीन वैज्ञानिक संशोधनासाठी दिशा मिळत आहे यासाठी विज्ञान साहित्याचे महत्त्व अधिक वाढते. एवढेच नाहीतर विज्ञान अज्ञानातून ज्ञानाकडे जाण्याच्या मार्गावर सोबत व मार्गदर्शन करते आहे, अंधश्रद्धा निर्मूलन व्हावे म्हणून समाजप्रबोधन विज्ञान करते आहे. थोडक्यात सांगावयाचे तर मानवी जीवन सुसह्य करण्यासाठी विज्ञान मदत करते अशा या विज्ञान साहित्याला न्याय देण्याचे काम मराठी विज्ञान समीक्षकही करत आहेत.

विज्ञानाचा थेट संबंध मानवी जीवनाशी असल्यामुळे त्याचा मानवी जीवनावर होणाऱ्या परिणामांचा विचार विज्ञान साहित्यामध्ये येतो. खऱ्या अर्थाने या सर्व बाबींची दखल घेऊन साहित्यकृतींना न्याय देण्याचे काम समीक्षक करतो विज्ञान साहित्य जसे दुर्मिळ तसेच समीक्षकही दुर्मिळ आहेत उत्तर महाराष्ट्र जळगाव येथील विज्ञान साहित्याच्या समीक्षक डॉ. वंदना लव्हाळे यांनी विज्ञान कथा कादंबरी आणि कवितांची समीक्षा करून विज्ञान लेखक-कवींना प्रेरणा देण्याचे कार्य केले आहे. त्यांचे विज्ञान साहित्यावरील काही समीक्षा लेख व पुस्तक माझ्या वाचनात आले. प्रस्तुत शोधनिबंधात डॉ. लव्हाळे यांच्या विज्ञान साहित्य समीक्षेचा शोध घेतलेला आहे.

आपल्या विविध समीक्षापर लेखांमध्ये त्यांनी विज्ञान साहित्यचे अभ्यासपूर्ण असे विवेचन करून निष्कर्ष नोंदविलेली आहेत. मराठीतील पहिली विज्ञान कथा 'तारेचे हास्य' १९१६ पासून तर १९७५ च्या स्त्रीमुक्ती चळवळीनंतर शुभदा गोगटे, माधुरी शानभाग, रेखा बैजल या स्त्री लेखिकांनी स्त्री पात्रांना केंद्रस्थानी ठेवून चित्रण केलेले आहे. मराठी विज्ञान कथेतील स्त्री चित्रणाच्या संदर्भात डॉ. लव्हाळे असा निष्कर्ष नोंदवितात की, "विज्ञान कथांत स्त्रीजाणिवांचे चित्रण हे मर्यादित





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Editor

Dr. Bapu G. Gholap



## निसर्ग आणि विज्ञाननिष्ठ कवी : आ.य.पवार

प्रा.डॉ.गोपीनाथ पांडुरंग बोडखे,  
आनंदराव धोंडे ऊर्फ बाबाजी  
महाविद्यालय, कडा, ता. आष्टी  
जि. बीड.

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### प्रस्तावना :

१९६० नंतर मराठी साहित्यामध्ये विविध  
ांगी विकास होत गेलेला दिसून येतो. नव कविता,  
कथा व कांदबरीचा उदयही १९४० नंतर मराठी  
साहित्यात झाला. अनेक कवी, लेखकांनी स्वतःचा  
एक नवा दृष्टीकोन घेऊन साहित्यक्षेत्रामध्ये आपला  
ठसा उमटविला. साहित्यिकांच्या गद्य-पद्य लेखनातून  
मराठी साहित्य विविध अंगांनी विकसीत होऊ लागले.  
या मराठी साहित्याच्या विकास प्रक्रियेमध्ये जामखेड  
येथील निसर्ग व विज्ञान कवी आ.य.पवार यांचे  
योगदानही मला महत्वाचे वाटते. मराठी साहित्यामध्  
ये विज्ञान कविता दूर्मिळ असून ग्रामीण साहित्यातील  
पहिले विज्ञान कवी म्हणून आ.य.पवारांची ओळख  
आहे. 'कुरुकुंज्याचा थवा' (१९६९), 'रानमाती'  
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'ऊनपाऊस' (२०१३), 'धूळपेर' (२०१८) इत्यादी  
त्यांचे काव्यसंग्रह प्रसिध्द आहेत.

पवारांची कविता विज्ञाननिष्ठ व निसर्गवादी  
आहे. आधुनिक माणसाने भौतिकसुख मिळवण्यासाठी  
निसर्गावर मोठ्या प्रमाणात अतिक्रमण केले आहे.  
नव्हे तर वैज्ञानिक प्रगतिच्या नावाखाली वर्तमान  
कालखंडात निसर्गाचा न्हास होत आहे. यांत्रिकीकरण  
व औद्योगिकरणामुळे प्रदुर्षणात वाढ झाली आहे.  
या सर्व बाबींच्या परिणामांचे प्रतिबिंब विज्ञान  
साहित्यामध्ये उमटले आहे. विज्ञान साहित्य मराठीत  
कमी प्रमाणात लिहिले गेले असले तरी अलीकडील

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अभ्यास" एस. एन. डी.टी विद्यापीठ.

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Professor Dr. Sadashiv H. Sarkate

## १९४५ ते १९६० या काळातील स्त्रियांचे कथालेखन

प्रा.डॉ. गोपीनाथ बोडये,

आनंदराव धोंडे ऊर्फ बाबाजी महाविद्यालय, कडा,

ता. आष्टी जि. बीड

प्रस्तावना -

१९४५ ते १९६० या काळातील स्त्रियांचे कथालेखन' असा शोधनिबंधाचा विषय असल्याने या कालखंडाकडे वळण्याआधी मराठी वाङ्मयाच्या इतिहासातील 'कथे'चे स्थानाचा आढावा घेणे म्हत्वाचे वाटते म्हणूनच प्रस्तावनेमध्ये मराठी कथेचा इतिहास व १९४५ पर्यंतची मराठी कथा व त्यामध्ये स्त्री कथा लेखिकांचे योगदान, सांस्कृतिक परिवर्तन पाहणे गरजेचे आहे.

१९४५ नंतरच्या कथा प्रामुख्याने 'नवकथा' शीर्षकाखाली येणार्या वैशिष्ट्यांमध्ये मोडण्याचा आहेत. मराठी कथेच्या प्रारंभापासून म्हणजेच हरिभाऊ आपटे पासून ते १९४५ पर्यंत लेखिकांनी 'कथा' वाङ्मयामध्ये मौलीक भर घातली आहे.

१९४५ नंतरचा कालखंड मराठी वाङ्मयाच्या दृष्टीने वेगवेगळ्या जाणिवेने झपाटलेला दिसून येतो. दुसरे महायुद्ध, युरोपातील मानवी संस्कृतीची उलथापालथ मोठ्या प्रमाणात होत होती. यांत्रिकता, बकालपणा व गतिमानता इत्यादीमुळे मानवी जीवन ढवळून निघाले होते. नवनवीन शोधांनी ज्ञानाच्या क्षेत्रात भर पडत होती. राष्ट्रा-राष्ट्रातील देवाण-घेवाण सोपी झाली होती. जुनी परंपरा, जुन्या श्रद्धा, जुनी संस्कृती, जुनी मूल्ये यांची झालेली पडझड लेखिकांनी शब्दबद्ध केली होती. 'सत्यकथा' सारख्या वाङ्मयीन मासिकाने आपले जुने वळण बदलले. 'अभिरुची' सारखे मासिक नविन कथालेखक मराठीत देऊ लागले.

१९९० ला 'करमणूक' या नियतकालिकाच्या माध्यमातून मराठी कथेला स्वतःचा चेहरा सपाडला. याचे श्रेय हरीभाऊ आपटे यांना जाते. आशय व अभिव्यक्तीच्या दृष्टीने हरीभाऊ यांनी मराठी कथेला नवे वळण लावले. १९१० ते १९२६ या काळात 'मनोरंजन' नियतकालिकाच्या काळातीलकथेने वाचकाला बोधकरण्यापेक्षा मनोरंजन करण्याकडे अधिक लक्ष दिले. ही कथा मध्यमवर्गीयाभोवती रेंगाळत राहिली. १९२६ ते १९४४ हा 'यशवंत'-'किर्लोसकर' कालखंड होय. या कालखंडात मराठी लघुकथेने आधुनिक वळण स्विकारले. कथेच्या वाटचालीतील हा कालखंड उत्कर्षाचा मानला जातो. या कालखंडात मराठी कथा अधिकाधिक रेखिव झाली. या कालखंडात ना. सी. फडके, वि. स. खांडेकर, दिवाकर कृष्ण, य. गो. बोकिल यांनी कथालेखन केले.

१९४५ पूर्व कालखंडातील स्त्रीयांचे कथालेखन -

१९४५ नंतरच्या वाङ्मयीन प्रवाहामध्ये नवकथाकारांचा काळ म्हटले जात असले तरी सुरुवातीपासूनच लेखिकांचा सहभाग होता. हरिभाऊ आपटे यांच्या प्रेरणेने व मार्गदर्शनाखाली त्यांच्याबरोबर लिहू लागलेल्या लेखिका म्हणजे काशीबाई कानिटकर, आनंदीबाई शिर्के, गिरिजाबाई केळकर या होत्या. 'मनोरंजन' मासिकाच्या काळात गिरिजाबाई केळकर आणि आनंदीबाई शिर्के या लेखिकांनी स्त्रीयांच्या दुःखाविषयी लिहावयास सुरुवात केली होती. दोघींनीही मोठ्या प्रमाणात लेखन केले. 'समाजचित्रे', 'केवळ विश्रांतीसाठी' व 'कथाकुंज' हे त्यांचे तीन कथासंग्रह प्रसिद्ध झाले





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## ‘परिवार विघटन का दस्तावेज’ – ‘अशक’ के नाटकों के संदर्भ में

प्रो. महेमूद पटेल  
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सामान्यतः संयुक्त परिवार संगठन के आधारपर निकट के नाते रिश्तेदारों की एक सहयोगी व्यवस्था है, जिसमें सम्मिलित वास अधिकारे एवं कर्तव्यों का समावेश होता है। हम ऐसे घराने को संयुक्त परिवार कहते हैं, जिसमें पीढ़ी की गहराई परिवार की अपेक्षा अधिक लंबी होती है तथा जिसके सदस्य एक-दूसरे से संपत्ति, आय एवं पारिवारिक अधिकारों एवं दायित्वों के आधारपर संबंधित होते हैं। परिवार के सदस्य एक दूसरे के सुख-दुख, हर्ष-शोक में भागीदार रहते हैं। संयुक्त परिवार के सदस्य व्यक्तिगत इच्छाओं और स्वार्थों को महत्व न देकर अन्य सदस्यों के लिए उन्हें त्याग देने के लिए प्रस्तुत रहते थे। करुणा, प्रेम, संतोष के कारण परिवार का प्रत्येक सदस्य एक दूसरे के साथ जुड़ा रहता था किंतु वर्तमान युग में उपर्युक्त व्यवस्था में व्यवधान उत्पन्न हो रहा है। भौतिकवादी, पूँजीवादी युग में त्याग का स्थान स्वार्थ ने ले लिया है और व्यक्ति महत्वाकांक्षी हो गया है। वह अपनी इच्छाओं को ही अधिक महत्व देता है, अन्य सदस्यों की उपेक्षा करता है। यही कारण है कि परिवार विघटित होते जा रहे हैं और एककी परिवार की परंपरा बल पकड़ती जा रही है।

उपेन्द्रनाथ अशकजीने विशेषकर समाज के मध्यवर्गीय जीवन को अपनाकर नाटक लिखे हैं। साथही समाज के महत्वपूर्ण घटक स्त्री-पुरुष, परिवार, विवाह, शिक्षा आदि को अपनाकर सभी नाटक लिखे

हैं। यहाँ पर उनके सामाजिक नाटकों में जो पारिवारिक, वैवाहिक तथा शैक्षिक समस्याओं का वर्णन किया है। उपर्युक्त मू्यों के आधारपर अशकजी के नाटकों में पारिवारिक विघटन दिखायी देता है।

स्वर्ग की झलक –

नाटक का उद्देश्य आधुनिक शिक्षा को स्पष्ट करना है। अशक स्त्री शिक्षा या आधुनिक शिक्षा का विरोध नहीं करते बल्कि स्त्री की उस मनोवृत्ति का विरोध करते हैं, जो हमारे समाज में अधिक पढ़ी-लिखी लड़कियों में पायी जाती है। मिसेज राजेंद्र और मिसेज अशोक ऐसी शिक्षिता आधुनिकाएँ हैं जो कभी गृहिणी नहीं बन सकती। जो बच्चों को दूध पिलाने से अस्वस्थ है और खाना नहीं बना सकती तथा बीमार बच्चे को घर छोड़कर कंसर्ट देखने चली जाती है। ऐसी शिक्षिता माता भी नहीं बन सकती, क्योंकि ममता नाम की चीज उनके पास नहीं होती। लेखक कहना चाहते हैं कि वे आधुनिकाएँ भी माता नहीं बन सकती जो अपने बच्चे को दूध न पिलाकर बीमार करती हैं। नाटक का नायक रघु ऐसी ही शिक्षित पत्नी चाहता है लेकिन जैसे ही मि. अशोक और मि. राजेंद्र की पत्नी को देखता है तो अपना निर्णय बदलकर साली रखा से विवाह की बात करता है।

शिक्षिता से डर लगता है। वह 6/10 था मैं बुरा नहीं कहता पर जिस त, जिक. लड़कियों को मिल रही है और उसका जो प्रभाव पड़ रहा है, उसकी ओर से आँखें बंद नहीं की जा सकती।<sup>14</sup>

पति-पत्नी का दंपति जीवन ही परिवार की नींव है। नाटक के दो पात्र मि. अशोक तथा मि. राजेंद्र शिक्षित और अपटूटेट लड़कियों से विवाहकर परिवार में ‘स्वर्ग की झलक’ देखना चाहते हैं। रघु छुट्टी के दिन मि. अशोक के घर जाकर देखता है कि उसकी पत्नी बीमार होने से उसने खाना नहीं बनाया, वह स्वयं खाना बना रहा है। दूसरी तरफ रघु ‘दर्शन’ का अध्यापक मि. राजेंद्र के घर जाकर देखता है कि वह बीमार बच्चे को गोद में लेकर शपकियाँ लगा रहा है क्योंकि उसकी पत्नी हिसार पीड़ितों की मदद के लिए कंसर्ट शो में चली गयी है। मानों मि. राजेंद्र स्वर्ग का

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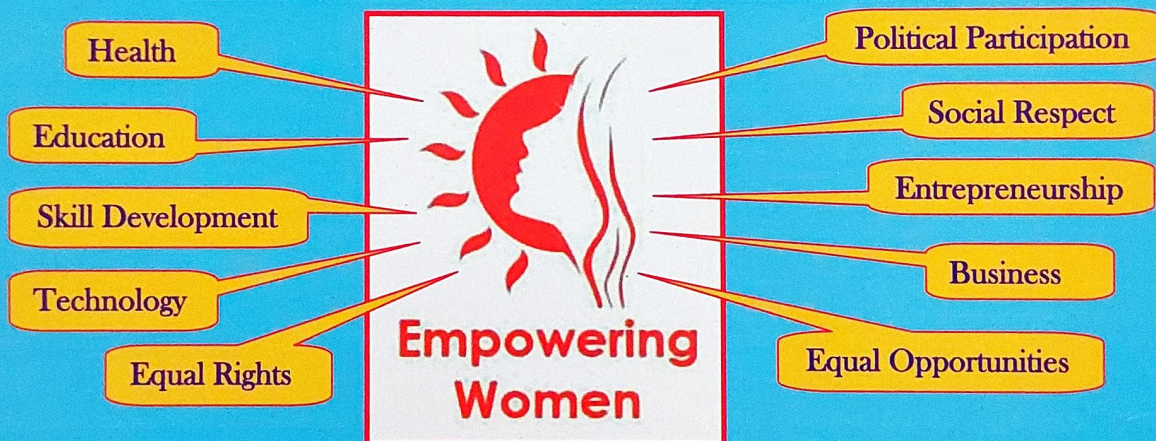
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**Women Empowerment**

Through Entrepreneurship &amp; Skill Development

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Ashti, Dist.- Beed [M.S.] India

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*- Chief & Executive Editor*

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## महिला सक्षमीकरण की आवश्यकता

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आनंदराव धोंडे महाविद्यालय कडा

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आज हमारा देश दिन दुनी रात चौगूनी तरक्की कर रहा है तथा विकासशील से विकसित बनने का प्रयास कर रहा है जो वैश्वीकरण के काल में संभव है। वैश्वीकरण का अर्थ है। वह समाज जहाँ आर्थिक, राजनैतिक तथा सामाजिक रूप से प्रत्येक व्यक्ति को समानता प्राप्त हो साथ ही उन्हें अपने क्षेत्र में कार्य करने की पूर्ण स्वतन्त्रता प्राप्त हो। वैश्वीकरण को भूमंडलीकरण, ग्लोबलायजेशन आदि नामों से भी जाना जाता है। आज वैश्वीकरण के युग में जहाँ भारत प्रत्येक क्षेत्र में उन्नति कर रहा है दुसरी और एक अन्धेरा कोना ऐसा भी है जहाँ आज भी कहीं ना कहीं आधी आबादी कही जानेवाली महिलाएँ दयनीय अवस्था में जीवन व्यतीत कर रही है।

इतिहास साक्षी है। की सृष्टि के सृजनकर्ता स्त्री और पुरुष है अर्थात यह भी कहा जा सकता है कि स्त्री और पुरुष में से किसी एक के अस्तित्व के बिना सृष्टि कि कल्पना भी नहीं कि जा सकती। परन्तु समाज का एक कटु सत्य यही भी है कि आज भी स्त्री और पुरुषों के बीच असमानता की गहरी खाई है। असमानता की इस गहरी खाई में भारतीय स्त्री धँसती जा रही है। जिन महिलाओं पर अत्याचार होता है ये महिलाएँ ग्रामीण हो तो समाज में उसका जीवन नरक हो जाता है।

भारतीय समाज में आज भी अनेक राज्य ऐसे है जहाँ महिलाओं के साथ अमानवीय व्यवहार हो रहा है तथा सरकार का उनकी तरफ कोई ध्यान नहीं है। वैश्वीकरण के इस युग में आज भी महिलाओं के प्रति सामाजिक, आर्थिक तथा राजनैतिक क्षेत्र में भेदभाव का चलन जारी है जिसके चलते महिलाओं की स्थिति बद से बदतर होती जा रही है।

समाज एक ऐसा विद्यालय है जहाँ हर एक मानव के व्यक्तित्व का विकास होता है मनुष्य के अच्छे बुरे व्यवहार से उसकी दूसरों के प्रति एक अलग पहचान बनती है।

एक सभ्य समाज का प्रणेता एक सभ्य मनुष्य ही होता है तथा उस सभ्य मनुष्य को अपने इस कार्य पर गर्वन्वित होने का पूरा हक है परन्तु आत्मा को झकझोरने वाला एक सत्य यह भी है कि क्या भारतीय समाज में सभी मनुष्य सचमुच में सभ्य तथा श्रेष्ठ है। क्या समाज में सभी समानता के प्रति जागरूक है तथा क्या वे मानवता की कसौटी पर खरे उतर रहे हैं।

भारतीय समाज में हिन्दू धर्म महान है परन्तु यह सत्य कभी नकारा नहीं जा सकता कि सबसे अधिक अंधविश्वास तथा आडम्बर भी इसी धर्म में है। समाज में अमीर गरीब, सवर्ण दलित, महिला पुरुष मध्य असमानता एक सामाजिक बराई है जो कि धीरे धीरे विकराल रूप धारण करती जा रही है। देहाती महिलाओं की स्थिति बहुत सोचनिय है। ग्रामीण क्षेत्र में समाज के पुराने रूढ रीति रिवाजों के कारण महिलाएँ घुट घुट कर जी रही है।

वैश्वीकरण के इस युग में देहाती महिलाओं की स्थिति कोई खास अच्छी नहीं है आज भी ये उपेक्षा भरी जिंदगी जी रही है। ये जहाँ काम करती है वहाँ के मालिक उन पर उपना हक्क समझते है। देहाती इलाके में महिलाओं की स्थिति दयनीय है परिवार के लोग यह नहीं चाहते कि उनके यहाँ कन्या का जन्म हो क्योंकि





कि उन्हें डर रहता है कि शादी के वक्त दहेज देना पड़ेगा। आज भी बहुतरासी देहाती लड़कियों बीच में ही स्कूल छोड़ देती है।

आज देश की आर्थिक प्रगति हो रही है जिसमें महिलाओं का बराबर योगदान है तथा महिलाओं की इस महत्वपूर्ण भूमिका को नकारा नहीं जा सकता कृषि हो या बड़ी बड़ी कंपनियाँ सब जगह महिलाएँ बराबर का योगदान है। साथ ही गृहकार्य तथा बच्चों को भी संभालती है। प्राचीन समय से ही, आर्थिक क्षेत्र में महिलाओं की प्रशंसनीय भूमिका रही है। आर्थिक क्षेत्र में महिलाओं के महत्वपूर्ण तथा महिलाओं की प्रशंसनीय भूमिका रही है। योगदान के पश्चात भी महिलाओं को आर्थिक क्षेत्र में वह स्थान प्राप्त नहीं है जिसकी वह हकदार है।

भारत देश किसानों का देश कहलता है तथा भारतीय कृषि आज पूरे विश्व में प्रख्यात है। उन्नत कृषि के सामने हम इस बात को नहीं नकार सकते कि महिलाओं ने कृषि के सामने पुरुषों से अधिक योगदान दिया है। परन्तु भारत की आर्थिक स्थिति में जी जान लगा कर मेहनत करनेवाली अधिकतर महिलाएँ आज की खेतों तथा कारखानों में निम्न वेतन पर कार्य कर रही है। तथा जमींदारों और कारखानों के मालिक उनका आर्थिक शोषण कर रहे हैं। आज ही उन्हें पुरुषों तुलना में कम मजदूरी पर काम करना पड़ता है।

स्वातंत्रता के ६ दशक पश्चात भी महिलाओं को राजनीति में उचित स्थान नहीं है। महिला है। किती गाँव की सरपंच बनती है। लेकिन उसका पती ही स्वयं को सरपंच कहता है। और गाँव के लोग की उसके पती को ही सरपंच कहकर पुकारते हैं। आज भी महिलाएँ चुनकर आती हैं लेकिन करोबार पुरुष लोग ही चलाते हैं। संसद में अभी अभी महिलाएँ चुनकर आने लगी हैं।

आज जहाँ चारों ओर भुमंडलीकरण का बोलबाल है तो प्रश्न यह उठता है कि लोकतंत्र ही दुहाई देनेवाले भारत देश में महिलाओं पर अन्याय एवम् अत्याचार क्यों हो रहे हैं। वह सामाजिक, राजनैतिक तथा आर्थिक शोषण का शिकार हो रहा है। यह सवाल रह रह कर सामने आता है। तथा मानव की मानवता को कचोटता रहता है।

२१ वीं सदी में भी क्यों महिलाओं को पूर्ण समानता, स्वतंत्रता तथा उनके अधिकार उन्हें नहीं प्राप्त हो रहे हैं। ध्यान दिया जाए तो कहीं ना कहीं महिलाओं की इस उच्च नीच स्थिति का जिम्मेदार हमारा समाज तथा समाज के संकीर्ण मानसिकता वाले व्यक्ति हैं। यह सत्य है कि समाज में अधिकांश इलाके में महिलाओं की स्थिति अच्छी नहीं है। इसलिए महिलाओं को सशक्त करने हेतु सरकार ने अनेक प्रयास किए हैं।

- ✓ अनुच्छेद १५ लिंग के आधार पर भेदभाव निषेध
- ✓ अनुच्छेद १५ (३) महिलाओं के विकास के लिए विशेष प्रावधान
- ✓ अधिनियम १९८९ अत्याचार निवारण
- ✓ अधिनियम २००५ घरेलू हिंसा से महिलाओं का संरक्षण
- ✓ अनुच्छेद ३९ समान कार्य के लिए समान वेतन
- ✓ ८९ वां संवैधानिक संशोधन २००३ अनुसूचित जाति आयोग ३३८ (१) अनुसूचित जनजाति आयोग ३३८ (क)

उपर सरकार द्वारा महिलाओं को सशक्त करने हेतु किए गए प्रयासों का उल्लेख है न कि जिनके द्वारा आज महिलाओं का उत्थान हो रहा है। सरकार ने राष्ट्रीय स्तर और राज्य स्तर पर महिला आयोग का गठन किया है।





महिलाओं की बिगड़ती स्थिति के लिए अब आवश्यकता है महिला सशस्तिकरण की। इसलिए महिलाओं ने स्वयं को सशस्त करने हेतु अनेक संघर्ष करने प्रारंभ कर दिए। यह महिला अब स्वयं पर हो रहे अत्याचार का विरोध करने में लगी है तथा अपने उस और अधिकारों के लिए निर्दयी पुरुष प्रधान समाज के समक्ष खड़ी हो गई है। अपने अधिकारों को प्राप्त करने के लिए महिलाओं ने आंदोलन उस काल से ही आरंभ कर दिये थे। बस उस काल में इनके आन्दोलन अधिक कामयाब नहीं हो सके क्योंकि उस समय महिलाओं में आत्मविश्वास और जागृकता की बहुत कमी थी।

बुध्दकाल में मेरी सुमंगता और पूर्णिमा दासी आदि । महिलाओं ने अपनी कविताओं के द्वारा महिलाओं को सशक्त करने की आवाज उठाई। महात्मा ज्योतिबा फुले और उनकी पत्नी सवित्रीबाई ने भी महिलाओं के उत्थान के लिए अनेक प्रयास किए थे।

भारतीय संविधान के रचेता डॉ. भीमराव आंबेडकर ने भी महिलाओं के संरक्षण के लिए संविधान में अनेक प्रावधान बनाए हैं। वर्तमान में २००५ के कानून के अनुसार बहुत सारी सुरक्षा महिलाओं को मिली है लेकिन कुछ घटनाओं में उसका गलत फायदा उठाया जाने लगा है ऐसा न होकर सही अर्थ में उपेक्षित महिलाओं का सक्षमीकरण होना आवश्यक है।

१ सिंह निशांत, महिला राजनिति—ओमेगा पब्लिकेशन्स—दिल्ली

२ महात्मा फुले प्रतिभा संशोधन अकादमी, निर्मिक, वाल्युम —२०१३

३ राष्ट्रीय मानव अधिकार आयोग नई दिल्ली भाग क २०१२





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जागतिकीकरणाचा भाषा व साहित्यावरील प्रभाव  
वैश्वीकरण का हिंदी भाषा और साहित्यपर प्रभाव  
Impact of Globalization on Language & Literature

अतिथी संपादक :

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✓ प्रा. डॉ. गुलाबराव विठोबा मंडलिक  
आनंदराव धोंडे महाविद्यालय कडा  
तह. आप्टी, जिला. बीड

हिंदी भारत की अधिकतम बोली जानेवाली, सर्वाधिक लोकप्रिय भाषा है। यह हिंदी सारे प्रदेशों में बोली जाने वाली पूरे भारत की भाषा है। आज हिंदी प्रगति पथ पर है, सारी विधाओं पर समान रूप से लेखन कार्य चल रहा है। कितनी कालजयी कृतियों ने भारतीय साहित्य को पुष्ट एवं गौरवान्वित किया है। आज के परिदृश्य में कविता और साहित्य की परिभाषा बदल रही है। व्यक्ति एवं समष्टि जगत के विचारों में परिवर्तन आ चुका है। आज हिंदी हिंदी को भी मीडिया को सारी सुविधाएँ प्राप्त हैं, रेडियो, टेलीविजन की सारी सुविधाएँ प्राप्त हैं। कम्प्यूटर्स पर भी हिंदी चलने लगी है और वेबसाइट खुलने लगी है। मीडिया द्वारा समाज एवं आध्यात्म के विकसित रूप दिखाए जाते हैं। आज इलेक्ट्रॉनिक मीडिया को अति उपयोगी है। प्रेमचंद, मोहन राकेश, मनोहर श्याम जोशी, फणीश्वरनाथ रेणु, शरतचंद्र चट्टोपाध्याय आदि साहित्यकारों की रचनाओं पर आधारित धारावाहिक तथा नाटकों का प्रदर्शन कर साहित्य को सामान्य जनता तक पहुँचकर उनके निकट लाने का प्रयास किया है। इलेक्ट्रॉनिक मीडिया ने जनमानस एवं साहित्यकार वर्ग की चिंतन धारा को विशेष प्रभावित किया है। इलेक्ट्रॉनिक मीडिया तथा साहित्य में समन्वय आज की आवश्यकता किया है। इलेक्ट्रॉनिक मीडिया तथा ससाहित्य में समन्वय आज की आवश्यकता है। मीडिया विज्ञान का प्रदर्शन नहीं अपितु सूचना के क्षेत्र में नई कांति है।

हिंदी का प्रयोग आज इंटरनेट और ई-मेल में संभव हो गया है। हिंदी में अनेक पार्टल भी प्रारंभ हो गए हैं। पार्टल के माध्यम से देश-विदेश की खबरें, वर्गीकृत विज्ञापन, कारोबार सम्बन्धी सूचनाएँ, शहर बाजार, शिक्षा, मौसम खेल-कूद पर्यटन, साहित्य आदि के सम्बन्ध में अद्यतन जानकारी पाई जा सकती है। कई कार्यालयों में हिंदी पार्टल के अतिरिक्त द्विभाषी और बहुभाषी सॉफ्टवेयर भी हैं। राजभाषा की स्वर्णजयंती के अवसर पर द्विभाषी वेबसाइट का निर्माण किया गया है। इस वेबसाइट पर ई-मेल सुविधा भी उपलब्ध है।

इलेक्ट्रॉनिक मीडिया में आकाशवाणी, दूरदर्शन एवं इंटरनेट पर भी हिंदी का वर्चस्व बढ़ता जा रहा है। हिंदी आजकल प्रयोजनमूलक रूप का निरंतर विकास हो रहा है। रेडियो द्वारा हिंदी के समाचारों को प्रसारण होता है। आज कई केन्द्रों से हिंदी के व्यावहारिक प्रयोग का ज्ञान बढ़ाने के लिए हिंदी के पाठ निरंतर प्रसारित किये जाते हैं। रेडियो नाटक लेखन बीसवीं सदी में एक सशक्त साहित्य विधा के रूप में उभरा है। अनेक प्रशिक्षित साहित्यकारों ने इसमें बहुत महत्त्वपूर्ण योगदान दिया है। जैसे मंटो, कृष्णचंद्र, राजेंद्र सिंह बेदी, करतार सिंह, दुग्गल प्रमुख हैं। आकाशवाणी केंद्रों में निरंतर हिंदी में वार्ताएँ भी प्रसारित की जाती हैं। आकाशवाणी की देश के 15 प्रतिशत जनसंख्या तक पहुँचे हैं। एवं विविध भारती एवं एफ. एम. चैनल पर चित्रपट संगीत हिंदी के प्रसार में महत्त्वपूर्ण योगदान है। हिंदुस्तान में दूरदर्शन का प्रदुर्भाव सत्तर के दशक से हुआ। दूरदर्शन के विभिन्न केंद्रों द्वारा भी हिंदी में पर्याप्त मात्रा में कार्यक्रम प्रसारित किए जाते हैं।

भारत में सबसे अधिक 20,586 समाचार हिंदी में प्रकाशित होते हैं। प्रिन्ट मीडिया में समाचार पत्र एवं पत्रिकाएँ। आती हैं एवं स्वतंत्रता के बाद समाज में राजनैतिक जागृति, सामाजिक, धार्मिक,



आपराधिक आर्थिक गतिविधियों एवं घटनाओं के प्रति जनसामान्य की जिज्ञासा में वृद्धि के कारण हिंदी समाचार पत्रों के प्रसार संख्या में बड़ी वृद्धि हो रही है। प्रिंट मीडिया ने भारत के स्वतंत्रता आंदोलन की हिंदी के माध्यम से गति प्रदान की थी। स्वतंत्रता आंदोलन की हिंदी के माध्यम से गति प्रदान की थी। स्वातंत्रता के बाद हिंदी को संपर्क भाषा एवं राजभाषा घोषित करने के कारण हिंदी समाचार पत्र एवं पत्रिकाओं का निरंतर प्रसार बढ़ता जा रहा है।

मीडिया की कथा बड़ी रोचक, सुखद एवं सुखांत है। चलचित्र की महिमा गरिमामय है। दृश्य-श्रव्य, डाक्यू-मेंटरी, प्रब्लिसिटी, प्रोपेगेंडा, स्वास्थ्य, व्यवसाय, डिजनी, कार्टून, बाल-विनोद, प्रकृति के आश्चर्य, कृषि, मिल्स, फौट्रीज, प्रयोगशालाएँ, वार्ताएँ, कक्षा-शिक्षा, शिक्षण, स्पोर्ट्स, गेम्स के सारे कार्य व्यापारों ने परे विश्व को मुट्ठियों में बंद कर रखा है।

मीडिया विज्ञान का प्रदर्शन नहीं अपितु सूचना के क्षेत्र में नयी कान्ति की है। इलेक्ट्रॉनिक मीडिया साहित्य की मूलभूत एकता, उसकी भारतीयता परक गरिमा को दिन ब दिन धूमिल करती जा रह है। मीडिया से किसी भी सत्य की तह तक पहुँचना सहज हो सकता है परंतु उसके लिए ऊर्जा संपन्न मानव धारा चिरंतन है, जिससे मीडिया की चुनौती को स्वीकार किया है। मीडिया माध्यम हो सकती है वह साध्य कभी नहीं हो सकती है।

इलेक्ट्रॉनिक संचार युग का यह सर्वाधिक विस्मयकारी सूक्ष्म और तेज सूचना संवाहक पूरे समाज को बदलने में अत्यंत उपयोगी है। इंटरनेट का मुख्य कार्य है सूचनाओं को आदान-प्रदान। वास्तव में इसे सूचनाओं का समुद्र कहना ही ठीक होगा। इंटरनेट इस ब्रह्मांड की लगभग सभी विषयों से सम्बन्धित जानकारी रखता है। इंटरनेट सूचनाओं को इकट्ठा करने, भ्रामक समाचारों से बचने, समाचार पत्र के स्थानीय संस्करण निकालने आदि में सहायक बनकर पत्रकारिता की दुनिया में महत्त्वपूर्ण भूमिका निभा रहा है।

ई-मेल इंटरनेट के द्वारा संचालित इलेक्ट्रॉनिक मेल सेवा है। इस संचार माध्यम से हम अपना पत्र या कोई संदेश विद्युत गति से दुनिया के किसी भी कोने में स्थित संगणक-मॉनीटर पर पहुँचा सकते हैं। वहाँ उसका प्रिंट लिया जाता है। यह फ़ैक्स की अपेक्षा बहुत ही सस्ता और विश्वसनीय माध्यम है।

फ़ैक्स यह किसी लिखित संदेश को लिखित रूप में ही प्राप्त रकने का उपकरण है। इसे दूरभाष और संगणक के साथ जोड़ा जाता है। इसकी सहायता से एक स्थान से दुनिया के किसी भी कोने में फोटो स्टेट मशीन की भाँति लिखित संदेश तत्काल पहुँचाया जा सकता है। (मीडिया और हिंदी-डॉ. मधु खराटे)

आज मीडिया की भाषा का निर्माण कर रहा है। आज सूचना एवं औद्योगिक के क्षेत्र में हिंदी का प्रयोग दिन-ब-दिन बढ़ता जा रहा है। विभिन्न व्यवसायों, कार्यालयों बैंकों, रेल, डाक, तार, विज्ञापन, आकाशवाणी, दूरदर्शन, टेलीप्रिंटर, फ़ैक्स, कम्प्यूटर, इंटरनेट आदि अनेक क्षेत्रों में हिंदी की व्यापक प्रयोग हो रहा है।

मीडिया के कारण हिंदी आज नये-नये रूप में विकसित होते हुए खिाई देती है। दूरदर्शन ने तथा फिल्मों ने हिंदी को पूरी दुनिया में जनप्रिय बनाया है। वैश्वीकरण के इस दौर में हिंदी आज मीडिया के कारण पूरी दुनिया में प्रतिष्ठात दिखाई देती है। व्यावसायिक कारण से हिंदी आगे बढ़ रही है। जनसंचार माध्यमों ने हिंदी की अभिव्यक्ति क्षमता को निरंतर बढ़ाया है। वैश्वीकरण के इस दौर में हिंदी आज प्रतिष्ठित दिखाई देती है।





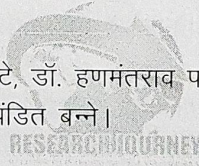
फिल्मों में भी संचार का बहुत अच्छा काम किया है। टेलीविजन की अपेक्षा बहुत बड़े पर्दे पर अधिक लोगों तक आम जनता तक पहुँचने का वह अच्छा माध्यम था। अतः गीतकार, कथा, लेखक, संवाद, लेखकों के लिए काफी संभावनाएँ बनी कि वे अपने विचारों को पात्रों के द्वारा अधिकाधिक लोगों तक पहुँचा सके। पत्रकारिता का मूल उद्देश्य संचार के माध्यमों से अन्याय का उद्घाटन करना, सलाह करना, असहायों की सहायता करना आदि। पत्रकारिता हर क्षेत्र के लोगों की जिज्ञासा पूर्ति करती है। बदलते युगानुरूप पत्रकारिता ने भी अपने आपको अनेकानेक रूपों में परिवर्तित किया है। जीवन की विविधता एवं नए-नए साधनों के आविष्कारों ने पत्रकारिता को बहुआयामी बना दिया है।

#### **निष्कर्ष-**

निष्कर्षतः स्पष्ट है कि संचार क्रांति की इस दौड़ में भारत पीछे नहीं है। कम्प्यूटर, दूरदर्शन के कारण हिंदी व्यापक रूप में प्रयुक्त हो रही है। दूरभाष, सेल्यूलर, समाचार-पत्र, फिल्म तथा रेडियो आदि के क्षेत्र में हिंदी का प्रयोग बहुत अधिक बढ़ा है। मीडिया के कारण हिंदी आज नये-नये रूप में विकसित होते हुए दिखाई देती है। वैश्वीकरण के इस दौर में हिंदी आज मीडिया के कारण पूरी दुनिया में प्रतिष्ठित दिखाई देती है। हिंदी जनचेतना को स्वर देने में सर्वाधिक समर्थ होकर धीरे-धीरे विश्व भाषा बनने जा रही है। जनसंचार माध्यमों ने हिंदी की अभिव्यक्ति क्षमता को निरंतर बढ़ाया है।

#### **संदर्भ ग्रंथ-**

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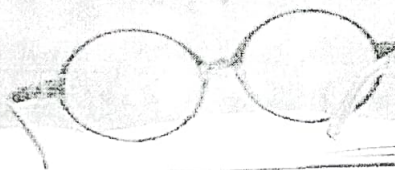
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## बीड जिल्ह्याची हवामान वैशिष्ट्ये: एक अध्ययन

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कडा, ता.आष्टी, जि. बीड

### प्रस्तावना:

हवामान ही भौगोलिक संकल्पना पृथ्वीच्या पृष्ठभागाजवळील वातावरणाच्या सरासरी स्थितीचे विशेष वितरण दर्शवते. तापमान, आर्द्रता, हवेचा दाब, पर्जन्य, वाऱ्याची दिशा व वेग, सूर्यप्रकाश इत्यादी घटकांचा हवामानात समावेश होतो. कोणत्याही प्रकारच्या पिकासाठी विशिष्ट तापमानाची आवश्यकता असते. किंबहुना प्रत्येक पिकासाठी असे विशिष्ट किमान तापमान आवश्यक असते. त्यापेक्षा कमी तापमान असल्यास पिकाची वाढ होऊच शकत नाही. सर्व रासायनिक व भौतिक प्रक्रिया चालू ठेवण्याचे कार्य तापमान करते. बीड जिल्ह्याचे स्थान उष्णकटीबंधीय प्रदेशातील अवर्षण ग्रस्त क्षेत्रात आहे. त्यामुळे अभ्यासक्षेत्रात तापमान जास्त आहे. तक्ता क्र. १ मध्ये बीड जिल्ह्याच्या तापमानाची सन २००१ ते २०१५ पर्यंतची आकडेवारी जमा करून दर्शविण्यात आली आहे.

तक्ता क्र. १

बीड जिल्हा - तापमान (सन २००१ ते २०१५)

वर्ष	कमाल तापमान (°C)	किमान तापमान (°C)
२००१	३५	१०
२००२	३५	११
२००३	३६	१०
२००४	३५	१२
२००५	३५	१३
२००६	३६	१२
२००७	३७	१४





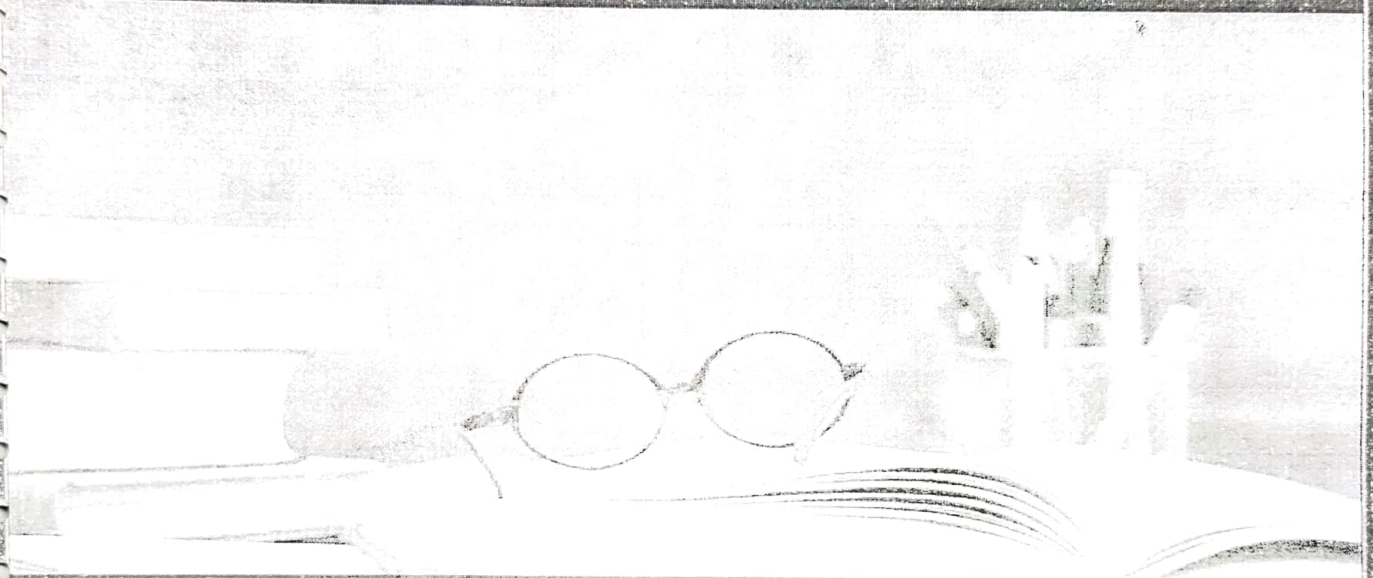
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## बीड जिल्ह्यातील जलसिंचन स्थिती: एक अभ्यास

डॉ. राजपंगे एम.जी.

भूगोल विभाग,  
आनंदराव धोंडे कला, वाणिज्य व विज्ञान महाविद्यालय,  
कडा, ता.आष्टी, जि. बीड

### प्रस्तावना:

कृषी विकासासाठी जलसिंचन ही अत्यंत महत्वाची बाब आहे. आधुनिक काळात पारंपारिक पिकापेक्षा नगदी व फळपिकांना जलसिंचन हे अपरिहार्य झाले आहे. जलसिंचनाची व्यवस्था असेल तर उत्पादन व उत्पादकता वाढते यात शंका नाही. भारतीय शेती पारंपारिकरित्या मान्सूनच्या पावसावर अवलंबून आहे. परंतु अलिकडच्या काळात पर्यावरणाच्या बिघडत्या समतोलामुळे मान्सूनचा लहरीपणा वाढला आहे. यामुळे कधी कोरडा दुष्काळ तर कधी पुरसदृश्य स्थिती अशी विचित्र स्थिती मराठवाड्यात आढळते. यामुळे पिकांची पाण्याची गरज व उपलब्ध जलसिंचन यांचा ताळमेळ बिघडतो व पर्यायाने पिकांचे नुकसान होते. ज्यावेळी जमिनीतील पिकास पाण्याची कमतरता असते त्यावेळी कृत्रिम मार्गांनी वेळोवेळी पिकांना पाणीपुरवठा करावा लागतो.

### अभ्यासक्षेत्राची ओळख :

बीड जिल्हा मराठवाड्याच्या मध्यस्थानी आहे. बीड जिल्ह्याचा अक्षवृत्तीय विस्तार  $16^{\circ}27'$  उत्तर ते  $19^{\circ}27'$  उत्तर अक्षांश व रेखावृत्तीय विस्तार  $74^{\circ}49'$  पूर्व ते  $76^{\circ}48'$  पूर्व रेखांश असा आहे. जिल्ह्याच्या उत्तरेस औरंगाबाद व जालना, पूर्वेस परभणी व लातूर हे जिल्हे आहेत. दक्षिणेस उस्मानाबाद व अहमदनगर तर पश्चिमेस अहमदनगर जिल्हा आहे. जिल्ह्याचे एकूण क्षेत्रफळ  $10698$  चौ.कि.मी. असून ते महाराष्ट्राच्या एकूण क्षेत्रफळाच्या  $3.47\%$  एवढे आहे.  $2011$  च्या जनगणनेप्रमाणे जिल्ह्याची एकूण लोकसंख्या  $25,84,089$  होती. महाराष्ट्राच्या एकूण लोकसंख्येशी हे प्रमाण  $2.30\%$  आहे. जिल्ह्यात एकूण  $11$  तालुके आहेत. प्रशासकीय सोयीच्या दृष्टीने जिल्ह्याचे दोन महसुली विभाग पाडण्यात आले आहे. एक उपविभाग बीड येथे असून यांतर्गत बीड, गेवराई, पाटोदा, आष्टी, शिरूर (कासार) हे तालुके





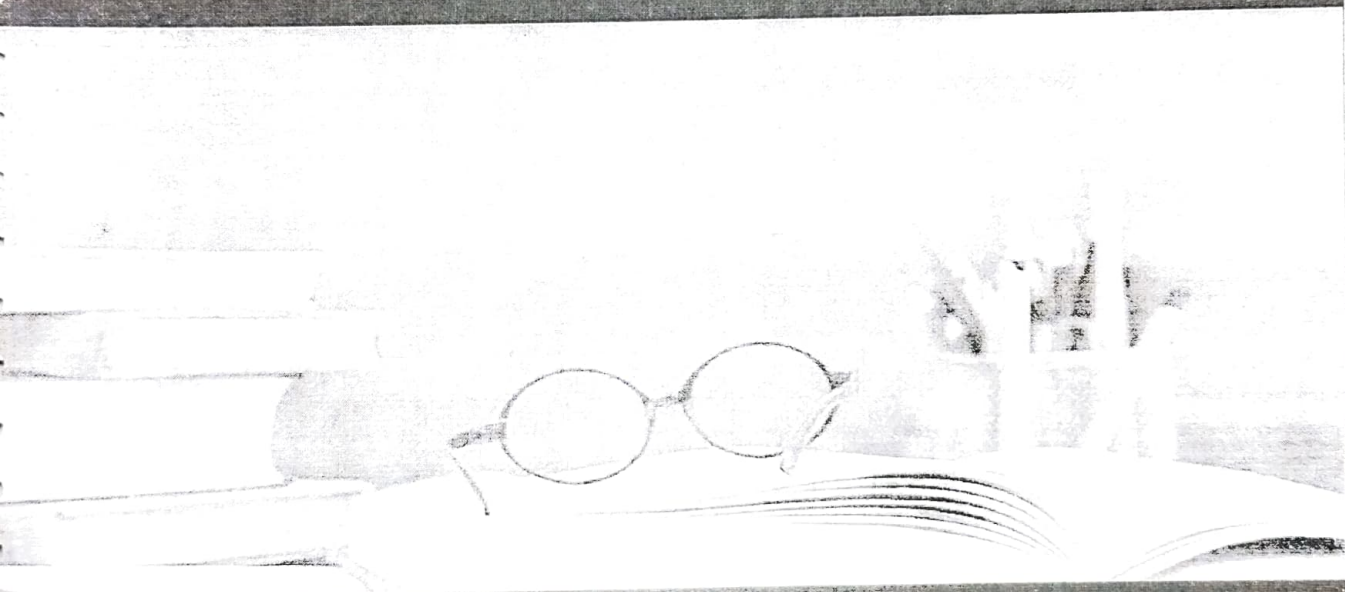
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**भारतातील पाणी समस्या व आंतरराज्यीय जलसंधर्ष - एक भौगोलिक अभ्यास****प्रा. डॉ. माधव गणपती राजपांगे**

आनंदराव धोंडे महाविद्यालय, कडा

**प्रस्तावना -**

पाणी म्हणजे जीवन असा अर्थ मानवी समाज घेत असतो. खरोखरच 'जल हे तो कल है' उक्ती मानवी समाजाबरोबरच पृथ्वीवरील सर्व सजीवसृष्टीच्या जीवनाच्या उत्थानासाठी महत्त्वपूर्ण आहे. भारतात सरासरी दरवर्षी ६ मी. पर्जन्यवृष्टी होते. पण ही सरासरी विश्वासाहार्य वाटत नाही कारण ती संख्या मोड करून दर्शविण्याचा प्रयत्न केलेला असतो, वास्तव मात्र वेगळे असते. भारताच्या उत्तर-पूर्व भागात चेरापुंजी व मौसमग्राम येथे ११ मी. इतके पर्जन्य दुसऱ्या ठिकाणी म्हणजे राजस्थानच्या पश्चिम भागात केवळ ०.१ मी. पर्जन्यवृष्टी होते आणि पश्चिम घाटात हेच प्रमाण वाढून ३ मी. पर्यंत जाते. दख्खनच्या पठारावर ०.०६ मी. इतका पाऊस होतो. म्हणजेच पर्जन्याचे वितरण विषम स्वरूपाचे असून केवळ चार महिने आणि त्यातही जेमतेम १०० दिवस पर्जन्यवृष्टीसाठी देशात महत्त्वाचे आहेत. त्यामुळे नैसर्गिक पर्जन्यवृष्टीचे पाणी जतन करून त्याचा वापर नियोजनबद्ध केल्यास निश्चितच भारतीय कृषी अर्थव्यवस्था वृद्धीगंत होण्यास मदत होईल. जलसमस्येची जनजागृती व समस्या निर्मूलनासाठी नियोजनाचा अभाव व शासन कर्त्यांच्या राजकीय इच्छा शक्तीच्या अभावामुळे भारतातील ६०० मिलीयन लोकांना पाण्यासाठी संघर्ष करावा लागत आहे. देशातील २६ राज्यांपैकी २४ राज्यात पाण्याची फार मोठी समस्या निर्माण झाली असून त्यांचे संघर्षात रुपांतर झाले आहे. राज्या-राज्यात पाणी वाटपावरून वाद निर्माण झाले आहेत.

देशातील जवळपास २१ महानगरातील भूगर्भीय जलपातळीवरील जलसाठा इ.स. २०२० पर्यंत नष्ट होण्याच्या मार्गावर असल्याचे संशोधनातून स्पष्ट झाले आहे, त्यामुळे संपूर्ण भारतात पाणी ही एक समस्या म्हणून राज्यकर्त्यांबरोबरच सर्व भारतीय लोकांना आव्हान देत आहे.

**भारतीय जलाची मागणी (बिलियन क्यूब मॅट्रिक)**

(तक्ता क्र. १)

क्षेत्र	जलसंधारन मंत्रालय			एन.सी.आय.डब्ल्यू.		आर.डी.
	२०१०	२०२५	२०५०	२०१०	२०२५	२०५०
सिंचन	६८८	९१०	१०७२	५५७	६११	८०७
पिण्याचे पाणी	५६	७३	१०२	४३	६२	१११
उद्योग	१२	२३	६३	३७	६७	८१
ऊर्जा	०५	१५	१३०	१९	३३	२०
इतर	५२	७२	८०	५४	७०	१११
	८१३	१०९३	१४४७	७१०	८४३	११८०

संदर्भ - ११ वी पंचवार्षिक योजना (भारत सरकार २००७-२०१२), खंड - ३ पान नंबर ४६.





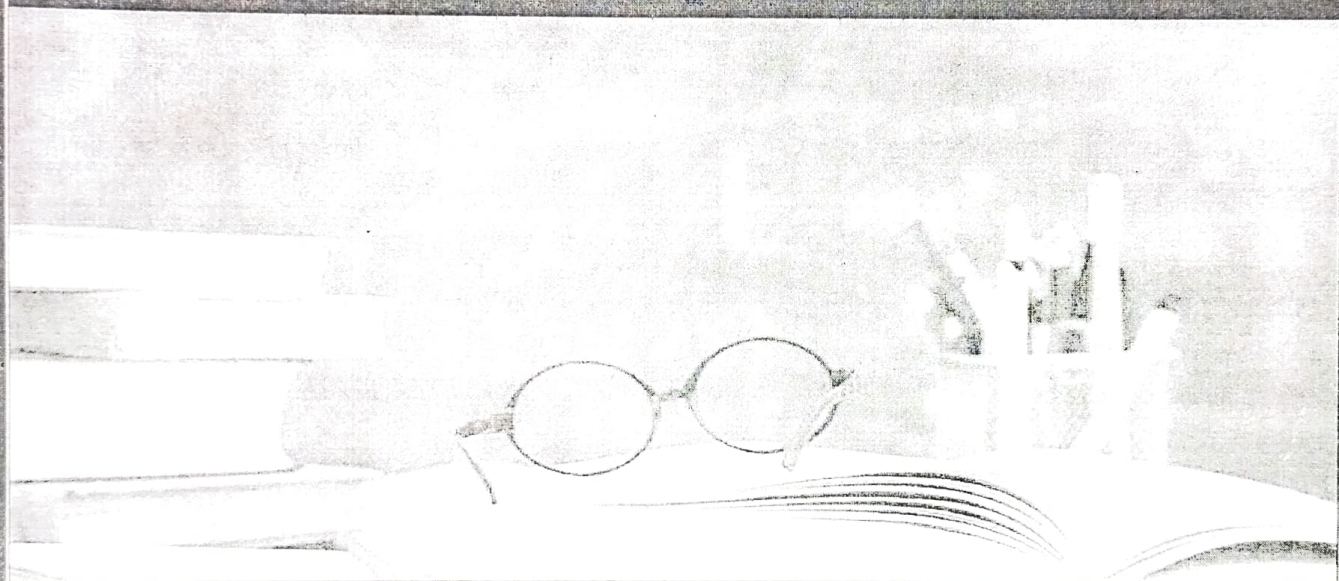
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## **Agricultural Changes and Agriculture Productivity in Ahmednagar District**

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### **ABSTRACT**

The Ahmednagar district is agriculturally imbalance. the valleys of river Godavari. Bhima and its tributaries are agriculturally superior and different components are agriculturally backward. There is excessive diploma of iversification in physiography and soils due to this, district have pretty disparities in gricultural productivity. There is excessive variant in distribution and density of non bodily determinants such as irrigation. regular and contemporary farm implements. technological input. agricultural credit etc. Agriculture is the main occupation and the predominant remain of the humans dwelling in the Ahmednagar district which is one of creating district of Maharsashtra. The effects of productiveness indices published that there are greater or much less comparable sample of agricultural productivity. Although modifications in agricultural productiveness are no longer uniform and there is variant amongst the specific tehsils of district. These variants are due to the variant in the bodily and non bodily determinants. The availability and use of bodily and non bodily determinants in all the tehsils is no longer uniform and so is the productivity. On the groundwork of composite productiveness at some stage in the length of investigation seven tehsils has recorded exchange in their productiveness level. The bad alternate observed in 4 tehsils namely. Nagar. Shrirampur. Nevasa and Karjat whilst fine exchange observed in tehsils of Shevgaon, Sangamner and Kopargaon. Rest of the six tehsils namely. Rahuri. Pathardi. Jamkhed. Shrigonda. Parner and Akole seen no exchange in their productiveness level.

### **Introduction:-**

Development in agriculture performs an essential position in each country wide economy- climate developing, developed or in-transition. It has remained an vital sourceof food, fodder and uncooked fabric for range of industries. In the world close to aboutfifty percentage working populace nevertheless relies upon on agriculture for employment. Indeveloping nations agriculture and allied things to do maintain the practicable for providingsignificant employment possibilities and typical monetary boom as nicely as socioeconomic development. India's financial improvement appreciably rests onagriculture that employs 58.5 percentage of country's work pressure and it contributes about20 percentage Gross Domestic Product (GDP) (Shah. R. K. 2014).

Indian agriculture looks to be the three phases of the place the nature ofagriculture has been shifted i.e. put up independence length (1950-51 to 1965-66).





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## नाशिक जिल्ह्यातील नैसर्गिक वन क्षेत्राचा भौगोलिक अभ्यास

आहिरे बाबाजी मोतीराम

संशोधक विद्यार्थी

डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ,  
औरंगाबाद

प्रा.डॉ. राजपंगे माधव गणपती

मार्गदर्शक

भूगोल विभाग प्रमुख

आनंदराव धोंडे उर्फ बाबाजी महाविद्यालय,  
कडा ता. आष्टी. जि. बीड - ४१४२०२

### गोषवारा :

वनांमुळे जैवविविधतेचे संरक्षण, औषधी तसेच इतर ही उपयुक्त वस्तूंची उपलब्धता तसेच तेथील लोकांना उपजीविकेचे साधन असे अनेक फायदे होतात. भ्रमसाट विकास प्रकल्पांमुळे वनक्षेत्रे अत्यंत वेगाने कमी होत चालली आहेत. यामुळे जैवविविधता धोक्यात येऊ लागली आहे. वन्यप्राण्यांची नैसर्गिक आश्रयस्थाने नष्ट होऊ लागल्याने मानव वन्यजीव संघर्ष वाढीस लागले आहेत. वनांचे क्षेत्र कमी होऊ लागल्याने दरवर्षी पृथ्वीच्या तापमानात वाढ होत आहेत. जागतिक तापमानवाढीमुळे हवामान बदल वेगाने होत आहे. यामुळे चक्रीवादळांचे, ढगफुटींचे व अवकाळी पावसाचे प्रमाण वाढत आहे. निसर्गाचे हे बदलते स्वरूप आपल्यासाठी अत्यंत चिंताजनक आहे, हे ज्ञात असून ही वनांचा न्हास थांबलेला नाही, ही आजची सद्यस्थिती आहे. देशातील जंगले वाढविण्यासाठी सरकार व राज्य सरकार विविध घोषणा, उपाययोजना करीत असतात. या घोषणा, योजना कितपत यशस्वी झाल्या व खरेच किती वनक्षेत्र वाढले, घटले, नेमके कुठे वाढले, कुठे घटले, वाढण्याची किंवा घटण्याची कारणे काय ह्याचा अभ्यास करणे गरजेचे आहे.

की. वर्ड (कळ शब्द) : नैसर्गिक वन क्षेत्र, नैसर्गिक आपत्ती, जंगल, वनाच्छादन, अवर्गीकृत वने, कुन्हाड बंदी, सामाजिक वनीकरण, वृक्षदिंडी.

### प्रस्तावना :

पृथ्वीच्या एकूण क्षेत्रफळाच्या सुमारे दोन तृतीयांश क्षेत्रफळ पाण्याने व्यापले आहे. उर्वरित जमिनीचा एक तृतीयांश भाग जंगलांनी व्यापलेला असणे आवश्यक आहे. झाडांनी दाटलेल्या भागाला वन, जंगल, रान Forest असे म्हणतात. एकेकाळी पृथ्वीच्या भूपृष्ठाचा ५०% हिस्सा व्यापणाऱ्या वनांनी वर्तमानात पृथ्वीच्या पृष्ठभागावरील ९४ % हिस्सा, अर्थात भूपृष्ठाचा ३० % हिस्सा, व्यापला आहे. वनांमध्ये सजीवांना नैसर्गिक आसरा लाभतो, तसेच वनांमुळे जलचक्राचे नियमन व भूपृष्ठाचे संरक्षण होते. जंगल आपल्या गरजा भागवतात उदा. लाकूड, औषधी वनस्पतीवन. म्हणजे वृक्षांचे वर्चस्व असलेले मोठे क्षेत्र आहे. एक हेक्टर पेक्षा मोठी असलेली व १० % पेक्षा अधिक वृक्षराजी असलेल्या कोणत्याही जागेला 'वन' किंवा 'वनाच्छादन' म्हणतात. वने ही जगातील कार्बनचे सर्वात मोठे साठे आहेत. ते कार्बन डाय-ऑक्साइड वायूचे शोषण करतात आणि वातावरणातील उष्णता वाढ रोखतात. उष्ण कटिबंधातील वनांमध्ये जगातील सर्वात जास्त कार्बनचे साठे आहेत.

### उद्दिष्टे :

- १) जंगल क्षेत्राचा सद्यस्थितीचा आढावा घेणे.
- २) जंगल क्षेत्राचा न्हासाची कारणे शोधणे.
- ३) नाशिक जिल्ह्यातील जंगल क्षेत्राच्या न्हासावर विविध उपाय योजना करणे.

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## Population Aspects and Growth in Ahmednagar District of Maharashtra State-A Geographical Study

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**Mr. Sandip Sampatrao Bhanage**

Research Student

### Abstract

Twentieth century is witnessed unprecedented demographic change of because of socio-economic condition of region. Population is itself a resource. Unplanned population growth within region is responsible for shortage of food, shelter, water, transport, education, health services and other socio-economic amenities resulting imbalance sex ratio, marital status, fertility, mortality, age structure, migration and occupation structure. Overpopulation is basic problem in south Asian countries including India. It leads to shortage of food, unemployment, poor health, poor public services and degradation of environment. To overcome above issues there is urgent need to stabilize increasing size of population. Size of population, density of population, sex ratio and literacy is the major aspects of population to understand the socio-economic development of an area as well as future planning. In the present paper Ahmednagar district is selected as study area which is suffering population explosion issues. The present study is focused on decadal growth rate and projected growth of population characteristics. Decadal growth rate of population is 12.44 percent. Tehsil wise trend of decadal growth of population characteristic shows tremendous variation.

**Key words:** decadal growth, annual growth, population density, sex ratio

### Introduction

"The power of population is indefinitely greater than the power in the earth to produce subsistence for man." (Thomas Malthus, 1798). Population is the major element because population play vital role in the development of region. The growth of population, its structure and composition affect on social and economic conditions. Population is one of the resources. Unplanned population growth within region is responsible for shortage of food, shelter, water, transport, education, health services and other socio-economic amenities resulting as imbalance in sex ratio, marital status, fertility, mortality, age structure, migration and occupation structure. Many geographical studies have described and compared the size, structure, characteristics, distribution and changes of population through time. The population structure and population characteristics include marital status, literacy, educational status and labourers force, etc. These may change through social mobility (Bhende and Kanitkar, 2003).

Population characteristics are the basic tools to study the socio-economic development of an area. Moreover, population projection has been used for planning to ensure provision of basic needs as well as health, education and employment. The present study makes an attempt to study the population characteristics such as size of population, density of population, sex ratio and literacy of Ahmednagar district. The study is based on census data for the year 2001-2011 with emphasis on analysing trends in decadal and projected growth. In study region more than 70 percent of population depends on agriculture for employment and livelihood. Agriculture of the district is mainly depends on monsoon rainfall. Poor or failure of monsoon leads to reduce the productivity of agriculture, it adverse effect on economy of district as well as increase the rate migration. It effects on social relation and literacy.





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## **Problems Related to Natures Hazards in India and Maharashtra**

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### **Introduction:**

The word disaster is derived from the ancient Greek Word (dus-) "bad" and (aster), "star". The root of the word disaster ("bad star" in Greek) comes from an astrological sense of a calamity blamed on the position of planets.

Disaster is defined as "any occurrence that cause damage, ecological disruption, loss of human life, deterioration of health and health services, on a scale sufficient to warrant an extraordinary response from outside the affected community or area" (WHO)

Disasters can be defined in different ways.

- A disaster is an overwhelming ecological disruption occurring on a scale sufficient to require outside assistance.
- A disaster is an event located in time and space, which produces conditions whereby the continuity of structure and process of social units becomes problematic.
- It is event or series of events of events which seriously disrupts normal activities.

### **Types of disasters:**

There is no country that is immune from disaster, though vulnerability to disaster varies, Following are the main types of disasters.

- **Natural disasters.**

These disasters include floods hurricanes, earthquakes and volcanic eruptions impacts causing further impacts on human health, as well as secondary impacts causing further death and suffering from floods causing landslides, earthquakes resulting in fires, tsunamis causing widespread flooding and typhoons sinking ferries, etc.

- **Environmental emergencies**

These emergencies include technological or industrial accidents, usually involving hazardous material, and occur where these materials are produced, used or transported Large forest fires are generally included in this definition because they tend to be caused by humans.

- **Complex emergencies.**

These emergencies involve a breakdown of authority, looting and attacks on strategic installation. Complex emergencies include conflict situations and war.

- **Pandemic emergencies**

These emergencies involve a sudden onset of a contagious disease that affects health but also disrupts services and businesses, bringing economic and social costs.

### **The Geography of Disaster:**

One of the important factor concerns what might be called the geography of disaster? It has often been pointed out that most of the World's worst disasters tend to occur between the Tropic of Cancer and the Tropic of Capricorn and that, coincidentally; this area contains the poorer countries Of course, a major significance of this is that such countries find themselves





facing repeated setbacks to progress, indeed, some countries seem destined to remain within the developing category primarily because of the severity and magnitude of their disasters. Seen in this lights, therefore, disaster can be a strong aggravating factor in the differences between wealthy and poor nations that is between the "haves" and the "have-nots".

#### **The General Effects of Disaster:**

Generally, typical effects of disasters may be:

- Loss of life,
- Injury,
- Damage to and destruction of property,
- Damage to and destruction of subsistence and cash crops,
- Disruption of production,
- Disruption of lifestyle,
- Loss of livelihood
- Disruption to essential services,
- Damage to national infrastructure and disruption to governmental systems,
- National economic loss and
- Sociological and psychological after effects.

#### **Hazard:**

A hazard can be defined as a potentially damaging physical event, social and economic disruption of environmental degradation. Typical examples of hazards can be absence of rain (leading to drought) or the abundance there of (leading to floods), Chemical manufacturing plants near settlements and incorrect agricultural techniques, can also be seen as hazards which could lead to possible disasters, Hazards can be the creation of man or the environment.

It is defined as "phenomena that pose a threat to people, structures or economic assets and which may cause a disaster.

#### **Vulnerability:**

It is defined as "the extent to which a community, structure, service or geographical area is likely to be damaged or disrupted by the impact of particular hazard on account of their nature, construction and proximity to a hazardous terrain or disaster prone area.

Vulnerability describes the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard. There are many aspects of vulnerability, arising from various physical, social, economic, and environmental factors. Examples may include

- Poor design and construction of buildings,
- Inadequate protection of assets,
- Lack of public information and awareness,
- Limited official recognition of risks and preparedness measures, and
- Disregard for wise environmental management.

Vulnerability varies significantly within a community and over time. This definition identifies vulnerability as a characteristic of the element of interest (community, system or asset), which is independent of its exposure. However, in common use the word is often used more broadly to include the element's exposure.





**Conclusion:-**

Youth of the country should be encouraged to learn and practice techniques of disaster management.

Education about disaster management should be imparted in schools and colleges.

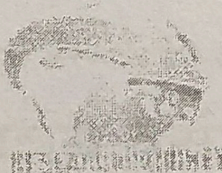
Disaster evacuation drills should be practiced in schools and offices.

Prepare a first aid box, which would be handy in times of disasters,

Details of disaster management squad should be shared through media at every corner of the country.

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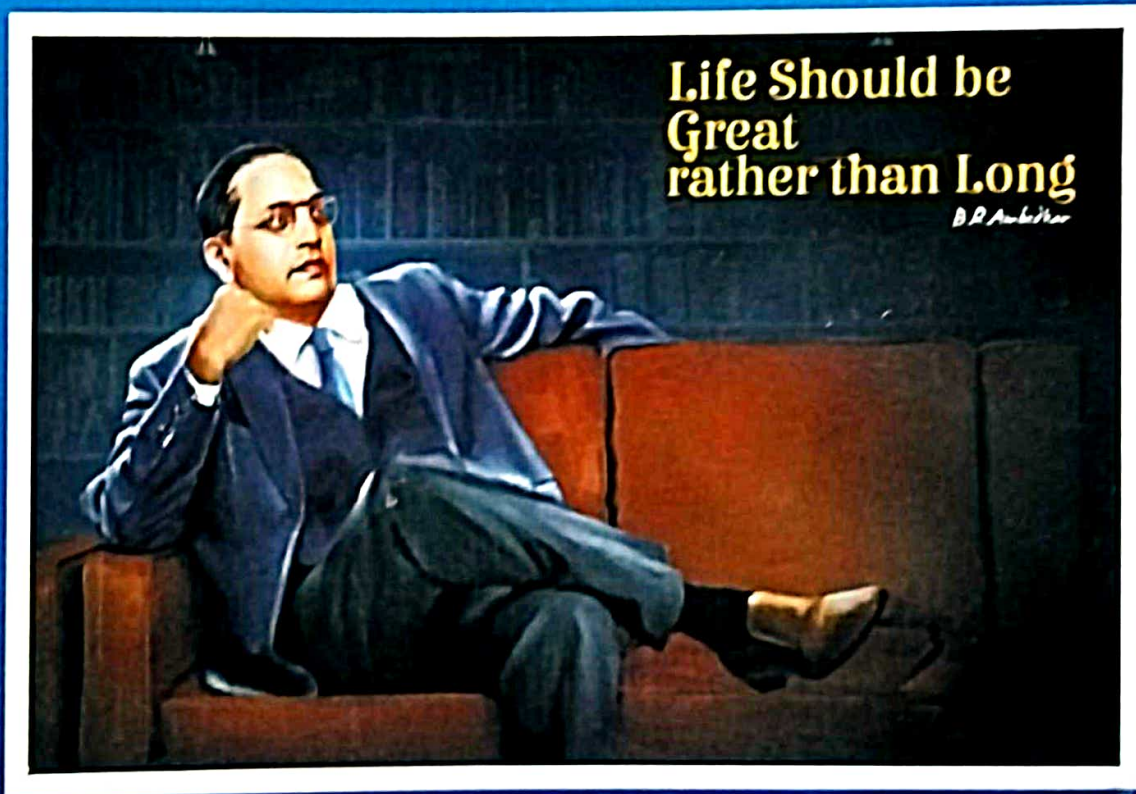
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## **Thoughts of Dr. B.R. Ambedkar**



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## **Dr. Ambedkar's Vision and Indian Development to Water Management**

**Dr. Tekade Mangal Shantinath**

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### **Abstract**

Dr. Ambedkar had greatly contributed to the water resource development in India as a member of Central Cabinet in-charge of the Department of Irrigation and Electric Power during 1942-46. Though he made a substantial contribution to the nation's development in this position, surprisingly, this aspect of his life has hardly been studied. The objective of present paper is to highlight the great contribution of Dr. Ambedkar to the water resource development in India which is hardly studied by the researchers. The study is descriptive in nature. Secondary sources like books, research journals, magazines, newspapers were thoroughly studied and analysed to meet the objectives of the study. Paper concludes that Dr. Ambedkar played a great role in the establishment of Damodar Valley Corporation, Hirakund Dam, Sone and Kosi River project. He contributed a lot in constitution of a central authority for the water issues in India. Today's Central Water Commission is also due the efforts made by him as a Member of Viceroy's Executive Council. Paper also discusses about the relevance of his ideas related to water resources in present era of water crisis.

**Keywords:** Water, Waterways, Irrigation, River, Dam, Drought, flood, recharge, contamination, arsenic.

### **1. Introduction**

Ambedkar's Contribution to Water Resources Development' notes, "India's water policy emerged during the years that Dr. Ambedkar held this portfolio in the years 1942-46. It was during these years that, for the first time, the Labour Department formulated a policy for planned development of irrigation and electric power resources in the country on a comprehensive all-India scale, and against an all India background as a part of its post-war plan of economic development. The planning on the part of Dr. Ambedkar and his team in the Labour Department led to some basic developments, which laid the foundation of India's water policy. It resulted in the establishment of a high-level technical organisation at the Centre, namely the Central Waterways, Irrigation, Navigation Commission (the present-day Central Water Commission)". The policy framework prepared at that time under the guidance of Dr. B R Ambedkar emphasized on these components.

- (a) Adoption of a concept of River Valley Authority or corporation for the management and control of projects on inter-State rivers
- (b) Adoption of the concept of regional and multipurpose development of River Valley Basin as a whole
- (c) Establishment of administrative and technical expert bodies at the Centre. The Central Waterways, Navigation and Irrigation Commission set up for this purpose was the precursor of the present-day Central Water Commission, and the Central Technical Power Board that of the Central Electricity Authority.

### **PM Modi Revived Ambedkar's Vision**

It is well known that rapid progress has been taking place under the Modi government in developing India's inland waterways. Two multi-modal terminals, one at Varanasi and another at Jharkhand's Sahibganj are already operational.

Prime Minister Narendra Modi, back in 2016 had credited Dr B R Ambedkar for giving India a river navigation policy. Many people may have known about the social reform efforts by Dr Ambedkar; however, they came to know about his works on water only after PM Modi spoke at length on this.

### **Research methodology**

The study is purely conducted on secondary data assembled from sources such as journal articles.

### **Objective of the study**

Improving productivity of irrigation water by efficient conveyance and its effective farm level use by adopting conservation agricultural practices. Production of more profitable crops through high efficiency irrigation systems (HEISs) for meeting increasing domestic demand and enhancing exports.

### **Developing India's Inland Waterways: A Socio-Economic Revolution in the Making**

India is a land of rivers. Its civilization, livelihood, culture and commerce have evolved along the banks of rivers. Notwithstanding this historical fact, India's inland waterways, in the modern era, have been largely neglected. Due to a lack of funding and infrastructural lacunae, Indian rivers once so busy carrying goods and people had been left unused and/or underutilised with the advent of the railways, thereby undermining their socio-economic potential. Meanwhile, the world-over, waterways, both inland and coastal have been seen to be given importance as they significantly reduce cargo transportation costs and also the carbon footprint.

### **Untapped Potential**

Although India has a 7,500-km-long coastline, with approximately 14,500 km of navigable waterways, coastal shipping accounts for only 6% and inland water transport for about 0.4% of trade.





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# Modern Trends and Challenges in Physical Education and Sports Sciences

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## ABSTRACT

*The aim of this paper is to identify the current trends and challenges in physical education and sports and based on these current challenges, future trends and challenges would be discussed. There are various factors which are diminishing the interest of students in physical education activities. Although the physical education is being taught as a part of curriculum in all the schools but lack of adequate time and trained teachers, good facilities are responsible for little interest in this field. The future challenges to make this field interesting involves an adequate curriculum, sufficient funds allotment for holding various competitions and role of technology to create awareness about the importance of physical activities and sports in our daily life. All these issues have been discussed in the present study.*

## INTRODUCTION

The importance of physical education has never been emphasized more than it is today. It is widely recognized that physical education and sports is relevant and important in developing an active and healthy lifestyle and the solution to rising obesity rates worldwide. Although in most countries, physical education is part of the school curriculum, lessons are not given, thus leading to a reduced experience of physical activity for children and youth. The practice of a physically active lifestyle in combination with healthy nutrition, however, needs to be started in early childhood. Therefore, ensuring that all children engage in regular physical activity is crucial, and the schools are the only place where all children can be reached. Quality Physical Education is the most effective and inclusive means of providing all children, whatever their ability/disability, sex, age, cultural, race/ethnicity, religious or social background, with the skills, attitudes, values, knowledge and understanding for lifelong participation in physical activity and sport and is the only school subject whose primary focus is on the body, physical activity, physical development and health. The present study will identify the current trends, issues and challenges in PE and sports based on which future challenges will be addressed.

## CURRENT TRENDS IN SCHOOL PHYSICAL EDUCATION AND SPORTS:

Physical education trends have developed recently to incorporate a greater variety of activities besides typical sports. Introducing students to activities like bowling, walking or hiking, or Frisbee at an early age can help students develop good activity habits that will carry over into adulthood. Some teachers have even begun to incorporate stress-reduction techniques such as yoga, deep-breathing and tai chi. Tai chi, an ancient martial arts form focused on slow meditative movements is a relaxation activity with many benefits for students. Studies have shown that tai chi enhances muscular strength and endurance, cardiovascular endurance, and provides many other physical benefits. It also provides psychological benefits such as improving general



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# Modern Trends and Challenges in Physical Education and Sports Sciences

**Dr. Shaikh M.B.**

Dept. of Physical Education Anandrao Dhonde Mahavidyalaya  
Kada

## ABSTRACT

*The aim of this paper is to identify the current trends and challenges in physical education and sports and based on these current challenges, future trends and challenges would be discussed. There are various factors which are diminishing the interest of students in physical education activities. Although the physical education is being taught as a part of curriculum in all the schools but lack of adequate time and trained teachers, good facilities are responsible for little interest in this field. The future challenges to make this field interesting involves an adequate curriculum, sufficient funds allotment for holding various competitions and role of technology to create awareness about the importance of physical activities and sports in our daily life. All these issues have been discussed in the present study.*

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## EFFECT OF GENES ON SPORTS PERFORMANCE

**Dr. Shaikh Mushtaq Badeshaha**

Dept. of Physical Education

A.D. College, Kada Tq. Ashti Dist. Beed.

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### Abstract :

Gene is the basic structural and functional unit infact it is a vehicle to carry hereditary traits. Sports and genes are like heart and beat. When genes express the sports like activities such as all bodily movements are regulated. Everybody possess a large verties of genes. A single gene express single protein which infact causes activation for specific activity. So it can be said gene express single character.

There are some specific genes which works together in group in a healthy sportive body. Such genes are further transferred to their offspiring. Thus a volleyball champion's son has those specific genes which were produced in father once upon a time and transferred to son as a lovely legacy.

### Introduction :

The present paper is focused on two concepts of genes; one is the presence of specific genes in body which favours the body to develop into a sportive body.

Another is the importance of sports in making genes to switch on and off according to a sportsman's wish. This shows that gene can be tamed, replaced, exchanged in a sportive body as some genes are confined to sports activities.

### Materials required :

Variety of sports related genes such as :

- Gene responsible for muscle builds up and quick movement ath is ACTN3.
- The protein alpha acitin 3 of ACTN3.
- Mutated RS 77x gene from ACTN3.
- APOE gene and its protein produced.
- Myostation growth factor
- Insulin (IGF-1)
- Enzyme phopphoenol pyruvate carboxyl kinase (9 pepck-c)
- Erythropoietin.

### Methodology :

The first concept means human body harbours already special genes for special activities in sports such as elite athletic, sprinters, gymnasts etc. several evidence shows that there are large number of special sports genes in body by birth but as time passes they express proteins that causes the body to exhibit it in board ways, once such example is Mac Arthur's coauthor professor Kathryn North was studying people with neuromuscular disease in the hope of finding a cause if not a cure. Later he focused on a gene caved ACTN3, which is already found in small organisms to human beings, ACTN3 controls the production of protein in muscles. This gene producers alpha actinin – 3 found in which muscles, the type that are predominantly used to make powerful movements such as sprinting and jumping etc.



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आधुनिक महाराष्ट्राच्या निर्मितीत यशवंतराव चव्हाण यांचे योगदान



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## यशवंतराव चव्हाण यांचे आर्थिक विचार

डॉ. अशोक भाऊराव माळशेखरे

अर्थशास्त्र विभाग

आनंदराव धोंडे ऊर्फ बाबाजी महाविद्यालय, कडा ता. आष्टी जि. बीड

मो.नं. ९४२०४१२२१९, E-mail – ashok\_m2013@rediffmail.com

### प्रस्तावना :

भारताचे उपपंतप्रधान, पहिले मुख्यमंत्री, कुशल प्रशासक, उत्कृष्ट संसदपटू, भारताचे संरक्षणमंत्री अशा यशवंतरावांचा जन्म सांगली जिल्ह्यातील देवराष्ट्रे या गावी १२ मार्च १९१४ रोजी झाला. १९१४ म्हणजे पहिल्या महायुद्धाचा काळ १९१७-१८ मध्ये युद्ध संपले आणि प्लेगची साथ सुरु झाली या प्लेगच्या साथीमध्ये यशवंतराव चव्हाण यांच्या वडीलांचे निधन झाले. त्यानंतर कुटुंबाची सर्व जबाबदारी विठाबाईवर पडली. त्या चार मुलांना घेवून कराडला आल्या. रोजगार करत त्या मुलांचा संभाळ करू लागल्या परंतु ही मिळकत खूप कमी होती. त्यांनी न्यायधिकांना भेटून ज्ञानोबाला कराडच्या कोर्टात बेलीफ म्हणून नौकरी मिळवून दिली परंतु आर्थिक अडचणीमुळे ज्या गावात यशवंतरावांचा जन्म झाला त्या देवराष्ट्रे या गावी पुन्हा यावे लागले. त्यांचे चौथी पर्यंतचे शिक्षण देवराष्ट्रे येथेच झाले. पुढील शिक्षणासाठी कराडच्या टिळक हायस्कूलमध्ये दाखल करण्यात आले. १९३४ मध्ये ते मॅट्रिकची परीक्षा पास झाले. १९३८ मध्ये त्यांनी कोल्हापूरच्या राजाराम महाविद्यालयातून बी.ए. ची पदवी संपादन केली. १९४१ ला पुण्याच्या लॉ कॉलेजमधून त्यांनी एल.एल.बी. ही पदवी प्राप्त केली. २ जुन १९४२ रोजी यशवंतराव चव्हाण व वेणुताई यांचा विवाह सोहळा पार पडला. यशवंतरावांनी आपल्या वकिली व्यावसायाला कराड येथे सुरुवात केली.

पुढे यशवंतराव राजकारणामध्ये सक्रिय सहभागी झाले. सातारा जिल्हा काँग्रेसचे अध्यक्ष व त्यानंतर १९५२ मध्ये कराड मतदार संघातून विधान सभेवर निवड झाली. १९५६ मध्ये द्वैभाषीक मुंबई राज्याचे मुख्यमंत्री झाले. १९६० मध्ये महाराष्ट्र राज्याची निर्मिती झाली व पहिले मुख्यमंत्री म्हणून चांगली कामगिरी केली. १९६३ मध्ये ते लोकसभेवर निवडून गेले. १९८२ मध्ये दहाव्या वित्त आयोगाचे अध्यक्ष म्हणून त्यांची निवड झाली. “देशातील सर्वोत्तम मुख्यमंत्री” म्हणून त्यांची प्रशंसा केली जाते या सर्वोत्तम मुख्यमंत्र्याचे २५ नोव्हेंबर १९८४ रोजी दिल्ली येथे निधन झाले.

### यशवंतराव चव्हाण यांचे आर्थिक विचार

यशवंतराव चव्हाण यांचे आर्थिक विचार प्रामुख्याने शेती, उद्योग, सहकार, समाजवाद, आर्थिक विषमता इत्यादीशी निगडित आहेत.

#### १) शेतीसंबंधीचे विचार :

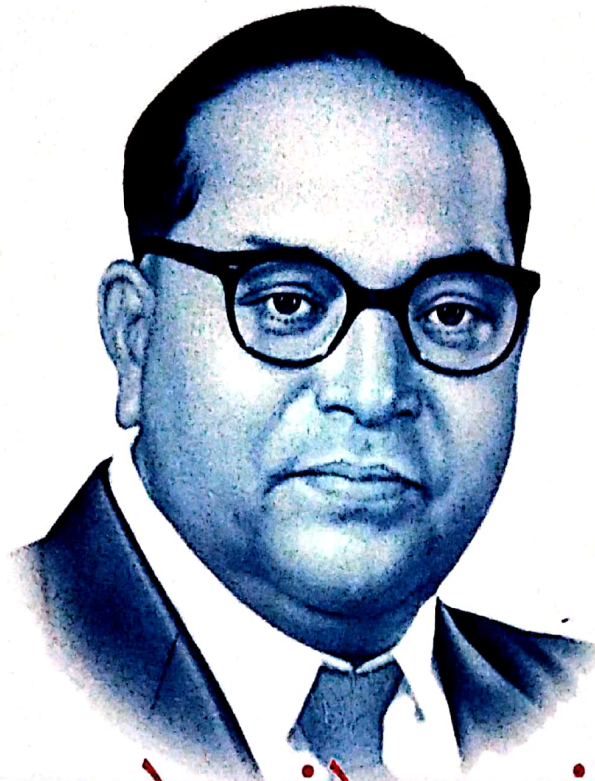
यशवंतराव चव्हाण यांनी कृषिविषयक विचार मांडताना शेतीच्या मालकी हक्काचा प्रश्न, भुमिहीनांचा प्रश्न व कृषी विकासासाठी उपाय यावर भर दिला. त्यांच्या मते जमीन कसणारा जमिनीचा मालक असला पाहिजे. भारतात शेती क्षेत्रात भुमिहीनांची संख्या अधिक आहे. म्हणून ज्यांच्याकडे अधिक जमीन आहे त्यांनी एक ते दोन टक्के जमीन भुमिहीनांना द्यावी. त्याच बरोबर पडीक जमीन लागवडीखाली आणली जावी. शेतीच्या आधुनिकीकरणाच्या मार्गातील अडथळे दुर केले जावेत. नद्यांचा पाण्याचा शेतीसाठी वापर केला जावा. नद्यावर धरणे बांधली जावेत जेणे करून शेती उत्पादनात मोठ्या प्रमाणात वाढ होईल.





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## **डॉ. बाबासाहेब आंबेडकर यांचे विचार Thoughts of Dr. Babasaheb Ambedkar**

Editor : Dr. Rajesh Gangadharrao Umbarkar

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Law, Engineering, Medical, Ayurveda, Pharmaceutical, Journalism, Mass Communication, Library Science, etc.)



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# डॉ. बाबासाहेब आंबेडकर यांचे आर्थिक विचार

डॉ. अशोक भाऊराव माळशिखरे

अर्थशास्त्र विभाग, आनंदराव भोंडे ऊर्फ बाबाजी महाविद्यालय, कडा ता. आग्दी जि. बीड

सारांश (गोपबारा) :

डॉ. बाबासाहेब आंबेडकर यांनी विविध विषयावर आपले आर्थिक विचार मांडले आहेत. कृषी विषयक, उद्योगासंबंधी, रुपयाचा प्रश्न सार्वजनिक अर्थव्यवहार, पाणी व्यवस्थापन, वित्तीय प्रशासन समाजवाद, अर्थशास्त्राचे स्वरूप, शेतमजुरी, आंतरराष्ट्रीय व्यापार, दारुबंदी, कर विषयक विचार अशा विविध विषयांवर डॉ. बाबासाहेब आंबेडकर यांनी आपले विचार मांडलेले आहेत.

प्रस्तावना :

भारतीय राज्यघटनेचे शिल्पकार, भारतरत्न डॉ. भीमराव आंबेडकर यांचा जन्म १४ एप्रिल १८९१ रोजी रत्नागिरी जिल्ह्यातील अंबेवडे या गावी झाला. त्यांनी आपले प्राथमिक शिक्षण दापोली तर माध्यमिक शिक्षण सातारा येथे पूर्ण केले, तर एल्फिन्स्टन कॉलेज बॉम्बे येथून एम.ए. (अर्थशास्त्र) कोलंबिया विद्यापीठातून पी.एच.डी. ही पदवी संपादन केली. १९२२ मध्ये बॅरिस्टर परीक्षा व १९२३ मध्ये डॉक्टर ऑफ सायन्स ही पदवी मिळवली.

डॉ. बाबासाहेब आंबेडकर भारतीय संविधानाचे शिल्पकार, भारताचे पहिले न्यायमंत्री होते. डॉ. भीमराव आंबेडकरांनी दलितांच्या उत्थानाकरता आणि भारतातील मागासलेल्या वर्गाच्या प्रगतीकरीता आपल्या संपूर्ण जीवनाचा त्याग केला. आज समाजात दलितांना जे स्थान आहे याचे संपूर्ण श्रेय डॉक्टर भीमराव आंबेडकर यांना जाते.

‘देशप्रेमापुढे स्वतःच्या विश्रांतीचा त्याग केला. माणसाला स्वाभिमान शिकवला. ज्यांना आम्हाला संकटशी सामना करणे शिकवले असा या आकाशात एकमेव तारा बाबासाहेब होता.’

१९२७ मध्ये डॉ. आंबेडकरांनी अस्पृश्यता मिटवण्याकरता व जातीभेद संपविण्याकरता काम केले. या करिता त्यांनी अहिंसेच्या मार्गाने आंदोलन केले. पाणवटे सर्वाकरीता खुले केले जावेत. मंदीरात प्रवेश खुला करण्यात यावा. १९३२ मध्ये दलितांच्या अधिकाराकरीता धर्मयुद्धातील योद्ध्या प्रमाणे लढले. पुढे त्यांची लोकप्रियता वाढत गेली. लंडन मधल्या गोलमेज संमेलनात सहभागी होण्याचे त्यांना आमंत्रण मिळाले. ज्यात त्यांनी वेगळ्या मतदारांविरोधात आवाज उठविला व वेगळ्या मतदार संघाची मागणी केली. १९३७ ला त्यांनी स्वतंत्र लेबर पार्टी बनविली. १९३७ ला केंद्रीय विधानसभा निवडणुकीत त्यांनी १५ जागा जिंकल्या. १५ ऑगस्ट १९४७ ला भारत स्वतंत्र झाल्यावर डॉ. आंबेडकरांनी आपल्या स्वतंत्र लेबर पार्टीला आखिल भारतीय अनुसूचित जाती संघ पार्टीत विलीन केले.

काँग्रेस आणि महात्मा गांधींनी दलित वर्गाला हरिजन असे नाव दिले. परंतु डॉ. आंबेडकरांना हे आवडले नाही. त्यांचे म्हणणे असे होते ही, “अस्पृश्य समाजातील लोक देखील आपल्या समाजाचा एक भाग आहेत आणि ते सुध्दा समाजातील अन्य सदस्यासारखेच सामान्य माणसं आहेत.”

त्यांचा त्याग, संघर्ष आणि समर्पणाच्या बळावर भारताचे पहिले कायदामंत्री झाले. डॉ. भीमराव आंबेडकरांचा संविधान निर्मातीमागचा मुख्य उद्देश देशातील जातिपातीचा भेदभाव मुळापासून नष्ट करणे हा होता. समता, स्वातंत्र्य, बंधुता आणि मानवतेवर आधारीत भारतीय संविधानाला जवळ-जवळ २ वर्षे ११ महिने आणि ७ दिवसांच्या अथक परिश्रमाने २६ नोव्हेंबर १९४९ ला तयार करून तेव्हाचे राष्ट्रपती डॉ. राजेन्द्र प्रसाद यांच्याकडे सुपुर्द करित देशातील सर्व नागरीकांना राष्ट्रीय एकता, अखंडता आणि व्यक्तींनी स्वाभिमानी जीवन पध्दतीने भारतीय संस्कृतीला गौरवान्वित केले. डॉ. आंबेडकर यांना अनेक आजारांनी ग्रासले होते. मधुमेहाची समस्या वाढल्याने त्यांना इन्सुलिन घ्यावे लागायचे. या आजारांकरता ते मुंबईला





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# **Edu Care**

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# ७३ वे घटना दुरुस्ती विधेयक आणि नवीन पंचायतराजमध्ये महिलांना संधी: समाजशास्त्रीय अभ्यास

प्रा. डॉ. आक्काड भगवान भानुदास\*

## गोषवारा

१९६२ साली ७३ वे घटना दुरुस्ती विधेयक मंजूर झाले आणि २४.०४.६३ पासून 'पंचायतराज' ची अंमलबजावणी सुरु झाली. ७३ व्या घटना दुरुस्तीच्या माध्यमातून पंचायतमध्ये महिलांना ३३.३३% आरक्षण देणे हि समानतेकडे जाणारी एक पायरी आहे. पण ती यशस्वी होण्यास महत्वपूर्ण आधार मिळालेला नाही. महिला नेतृत्वावर भाष्य करण्याच्या सरकारी प्रयत्नांन व्यतिरिक्त, स्थानिक लोक आणि स्वयंसेवी संस्थानीही महिलांसाठी काही प्रयत्न केले पाहिजेत. एक गट स्थापन झाला पाहिजे. या संघटना गट महिलांमध्ये आत्मविश्वास वाढवितील आणि सहकार्याची भूमिका बजावतील. योजना बनवण्यापासून ते निर्णय घेण्यापर्यंत महिलांना आपली भूमिका घेता आली पाहिजे. गरीब महिलांकडे वेतन मजुरीवरून काम सोडून पंचायतींमध्ये प्रभावशाली भूमिकेची अपेक्षा करणे धाडसाचे ठरेल, तसेच त्यांच्या सर्वांगीण विकासासाठी विशेष प्रयत्न करावे लागतील. संविधानाच्या भावनांना व्यावहारिक करण्यासाठी पुनः समाज सुधारणेला चळवळीचे रूप द्यावे लागेल. महिला सक्षमीकरणाच्या बाबतीत त्यांना सन्मान, पाठिंबा आणि सुरक्षित वातावरणाची गरज आहे.

**कीवर्ड :** ७३ वी घटना दुरुस्ती, पंचायत राज आणि महिलांना संधी

## प्रस्तावना

१९६२ ला पी. व्ही. नरसिंहराव यांनी 'पंचायतराज' संबंधी ७३ वे घटना दुरुस्ती विधेयक तयार केले. २२ डिसें.१९६२ ला या विधेयकावर लोकसभेत बहुमत सिध्द झाले. २३ डिसें.१९६२ ला विधेयकावर राज्यसभेत बहुमत सिध्द व त्यानंतर या विधेयकास १७ राज्यांच्या विधिमंडळाची मंजुरी मिळाली. २० एप्रिल १९६३ ला विधेयकावर राष्ट्रपतींची स्वाक्षरी होऊन पंचायतराज संस्थांना घटनात्मक दर्जा प्राप्त झाला. व २४ एप्रिल १९६३ पासून पंचायत राजच्या अंमलबजावणीस सुरुवात झाली. २४ एप्रिल १९६४ पर्यंत या शिफारसी सर्व राज्यांना लागू करण्याचे बंधन करण्यात आले. २०१० पासून २४ एप्रिल हा दिवस संपूर्ण देशामध्ये 'पंचायतराज' दिन म्हणून पाळला जातो. भारतीय राज्यघटनेत २४३ (ड) पंचायतराज मध्ये राखीव जागांची तरतूद केली आहे.

१. ग्रामसभेला 'पंचायती राज' पद्धतीचा आधार मिळाला.
२. जिल्हापरिषद, पंचायत समिती, ग्रामपंचायत याप्रमाणे त्रिस्तरीय पद्धत असेल.
३. तिन्ही स्तरावर सभासदांची थेट निवडणूक होईल.
४. प्रत्येक पंचायतीचा कालावधी ५ वर्षांचा आणि वयाची अट २१ वर्ष आहे.

\*समाजशास्त्र विभाग आनंदराव धोंडे उर्फ बाबाजी महाविद्यालय कडा, ता.आष्टी जि. बीड

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## अतिरिक्त लोकसंख्या-भारताची समस्या

प्रा.डॉ. आल्हाड भगवान मानुदास

समाजशास्त्र विभाग

आनंदराव धोंडे महाविद्यालय कडा. ता. आष्टी



**गोषवारा**—सध्याच्या जागतिक लोकसंख्येत विकसनशील देशांची लोकसंख्या साधारणतः ८० टक्के आहे. विकसनशील देशांचा लोकसंख्या वाढीचा वेग सरासरी १.५ टक्के आहे, तर विकसित देशांचा फक्त ०.५ टक्के आहे. विकसनशील देशांच्या लोकसंख्येच्या जडणघडणीत भारताचा मोठा वाटा आहे. जगाच्या लोकसंख्येने आतापर्यंत सातशे नव्वद कोटींचा पल्ला ओलांडला आहे. जगाच्या लोकसंख्यावाढीचा आधीचा वेग अतिशय कमी होता, म्हणजे सन १९०४ मध्ये जगाची लोकसंख्या शंभर कोटी होती, ती २०० कोटी होण्यास १२३ वर्षांचा कालावधी जावा लागला. त्यानंतर २०० कोटी लोकसंख्येचे ३०० कोटी होण्यास फक्त ३३ वर्षे लागली आणि नंतर ३०० कोटीची ४०० कोटी लोकसंख्या फक्त १४ वर्षांत झाली. देशांच्या 'जलद विकासासाठी' लोकसंख्या महत्वाचा घटक आहे पण भारतासारख्या अतिरिक्त लोकसंख्या असलेल्या देशाचा विचार केला तर वाढती लोकसंख्या विकसनशील देशांच्या सामाजिक विकासाच्या स्त्रोतांवर अडथळा बनते. भारत लोकसंख्येच्या दृष्टीने जगातील दुसऱ्या क्रमांकाचा देश आहे. हा लेख वाढत्या लोकसंख्येचा परिणाम म्हणून निर्माण झालेल्या समस्येवर प्रकाश टाकतो तसेच जन्मदर, मृत्यूचे प्रमाण आणि मृत्यू दर कमी होण्याच्या घटकांचे विश्लेषण केले आहे. मुख्य शब्द रु लोकसंख्या वाढ, दारिद्र्य, जन्म दर आणि मृत्यू दर प्रमाण, लोकसंख्या वाढीचे कारणे

**परिचय**— मनुष्य सर्व संपत्तीचा निर्माता आहे आणि मनुष्याशिवाय इतर सर्व साधने काहीच उपयोगाची नाहीत. म्हणून मनुष्य हा सर्व विकास प्रयत्नांचा केंद्रबिंदू आहे. समग्र मानवजातीच्या वापरासाठी संपत्ती निर्माण केली जाते. देशाची लोकसंख्या ही सर्वांगीण

तक्ता - १ भारतात लोकसंख्या वाढ १९०१-२०११

वर्ष	भारताची लोकसंख्या (कोटी मध्ये)	मागील दशकात वाढ किंवा घट (कोटी मध्ये)	मागील दशकात टक्केवारी वाढ किंवा घट (कोटी मध्ये)
१९०१	२३.६१	—	—
२००१	१०२.८०	१८.१७	२१.४६
२०११	१२१.०२	१८.२२	१७.७२
१९११	२५.२१	१.६०	६.७७
१९२१	२५.१३	-०.०८	-०.३
१९३१	२७.९१	२.७८	११.०६
१९४१	३१.८७	३.९६	१४.१८
१९५१	३६.११	४.२४	१३.३
१९६१	४३.९२	७.८१	२१.६२



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## महिला सबलीकरण आव्हाने आणि उपाय

प्रा. डॉ.आव्हाड भगवान भानुदास

समाजशास्त्र विभाग आनंदराव धोंडे महाविद्यालय कडा, तालुका- आष्टी, जिल्हा- बीड.

प्रस्तावना - भारतीय संस्कृती जगातील प्राचीन संस्कृतींपैकी एक आहे. भारतीय समाजातील उच्च दर्जाची मूल्यव्यवस्था, कुटुंबव्यवस्था आणि त्यातील स्त्रीचे स्थान हे महत्त्वपूर्ण आहे. जन्मापासून ती वेगवेगळ्या भूमिका पार पाडत असते. म्हणून तिला प्राचीनकाळी महत्त्वपूर्ण स्थान दिले होते. परंतु आधुनिक काळात पुरुषप्रधान संस्कृतीच्या वर्चस्वामुळे 'केवळ चूल आणि मूल' एवढ्यापुरते तिचे अस्तित्व मर्यादित होत गेले. परिणामी सामाजिक, आर्थिक, राजकीय, शैक्षणिक व सांस्कृतिक क्षेत्रांमध्ये महिलांना पुरुषांच्या बरोबरीचे स्थान नाकारल्यामुळे तसेच शिक्षणापासून वंचित ठेवले गेल्यामुळे, त्यांच्यात मागासलेपण वाढत गेले. महिलांना सर्वच घटकापासून दूर ठेवल्यामुळे त्यांच्या आणि समाजाच्या विकासाला खीळ बसलेली दिसून येते. आज एकविसाव्या शतकातही स्त्रियांवरील अत्याचारात दिवसेंदिवस वाढ होत असल्याचे दिसते. 'स्त्री आणि पुरुष' सामाजिक विकासाची चाके मानले जातात. परंतु भारतीय समाजात पुरुष चाकाची गती स्त्री चाकाच्या गतीपेक्षा अधिक असल्याचे दिसून येते. जोपर्यंत "स्त्री-पुरुष" यांच्यामध्ये समानता येत नाही तोपर्यंत विकासाला चालना मिळणार नाही. समाजाच्या सर्वांगीण विकास करण्यासाठी महिलांचे सक्षमीकरण करणे ही काळाची गरज आहे. तरच सामाजिक-आर्थिक विकासाचे स्वप्न साकार करता येईल. भारतीय समाजाचा अभ्यास केल्यानंतर लक्षात येते कि, महिलांना भारतीय समाजात दुय्यम स्थान देण्यात आलेले आहे. तिला शिक्षण आणि इतर सामाजिक घडामोडी-पासून वंचित ठेवण्याचा प्रयत्न झालेला आहे. स्त्रीला एकीकडे देवता म्हणायचे आणि दुसरीकडे कनिष्ठ समजून तिच्याकडे जाणीवपूर्वक दुर्लक्ष करायचे. ती सुद्धा एक माणूस आहे असे विचार समाजसुधारकांनी स्वातंत्र्यपूर्व कालखंडात मांडण्याचा प्रयत्न केला. तेव्हापासून आजपर्यंत अनेक क्षेत्रात महिलांना पुरुषांच्या बरोबरीने येण्यासाठी अडथळे निर्माण होत आहेत म्हणूनच 'महिला सबलीकरणावर' प्रकाश टाकण्याचा प्रयत्न केलेला आहे.

शोधनिबंधाची उद्दिष्ट्ये:

१. महिला सबलीकरण ही संकल्पना स्पष्ट करणे.
२. महिला सबलीकरणाच्या आव्हानांचा आढावा घेणे.
३. महिला सबलीकरणासाठी उपाययोजना सुचवणे.

शोधनिबंधाचे गृहितके:

१. महिलांचे शिक्षणामुळे सबलीकरण होत आहे.
२. महिलांच्या सबलीकरणामध्ये अनेक घटक अडथळा निर्माण करतात.
३. 'स्त्री-पुरुष' समानता यावरच महिला सबलीकरण अवलंबून आहे.

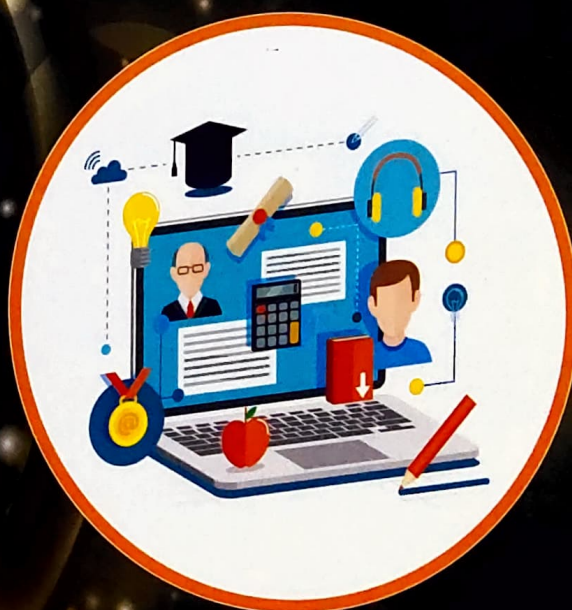


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कथाकारांची कथा त्यांच्या जीवनाभूताने निर्माण झालेली आहे. दलित कथेतून ग्रामीण शहरी भागातील दलित जीवन साकारतांना दिसते दलित कथेच्या मधून आलेली माणस पोटासाठी धडपडतांना दिसतात. पोटाचा प्रश्न सोडविण्यासाठी ती वाटे त्या मार्गाचा अवलंब करतांना दिसून येतात. या कथेतून आंबेडकरी विचार धारा प्रकट झाली आहे.

#### दलित कांदबरी :

दलित कांदबरी ही पांढरपेशी वाट मांडून नवा-आशय-विषय घेऊन अवतरली आहे. काही कांदबरीकारांची ठळक नावे पुढील प्रमाणे - अण्णाभाऊ साठे, शंकरराव खुरात, नामदेव व्हटकर, केशव मेश्राम, नामदेव ढसाळ, दलित कांदबरी ही डॉ. बाबासाहेब आंबेडकरांचे विचार मांडताना दिसते. दलित कांदबरीत दलित जीवनाचा गतकालीन व वर्तमान कालीन जीवन पट मांडलेला असतो. दलित कांदबरीचा विषय हा उपेक्षित जीवन जगणाऱ्या माणसांचा असतो दलित कांदबरी दलित समुहाचे, सामाजिक बांधिलकीचे तत्व जपतांना दिसते गावकुसा बाहेरील उपेक्षित जीवन दलित कांदबरी चित्रित करते. बाबुराव बागूल अघोरी कांदबरीत मंत्र-तंत्र हया अघोरी विद्येचा चमत्कार दिसून येतो दलित कांदबरीकारांनी महार, मांग, भटक्या जमाती, तमासगोर, बाघ्या मुरळी, वेढाबगार, झोपडपट्टी, हातभट्टी, स्त्रियांवरील अत्याचार असे अनेक विषय घेऊन कांदबरी लेखन केलेले दिसून येते दलित कांदबरी जास्त प्रमाणात लेखन करणारा कांदबरीकार म्हणून अण्णाभाऊ साठे यांच्याकडे पाहिले जाते.

#### संदर्भ सूची :

- १) आधुनिक मराठी वाङ्मयाचा इतिहास १८१८ ते २००० प्राचार्य - डॉ. वसंत बिरादार.
- २) ग्रामीण वाङ्मयाचा इतिहास संपादक- रामचंद्र काळुखे
- ३) दलित चळवळ आणि साहित्य - कृष्णा किरवले
- ४) दलित साहित्य : एक अभ्यास , संपादक - अर्जुन डांगळे
- ५) कर्डक भीमराव : आंबेडकरी जलसे : स्वरूप व कार्य, अभिनव प्रकाशन, मुंबई.

□□□

## भारतातील महिला सबलीकरण: एक समाजशास्त्रीय दृष्टीकोन

प्रा. डॉ. आव्हाड भगवान भानुदास  
समाजशास्त्र विभाग,

आनंदराव धोंडे ऊर्फ बाबाजी महाविद्यालय कडा,  
ता. आष्टी, जि. बीड

**परिचय:** स्त्रियांचा सन्मान, रोजगार, आरोग्य, शिक्षण असे अनेक प्रश्न १९७५ नंतर समोर आले. या सर्व प्रश्नांची चर्चा सार्वजनिक व्यासपीठावर करावी लागेल, असे वातावरण निर्माण झाले होते. स्त्री चळवळीत शोषणमुक्तीचा विचारही वारंवार चर्चिला गेला. त्या आंदोलनात अनेक विचारसरणीच्या कार्यकर्त्यांनी एकत्रितपणे आपले विचार मांडले. स्त्रीमुक्तीची सामूहिक संघर्षाची परिभाषा सोडून सबलीकरणाच्या परिभाषेला मान्यता दिली. १९८० च्या दशकाच्या मध्यापासून विकास हा विशेषतः महिलांच्या संदर्भात सबलीकरण हा शब्द लोकप्रिय झाला आहे. त्यानंतर महिला सबलीकरणाची संकल्पना रूढ झाली. भारत सरकारने ह्यब्ज्य हे वर्ष महिला सबलीकरणाचे वर्ष म्हणून घोषित केले. महिलांचे सबलीकरण म्हणजे स्त्रियांचे सामाजिक, राजनैतिक, आर्थिक सामर्थ्य वाढविणे. त्यामध्ये त्यांच्या स्वतःच्या क्षमतेसंबंधी त्यांचा आत्मविश्वास वाढविणे हा आहे. महिला सबलीकरणात विविध पैलूंचा विचार केला जातो. तळागाळातील कार्यक्रम आणि धोरणात्मक वादविवादात सक्षमीकरणाने कल्याण आणि उन्नती, समुदायातील सहभाग आणि दारिद्र्य निर्मूलन यासारख्या पदांचा विकास आणि हस्तक्षेपाचे उद्दीष्ट वर्णन केले. जगातील लोकसंख्येच्या जवळजवळ ह्यब्ज्य स्त्रिया आहेत परंतु महिलांची लोकसंख्या पुरुषांपेक्षा तुलनात्मक दृष्ट्या कमी आहे. जोपर्यंत त्यांच्या सामाजिक स्थितीचा प्रश्न आहे, तोपर्यंत त्यांना सर्व ठिकाणी पुरुषांइतकेच



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## महिलांवरील घरगुती हिंसाचार : कारणे, परिणाम आणि उपाय

प्रा. डॉ. आल्हाड भगवान भानुदास

समाजशास्त्र विभाग आनंदराव धोंडे महाविद्यालय,  
कडा, तालुका आष्टी, जिल्हा. बीड.

### परिचय :

“हुंड्यासाठी वधूवर अत्याचार” या आणि अशा अनेक घटना आपण कोणत्याही वृत्तपत्राचे निरीक्षण केले तर आपल्या दृष्टीस पडतील. यासारखी अनेक प्रकरणे आहेत जी नोंद विरहित असतात. आपल्या देशामध्ये असे अनेक प्रकरणे सातत्याने घडत आहेत. काहींवर अत्याचार, काहींना मारहाण तर काहींना ठार मारले जात आहे. याला ग्रामीण, आदिवासी, शहरी भाग अपवाद नाही. हे सर्वच ठिकाणी आणि सर्व वयोगटातील व्यक्तींच्या बाबतीत सत्य आहे. एका पिढीकडून दुसऱ्या पिढीपर्यंत हिंसाचार मार्गक्रमण करत आहे. घरातील हिंसाचाराच्या या विदारक समस्येचे वर्णन करण्यासाठी वापरण्यात आलेला शब्द म्हणजे घरगुती हिंसा. घरगुती हिंसाचाराला कुटुंबातील कोणताही सदस्य बळी पडू शकतोय मग तो सदस्य बायको, पती, मुलगा, मुलगी, आई, वडील, आजी-आजोबा इत्यादी असू शकतात. पण या शोध निबंधात महिलांच्या हिंसाचारावर लक्ष केंद्रित केले आहे. हिंसाचार शारीरिक, लैंगिक किंवा भावनिक अशा विविध प्रकारात होऊ शकतो. आपण ज्या समाजामध्ये राहत आहोत त्या समाजाकडे समाजशास्त्रीय दृष्टीकोनातून पाहिले तर घरगुती हिंसाचार समाजाचा अविभाज्य भाग बनलेला आहे असे जाणवते. विविध प्रसंग, मानसिक समस्या आणि सामाजिक प्रभाव देखील तीव्रतेत भर घालतात. भौगोलिक स्थानानुसार आणि संस्कृतीतील बदल यामुळे हिंसाचाराच्या तीव्रतेत फरक असू शकतो. त्यांच्या घरातील घटनांच्या कार्याचे विश्लेषण केले गेले आहे.

**बीज शब्द :** घरगुती हिंसाचाराचे कारणे, दुष्परिणाम आणि संभाव्य उपाय

महिलांवरील घरगुती हिंसाचार घरगुती हिंसाचाराचा हा प्रकार सर्वात सामान्य आहे. हे इतके प्रचलित होण्याचे एक कारण म्हणजे समाजातील रूढीवादी मानसिकता जसे की पुरुषांपेक्षा महिला शारीरिक आणि भावनिक दृष्ट्या दुर्बल असतात. आज कोणत्याही क्षेत्रात महिला पुरुषांपेक्षा कमी नाहीत हे वास्तव आहे. तरीही पुरुषांपेक्षा महिलांवर होणा-या हिंसाचाराच्या घटनेचे प्रमाण जास्त आहे. विवाहित भारतीयांपैकी जवळजवळ दोन तृतीयांश महिला घरगुती हिंसाचाराचा बळी पडतात आणि १५ ते ४६ वर्षे वयोगटातील सुमारे ७० टक्के विवाहित महिला

मारहाण, बलात्कार किंवा जबरदस्तीने लैंगिक अत्याचाराचे बळी ठरतात. २०२० चा विचार केला असता हि संख्या वाढलेली दिसून येते. भारतात ५५ टक्केहून अधिक महिला घरगुती हिंसाचारग्रस्त आहेत, स्त्रियांना मारहाण करणे याचे सर्वात सामान्य कारण म्हणजे हुंड्याबद्दल असंतोष आणि हुंड्याच्या नावाखाली नववधूला जाळणे, मारणे, उपाशी ठेवणे, टोचून बोलणे, जोडीदाराशी वाद घालणे, तिच्याशी लैंगिक संबंध ठेवण्यास नकार देणे, मुलांकडे दुर्लक्ष करणे, जोडीदाराला न सांगता घराबाहेर जाणे, अतिरिक्त वैवाहिक जीवनात व्यस्त राहणे, सासू-सासर्यांची काळजी न घेणे किंवा स्त्रियांमधील वंध्यत्व अशा विविध कारणास्तव कुटुंबातील सदस्यांकडून त्यांच्यावर प्राणघातक हल्ला देखील होतो. हुंड्याचा लोभ, मुलाची इच्छा आणि जोडीदाराचा मद्यपान ही ग्रामीण भागात महिलांवरील घरगुती हिंसाचाराची प्रमुख कारणे आहेत. मागणी असलेल्या हुंड्याची रक्कम घरी न आणल्यामुळे तरुण वधू जिवंत जाळल्या जातात किंवा सतत छळ केला जातो. असे अनेक घटक आहेत ज्यामुळे अगोदर मतभेद होतात नंतर ते घरगुती हिंसेचे स्वरूप धारण करतात. तरुण विधवांवरील हिंसाचारही वाढत चालला आहे. त्यांना ग्रामीण भागात पुनर्विवाहासाठी परवानगी दिली जात नाही. जेव्हा गर्भपात करण्यास असहमत असते तेव्हा स्त्रीला मारण्याच्या घटना देखील घडलेल्या आहेत. स्त्रीभ्यणहत्या ही वाढती चिंता आहे. महिलांविरुद्ध होणाऱ्या शारीरिक अत्याचाराच्या इतर प्रकारांमध्ये थप्पड मारणे, टोसे मारणे, पकडणे, त्यांच्यावर लबाडीचा आरोप लावणे, सार्वजनिक अपमान करणे आणि त्यांच्या समस्यांकडे दुर्लक्ष करणे समाविष्ट आहे. त्यांच्या विरोधात होणारी मानसिक छळाची इतर काही उदाहरणे म्हणजे त्यांच्या स्वतःच्या अभिव्यक्तीच्या हक्कांना आळा घालणे आणि जन्मजात कुटुंब आणि मित्रांशी संबंध ठेवण्याच्या स्वातंत्र्यास आळा घालणे होय.

महिलांवरील हिंसाचाराचे परिणाम रू अत्याचार म्हणजे एका व्यक्तीने दुसऱ्या व्यक्तीला राजरोसपणे धमकी देणे, ज्याचा परिणाम प्रामुख्याने त्या दुसऱ्या व्यक्तीचे नुकसान होण्यास किंवा नाव लौकिकास धक्का लावण्यात होतो. येथे आपण महिलांचा विचार करू. महिलांवर होणाऱ्या अत्याचारास त्रास देणारा घटक मुख्यता पुरुष असतो व हळूहळू इतर नाते

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**वृद्धांच्या समस्या : एक समाजशास्त्रीय अभ्यास****प्रा.डॉ.आव्हाड भगवान भानुदास**

समाजशास्त्र विभाग आनंदराव धडे ऊर्फ बाबाजी महाविद्यालय कडा, ता. आष्टी जि. बीड

**प्रास्ताविक :** मानवी जीवनातील अंतिम चरण म्हणजे वृद्धत्व होय. प्रत्येक व्यक्तीच्या जीवनाच्या अंतिम टप्प्यात वृद्धत्व येतच असते. वृद्धापकाळात मानवी जीवनात अनेक समस्या निर्माण होतात. १९ व्या शतकापर्यंत भारतीय समाजामध्ये संयुक्त कुटुंब पद्धतीत सर्वांना सहजपणे सामाऊन घेतले जात होते. परंतु काळाबरोबर या पद्धतीचे रूपांतर विभक्त कुटुंबात होत गेले. त्यास कारणीभूत झाले ते नागरीकरण, औद्योगीकरण आणि वाढता व्यक्तिवादी दृष्टीकोन यामुळे वृद्धांची अवस्था दयनीय झालेली दिसून येते. वृद्धावस्था हि मानवी जीवनातील अपरिहार्य अशी अवस्था आहे. या अवस्थेला आधारभूत घटक म्हणजे वय हा मानला आहे पण देश परतवे यामध्ये फरक आहे काही देशामध्ये ६५ वर्ष आहे तर भारत सरकारने मात्र ज्या व्यक्तीने वयाची ६० वर्ष पूर्ण केली आहेत. अशा व्यक्तींचा समावेश 'वृद्ध' या संकल्पनेत केला आहे. भारत सरकारने ६० हि वयोमर्यादा गृहीत धरून सन १९५१-२०११ मधील वृद्ध लोकसंख्येची आकडेवारी जाहीर केली आहे.

**भारतीय लोकसंख्येतील वृद्धांचे प्रमाण**

अ.क्र.	वर्ष	लोकसंख्या (कोटी)	६० वर्षावरील लोकसंख्येचे प्रमाण
१	१९५१	३६.०१	५.५ %
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३	१९७१	५४.८	६.०%
४	१९८१	६८.३	६.५%
५	१९९१	८४.५	६.८%
६	२००१	१०२.७	७.५%
७	२०११	१२१.०	८.६%

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उपरोक्त सारणीवरून भारतातील लोकसंख्या ज्याप्रमाणे वाढत आहे. तसतशी वृद्धांची संख्या वाढत जाण्याबरोबरच लोकसंख्येतील वृद्धांचे प्रमाण वाढत आहे. जसे प्रमाण वाढत आहे, त्या प्रमाणात वृद्धांच्या समस्यांची तीव्रता वेगाने समोर येत आहेत. संयुक्त कुटुंबातील प्रेम, आपुलकी, सहानुभूती, जिज्ञाळा, माया हि तत्वे संपुष्टात येत आहेत. यामुळे वृद्धांच्या समस्या गंभीर बनत आहेत. त्यामध्ये सामाजिक, शारीरिक, मानसिक, आर्थिक यासारख्या अनेक समस्या निर्माण झालेल्या आहेत. प्रस्तुत शोध निबंधासाठी काही उद्दिष्टे निश्चित केली आहेत

**संशोधनाचा उद्दिष्टे :**

१. वृद्धांच्या समस्यांचे स्वरूप लक्षात घेणे.

२. वृद्धांच्या समस्यांचे अध्ययन करणे.

**गृहीतके :**

१. वृद्धांच्या विविध समस्या आहेत.



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## Impact of Information Communication Technology (ICT) on Library Professional Development

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### Abstract-

Information needs and diverse information tools have affected our daily life as well as research and developmental activities. Latest devices for information communication have resulted in the expeditious dissemination of information and revolutionized the information handling activities in research and academic libraries in India. Academic libraries, mostly attached to universities and research institutions as centers of information services, have largely benefited by the rapid changes in technology. The advent of digital computer advances in telecommunication and audiovisual technologies have opened up new ways of collecting, organizing and disseminating scientific and technical information.

**Keywords-**Information needs,(ICT),Information support,digital computer.

### Introduction-

Technology has drastically changed the way librarians define themselves and the way they think about their profession and the institutions they serve. The librarian in the digital world now acts as a guardian of information, as a consultant to the users, an information broker and also a continuous learner. The platform of Internet and WWW has helped to change the ways of accessing and locating information and

there by change the functions of an academic librarian and academic library in the modern information society.

The biggest challenges facing the library profession today is preparing the professionals to use technology effectively. An academic library professional will be required to serve as an information service consultant with specific information technology skills As technology has saturated all levels of library's operations and services, the library professional in an academic institution has to anticipate the changing expectations of users, and be flexible in adapting and adopting new skills and levels of awareness. While being trained in IT skills, what every library professional chooses to ignore is the management aspect of a library. In addition to the technical and professional skills,

### Significance of the study

The shift from print to digital information has a high impact on all components of the academic library system in India, especially the users, the services and the staff. Though information is considered as an important resource, the use of ICT tools to collect and disseminate information has been in a slow pace in majority of the University libraries. This may be due to various factors like insufficient funds, inadequate staff trained in handling computers and software packages, administrative concerns, etc. In Kerala, automation has been initiated in almost all University libraries using library automation software and is under different stages of completion, but this has been extended to only a few department libraries in each university. In the library system in the Universities, comprising of a Central library and departmental libraries, the application of ICT has changed the type of services delivered through University libraries in the state, but a dynamic change is not yet reflected in the infrastructure and manpower development in the university libraries and the whole of library profession.

### Statement of the problem



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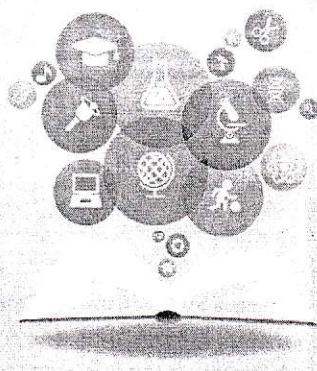
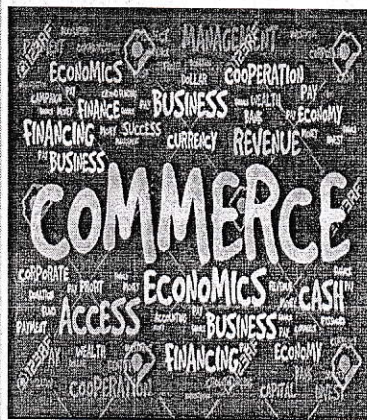
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## Farmers Suicide in India-Causes and Remedies

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### Abstract:

Agricultural sector is the main income for the rural people in India. It plays a significant role in their life. In India, small and marginal farmers account for 70%, according to the 2011 census of the Government of India. These small and marginal farmers took credit from banks and private money lenders. The non-repayment of credit led to an agricultural crisis and farmers' suicide. This study focused on the reasons that caused such a disaster. The study rests on a review of the literature which was extracted from journals, reports, and newspapers from 2004 to 2019. The review identified the following reasons for the agricultural crisis and farmer's suicides-poverty, indebtedness, crop failures, distress, lack of awareness on new technologies, inadequate debt, marketing of produce, the high interest of non-institutional credit, and depletion of water levels. The article concluded noting that -the government had to shift its focus from industries to agriculture and shift its agricultural policies from short-term to long-term ones.

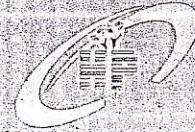
(*Keywords: Agricultural crisis, Distress, Economic conditions, Farmer's suicide.*)

### INTRODUCTION

According to the 2011 census of the Government of India, seventy percent of the Indian farmers are small and marginal. Livestock farming gives these farmers a secondary income, apart from agriculture. But even this is insufficient to satisfy their daily necessities. Due to this, farmers are forced to borrow money, not only for agriculture purpose but also for day to day consumption. The amount so borrowed, have not been used for the purchase of new technological equipment or for asset building which could have generated incremental income. Moreover, these farmers do not repay the loans on time. Thus, farmers' indebtedness grows. According to the National Crime Records Bureau report of 2015, 38.5% farmers committed suicide due to bankruptcy or indebtedness, 19.5% due to agricultural problems, 11.7% due to family problems, 10.5% due to illness, 2% due to marriage problems and 1.15% due to property disputes. The report further stated that in 2015, 45.2% small farmers and 27.4% marginal farmers committed suicide. In the same year, a total of 12,602 people committed suicide in the agricultural sector in India, out of which 8,007 were farmers and 4,595 of them were agricultural laborers. This data clearly showed that indebtedness (38.5%) was the major cause of farmers' suicide.

State government. The state government delayed the payment to the farmers by two to three months. Due to this reason, farmers approached the middlemen and sold their produce at a low price (Srinivas, 2019). NDTV (2017) reported that AkilBharathiyaKisanMahasabha General Secretary Leader HannanMollah said that all of the farmers in India were in distress. Farmers committed suicide since they could not recover the cost incurred. The government was not ensuring instant reliefs for the farmers. All the farmers had united and asked the government to waive bank loans and implement long term policies for avoiding the farmers' suicides. Former Reserve Bank of India Governor RaghuramRajan said that 'First we need to worry about why people are so distressed and angry. There is a lot of agriculture distress. I personally believe that farm loan waivers are not the answers. But there are other answers' (Press Trust of India, 2019). Unnikrishnan (2019) observed that loan waiver was not a permanent solution for farmer's problems. Moreover, the government had announced to





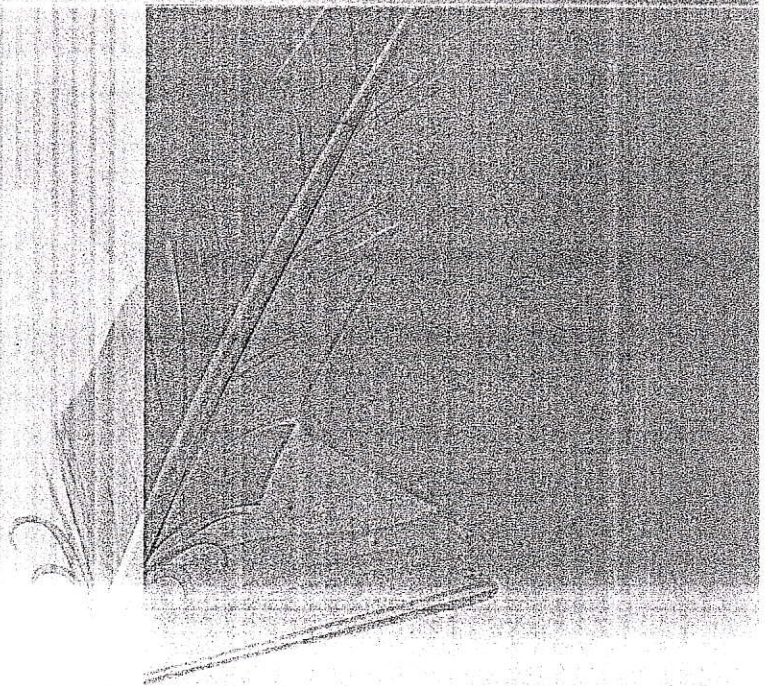
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## Need of Green & Eco-Friendly Entrepreneurship to Protect Environment

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\*\*\*\*\*

### Introduction

The world is facing with a direct climatic change due to the destruction of the ozone layer as a result of the emission caused by harmful gases into the atmosphere. In order to have a sustainable life in the current world, people should adopt lifestyles that will ensure the promotion of healthy living and dissuade pollution. The key to attaining this goal is crafting and investing in eco-friendly business ideas. Plus, there should be a myriad of projects and initiatives to ensure eco-friendly investment opportunities as well as living is encouraged. Accordingly, all the stakeholders and pioneers in various business sectors need to step up including the entire business community. Particularly, the sectors needs to see to it that the initiative of going green is reached by all means necessary. As much as installing eco-friendly measures are ideal, the whole business sector must invest in going green.

### Objectives

1. To create awareness about green bussiness opportunities
2. To know the importance of green busines

### Hypothesis

The world is on the right track towards achieving green living goals

A recent survey found that 88% of Americans believe taking care of the earth is very important - but only 52% believed that the government should be taking action to protect it. Green business can benefit either way: greater consumer interest and/or more protective policy!

Globally, a report from 2014 says that 55% of consumers across 60 countries are willing to pay higher prices for goods from environmentally conscious companies. A 2013 study claims that 71% of Americans at least consider the environment as a factor when shopping.

Organic food sales in particular seem to have turned a corner, jumping 11.3% in 2014, while overall food sales grew only 3%. Organic food has become far more mainstream over the last several years - expanding well beyond the niche market it once was. Sales in 2014 were over \$35 billion - compared to only \$3.4 billion in 1997. Growth is expected to continue strongly until at least 2018.

### Green & Eco-Friendly Businesses

#### 1. Start Air Duct cleaning

Dust and dirt in the air can clog the air ducts that are installed in homes or offices. This lowers the efficiency of the air conditioner and results in the use of a lot of energy to drive the gadget. The business idea would require regular cleaning of the air ducts to ensure less energy consumption. Also, with proper marketing, both private homes and offices would be willing to hire an expert for the service because it ultimately helps to save on energy bills.

#### 2. Sale of Energy Saving Bulbs

This idea is very lucrative in 2018 since majority of the households enjoy electricity in their homes. A lot of consumption of electricity subsequently leads to an increase in the electric bills. To avoid this, individuals seek energy saving electric bulbs that use electricity but reduce the energy they use and still provide electricity thus saving on bills.

Besides, this is a business that can thrive in almost any part of the world since even without electricity; one can use the bulbs to