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The Comparative Study of Rainfall and Rainy Days in Drought Prone Area of Nashik District (M.S)

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Abstract:

The present research paper emphasizes the comparative study of rainfall and rainy days in the drought-prone areas of Nashik district. The rainfall amount is going to decrease day by day in the study area. The researcher found that the average rainfall was sometimes found high but the number of rainy days is low. With the help of this investigation, the researcher found that the rainfall is going to decrease from the west to the east in the study area. For the concerned study, the author has used the secondary data from the district collector office of Nashik and also gets the rainfall data from various weather stations from the study area. The conclusion of this investigation shows that the average rainfall going to decrease where the intensity of drought is going to become severe in the study area.

Keywords: Rainfall, Area, Rainy days, the intensity of drought, level of droughts

Introduction:

Without water living, things cannot survive. There can be no substitute for it. Water is also used for transportation, domestic consumption, agriculture, and industrial development. Rain is an important source of water in any area. Plants get their water supply from natural sources and through irrigation. The agricultural productivity of crops particularly in rain-fed areas depends on the rainfall pattern, which makes it important to predict the probability of occurrence of rainfall from the records of climatic data using statistical analysis. The present research paper emphasizes the comparative study of rainfall and rainy days in the drought-prone area of Nashik district. The rainfall amount is going to decrease day by day in the study area. The conclusion of this investigation shows that the average rainfall going to decrease where the intensity of drought is going to become severe in the study area.

Aims and Objectives:

1. To measure the rainfall amount of the study area.
2. To calculate the rainy days of the study region.
3. To study the correlation between rainfall and rainy days.

Hypothesis:

The intensity of drought is going to increase due to low rainfall.

The geographical location of the study area:

Malegaon, Nandgaon, Yeola, and Chandwad Taluka's are the drought-prone area of the Nashik District located in the Eastern part of the District. It is one of the parts of the Deccan plateau, These Taluka's Occupied the total area of 1825.13 Km^2 , 1089.82 Km^2 , 1064.47 Km^2 , and 958.73 Km^2 respectively. The total area occupied by the southeastern part of Nashik is 4938.15 Km^2 (31.80 %).

The average rainfall in this region is only 48 to 53 cms. This region is in the rain shadow area of Maharashtra. Only 15.64% of the land area is under the forest, while the cultivated area is near 65%. Agriculture is highly dependent on rain. So Kharif and Rabbi are two seasons in this area. This area is famous for onion, bajara, maize, cotton, and jowar.

Data and Methodology:

The Researcher has collected secondary data of rainfall and rainy days from the collectorate office of Nashik district for the last fifteen years (1998-2020). Physiographical information is collected through ISO's One-inch toposheet maps and climatic data is collected from the various

weather stations mounted in the study region. Spearman's Rank Correlation Coefficient index has been measured for this study.

Explanation:

In this investigation, the researcher has found that Spearman's Rank Correlation coefficient technique is very useful for finding the correlation between rainfall and rainy days. With the help of

the following formula, the result has been calculated. $p = 1 - \frac{6\sum d^2}{n(n^2 - 1)} = 0.7125$

Result: There is a positive correlation between rainfall and rainy days.

Impact of Drought:

The study region is presently faced with several problems of which being common to the rest of Maharashtra as well as the country. The problem may be considered in two broad groups. The first one is the physical difficulties arising from study regions peculiar natural environment setting and the second is the social problem stemming from the cultural background of the people. Study regions are in the rain shadow zone of Maharashtra state. Ajantha mountain range spread over to the north-easterly direction of the study region. This is the water divider of the region.

The eastern part of this region is hilly and so soil erosion is the removal of soil from its original location, specifically; soil erosion is a process of detachment and transportation of soil materials by erosion agents like water and wind. The study region has been settled and farmed for so long that soil has been subjected to modification. The deficiency of vegetable cover has an agricultural implication. In many parts, the lack of forest cover has reduced the infiltration of moisture leading to increased run-off to soil erosion.

Recommendation

The majority of people in the study region are mainly dependent on agriculture. The economic development of the study area is mainly based on agriculture. Drought will be a permanent natural hazard in this region. There should be a need of applying new techniques of water harvesting and knowledge of biotechnology.

1. Applying new methods of irrigation is very useful for the better development of agriculture in the study area i.e. sprinkler, perforated pipe, drip irrigation, etc.
2. The most important thing is to increase the area of forest.
3. Agro-based processing industries should be started on a cooperative basis in this area.
4. The proper planning of watershed management is needed to study the area. Here is highly the importance of water conservation.
5. Plant protection measure is implemented in the irrigated area little progress has been made in adopting improved agricultural implements, in the study area.
6. An increase in the gross cropped area can be achieved by a reduction of fallows cultivable waste and by increasing multiple cropping.
7. In addition to the development of water resources, a large amount of rural infrastructure will have to be created to the extent of the geographic impact of agricultural modernization.

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The Effect Of Awareness On Environmental Education For Students In The Present Scenario

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Abstract-

Living life with nature using all the means and Don't misuse his resources. There is a wonderfully close relationship between man and nature. Whatever nature is around us and the man-made environment, all together form its environment, that is, trees and plants grow in the soil, the land on which we live, the water we drink. The air in which we breathe, the things we eat, we quench our hunger. All these things make up our environment. The impact of the environment is most on the population, the direct effect of the environment us on the way of life. When a particular environmental factor causes a particular situation and this particular situation effects human life. If instead of exhausting human wealth, mineral, coal, wind energy, water energy should be used more and more, then it can play an important role in creating the balance of the environment can make an impact by giving importance to the awareness of environmental education for the students.

Keywords- Present scinario, student, environmental education, awareness.

Introduction-

The interaction between man and his environment occurs from time to time, keeps on spreading from place to place. Environmental education is one of the most important aspects of environmental management. It mainly concerns itself with various aspects of environment and ecology. This issue has been discussed at the United Nations Conference on the Human Environment in Stockholm in 1972, after several national and international seminars, workshops and conferences on environmental education. The National Seminar organized by the Indian Environmental Society in collaboration with the International Programme on Environment Management at the Indian National Academy of Science, New Delhi in 1979, emphasized the inclusion of Gandhian thought and values as a part of environmental education. The main objective of environmental education is that individual and social groups should acquire awareness and knowledge, develop skills and abilities and participate in solving real life environmental problems our environment around us. There is a whole environment, such as water, air, trees, plants, soil and other elements of nature, animal etc. When the components of the environment do not harmonize with each other, ecological imbalance occurs. Human and animal life can be imagines only when the environment is balanced. Due to the distortion of the environment and its deterioration, there are imbalance and effects in human life and in the world, such as air, water pollution, deafness accidents and children in pregnancy etc. on human beings. Therefore, in the present scenario, there should be an effect of awareness about the environmental education for the students, they should prepare such students who can make the country and themselves prosperous in all respects by the means available in the natural environment of the country.

Environment in the present Scenario –

Present means from the present time. scenario refers to the donor or scenario that is the present scenario means the environment or scenario of the present time, environment in which they are residing at the said place. Whatever nature is around us and the environment created by man. Together they form the environment, the soil in which trees and plants grow and grow, the place on which we live, the water we drink, the air we breath, the things we eat to quench our hunger. Huh. All These make up the environment.

Awareness-

Creating awareness of the awareness problem is called awareness. Through awareness, mental interest is awakened in the human towards different aspects of the problem. Human beings know a problem, event or things to the extent of various dimensions and generate perception and sensitivity

towards it. Environmental awareness leads to the acquisition of environmental knowledge and conclusions. Recognizing the interdependence of environment, and human beings and understanding environmental development. Taking measures to protect the environment Taking Exploit the environmental resources appropriately and with appropriate potential. Do not harm the environment. Achieving a balanced environment, avoiding environmental problems and finding solution to them.

Environmental Education-

Environmental education prepares human beings for life by developing knowledge and values related to environmental problems. Environmental education should be integrated, practical, flexible, action-based, space-based. Human's environment is natural and man-made and beautiful and educative. When the child sees animals and birds, he is attracted towards them. Then acquainting with them is to impart education through the environment. This education is more important than the education given in the classroom. Therefore, through the environment, teaching-learning is provided to human beings in sufficient quantity. According to John Dubey – "All education begins with the participation of the individual in the social consciousness of the species." According to Thomson – "The environment is the teacher and the task of education is to adapt the student to him. It happens that environment education is the education to understand, solve, and overcome its problems by making information about the environment."

Objective Of Study-

The objective of studying the effect of environmental education awareness for students in the present scenario is as follows :-

Development of good citizenship:-The creation of good citizens can be possible only through social studies. That is why this has been considered as the main goal of environmental education.

Land Pollution:- The aim is to make the students aware of the causes and dire effects of the problems of land pollution, so that they do not litter the place, as it complicates the problem of land pollution. than land contamination occurs. In this way, the problems of land pollution can be solved through awareness of environmental education.

Noise pollution:- The purpose of awareness of environmental education is to make the student aware of the dangers of water pollution caused by loud noise vehicles, radio, television etc. It has to be done so that they can absorb the water pollution in their environment and themselves can avoid becoming a participant in this pollution.

Population growth:- The purpose of awareness of environmental education is to make the students aware of the ill effects of the increasing population, because only by stopping this attitude, the environment can be created from contamination. It is necessary to stop the increasing population towards the environment Education.

Environmental Knowledge:- The purpose environmental awareness of environmental education is to provide the students with social and natural cultural environment and to understand the importance. Only by living in this environment, can one become capable of becoming a citizen of the people by making all-round development of his personality.

Social Values and Achievement:- The purpose of awareness of environmental education is to make students aware of social values and help them in achieving social goals. knowledge of the values and goals set by the society is possible only through awareness of environmental education.

Development of world-fraternity and international feelings:- The purpose of awareness of environmental education is to develop world-fraternity and international feelings rising above selfishness in the students The feeling of universal harmony can be developed only by seeing the unity amongst many.

Need to Study-

Awareness of environmental education has been propounded by interpreting and analyzing the elements of the environment. The most invincible element of the environment is the climate, under the climate, it includes heating, rain, moisture and air. The importance of goods is immense for human and animal world. The rise or fall of temperature directly affects them. Non temperature is harmful for life. Temperature is essential for life. Whether it is a plant, animal or other bacterium on the surface or it may be a sea creature. Rain is also believed to have a tremendous effect on life and rain. Rain is very important for human life. Water is life. Drinking water is obtained from rain. Provides food to the flora, rain water for agricultural produce and industries in the climate. Rains is very important for

vegetation and human life. Air is obtained through awareness of environmental education. A person can live without water, but it is not possible to imagine a person's life without water. Air helps in making rain and keeping the environment male. to pucker rain water. Air is important in growing. Water is obtained only from the environment. Water is important for human life, vegetation, agriculture industry. Without water, the economic and cultural development of Man is slow. Due to the increase of carbon dioxide (CO₂) in the atmosphere, the temperature of the Earth's atmosphere has increased above normal by 0.05°C, which is likely to increase continuously. Also the destruction of Ozone (O₃) has also started Filters out ultraviolet rays and we are more exposed to vegetation.

Effects Of Awareness-

Effect of awareness in the present scenario, students awareness of environmental education has an impact on human life. Environment directly effected of human life. The awareness of education becomes complicated in the subject matter. The use of teaching aids helps in increasing the interest of the student to focus his awareness on the subject matter. It gives simple, live and pleasant form to the teaching. Awareness Creates curiosity in the child to know and maintains it To provide special assistance to the students. Consciousness related essays articles have to be disseminated through reports. Environmental education awareness can prove to be important in analyzing and evaluating the forms of pollution and distortions in environmental consciousness. To emphasize the illustration of special places in environmental consciousness. There has not been enough development of environmental awareness among the rural and desolate people. Correct information about environmental education can given through teachers. Which can be solved in the bright people. The emphasis on environmental protection through media and distance education has led to the development of distance education as an alternative to education. Which is a relatively economical alternative system. There is a need to do government and non-government efforts. Television which has emerged as a powerful means of mass communication. Through this, programs should be run for the awakening of environmental consciousness and give more importance to the awareness of the environment in the methods of publicity so that can have an impact on the public psyche.

Conclusion-

Environment in the Present scenario The said student is living in a developed physical, psychological and technical environment. He only has to enter the computer age. It has to be adjusted with the changing environment, physical resources and needs of the modern era. That is why there is a need that our education should be reciprocal and benefiting from the means of the environment. He should prepare such a student who can make the country naturally prosperous. Awareness of environmental education in the present scenario. In order to curb the increasing environmental pollution in the students, it is considered essential to provide environmental education to all.

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Quality Education and Role of Libraries: An Overview

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Abstract:

United Nations Organization announced 17 goals to achieve for sustainable development in the world. These are introduced in the year 2015. These goals supposed to be achieved by all the countries across the world. “Quality Education” is the one of the goal and which is necessary for every nation to develop in social, cultural and economic sectors. New Education Policy of India - 2020, is also explaining the importance of quality education. Libraries are the back bone of every educational and research organisations. What is the role of Libraries in this scenario and what are the challenges suppose to be faced by the libraries to achieve the UNSGD’s before 2030.

Key words: UNSDG’s, Digital Libraries, Technology, Networks, e-Resources, Education

Introduction:

United Nations introduced 17 Sustainable Development Goals in the year 2015 to achieve these goals by the year of 2030. It is mainly focusing on under developed and developing countries. These are for every individuals of the world.

UNSD Goals: 1. No Poverty: According to United Nations, more than 700 million people or 10% of the world population were still living in extreme poverty. The majority of people’s daily income is \$1.90 in sub-Saharan Africa. In the rural areas the poverty rate is 17.2%. We have to overcome this problem by giving Quality education and good opportunities.

Zero Hunger: 8.9 % of the world population or nearly 690 million people are hungry, by the year 2050; additional 2 billion people will increase to this list. So we have to increase the food products and have to distribute among the poor nations by using Science & Technology.

Good Health and Well-being: In this pandemic situation, world is suffering and facing medical emergency. Many people were lost their lives. Poor countries are waiting for the Covid-19 Vaccine. We have to educate the people and involve the society to join in this vaccination program.

Gender Equality: As per UN World population statics, the gender ratio in the year 2021 is 10.68 males per 100 females. 1 in 5 women and girls between the age groups of 15 – 49 report experiencing physical or sexual violence by an intimate partner within a 12-month period.

Clean Water and Sanitation: 1/3 people do not having the access of safe drinking water. 2/5 people do not have a basic hand-washing facility with soap and water. More than 673 million people still practice open defecation. So we have to create awareness and educate the people.

Affordable and Clean Energy: As population is increasing, we have to provide the clean energy and it supposed to be affordable by the common and poor people. We have to encourage renewable energy, have to focus on this.

Decent work and Economic Growth: Due to Covid-19 pandemic, many people were lost their jobs. It’s like a global recession. Many countries economic growth went down. So in coming future, we have to take essential steps to create a good work space and assured Job income.

Industry, Innovation and Infrastructure: In this present situation, we have to establish many food processing industries, manufacturing industries, IT sectors, Agricultural sector, etc. We have to focus on the innovative ideas for creating the better infrastructure for the development of people and nation.

Reduced Inequalities: Inequality is the major drawback of our society. Everyone is equal before the law, so everyone suppose to get equal opportunities and equal rights.

Sustainable Cities and Communities: Since 2007, the world becoming urbanization. As per a project report 60% of urbanization will be happened by the year 2030. Government supposes to create or encourage well planned cities for the development of people and nation.

Responsible Consumption and Production: As a consumer, we have to think before make use of any products, weather it's available in the market, its productivity, its importance, its quality and its price. Every product supposes to be available in affordable price for everyone.

Climate Action: Global warming is the major upcoming problem supposed to face by human beings across the globe. Paris agreement (2015), aims to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2°C above pre-industrial levels.

Life Below water: As responsible global citizens, we have to taker of aqua animals. The marine biodiversity is critical to the health of people and our planet. Marine protected areas need to be effectively managed for benefit of human beings and for future generation.

Life on Land: Earth is having 1/3 land and rest covered with water and ice. We have to be protect the land, forest, plateaus, tributary, plain areas, coastal areas. Human beings can survival happily on this mother earth.

Peace, Justice and strong institutions: "Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels" is the main aim for this goal.

Partnerships for the goals: It is possible by the strong global partnerships and cooperation with all the countries. So we have to make awareness from local level, regional level, national level and International level.

Quality Education: "Education is not the filling of a pail, but the lighting of a fire" – William Butler Yeats. Education is the most import tool for every nation to development in cultural and socio-economic sector. A Quality education will produce a knowledge society which will lead to developing nations to become developed nations.

New Education Policy of India - 2020, is focusing on the importance of the quality and skill based education. It will create good economy for the nation and also will provide good opportunities to every citizen of the country. India is having a lot of human resources and also young population with this step, India will became developed country.

New Education Policy is encouraging the digital library services. From the school level, every school has to be a Library with minimum resources for giving better services to the students and Teachers. In this pandemic situation, Libraries suppose to expand their services through e-resources.

Role of Libraries: Libraries will play a major role in achievement of quality education. As libraries are providing many type of services to their uses in different level and to different users across the globe. Quality education supposes to be provided from school level so that students will get benefit for their better future. Academic libraries will start their services from school level and it will continue with college and University level. The general Libraries in different levels, National Libraries, State Libraries, District Libraries, Village libraries and Local libraries. Special libraries (meant for a particular purpose) will provide limited subject and in-depth resources of the related subject for their users. ex: DRDL libraries, Army libraries, CSIR libraries, Other research organizations etc.

To achieve quality education, Libraries suppose to provide quality resources both in online and half-line resources for the users in different age groups and in different subjects. If we categorized the resources, it will be e-resources and Physical resources. E-resources, we can make use of information available for the users 24/7* 365 days. Users can access from any location across the globe. E-Resources can access by n- number of users at a time. Right information to right user at right time and right place. For reducing the cost and increasing the quality resources to satisfy the users we have to share the resources by creating consortium among the libraries.

e-Books: Digital format information of a physical book is called as e-Book. We can share it very easily to the users through internet. We can share it to large number of users at any time and any ware in this world.

E-journal: Electronic journals are the serial publications. Nowadays most of journals are available on the internet. There are two type of journals are available in the internet. Few are free journals and some are paid journals that we have to subscribe. The information of the journal is very much useful for the research scholars, faculty members, etc.

News papers: There are many news paper agencies are providing the information across the world. Depending on the language, places coverage - local, national global, etc there many news papers are available.

E-Magazines: There are the regular publications on some particular topics, which are in digital form. There are free and paid magazines are there and providing information to the users.

Online Databases: Online database is an organized collection of information of a particular subject or multidisciplinary subject area. It can be searched and retrieved through online by the users. It can be accessed and managed very easy manner. It may be stored in CD-ROM or DVDs.

Libraries & Web based services: Libraries will play a major role to serve quality education by using e-resources to its users in this digital ear. There are many technological updates in this Library profession. Nowadays, the technology is providing the flexibility to disseminate the quality and accuracy information to the library users.

Internet based Library services: Libraries can maintain its own websites to disseminate the information to its users. In this pandemic situation, it was a wonder full opportunity to provide the information to its user. There are many useful sites, which will be very useful to the users. Libraries can maintain blogs / websites etc, for the benefits of the users.

Digital Libraries: NEP 2020- Every Educational organization supposes to create and maintain digital libraries. Libraries can provide the e-content, images, MP3, MP4 files, CD-ROM, DVDs,.

Cloud Computing: “Cloud computing is the on-demand availability of computer system resources, especially data storage and computing power, without direct active management by the user”. many companies are offering the cloud computing technology. Like:Amazon web services, Google cloud platform, Microsoft Azure, IBM Cloud, VMware, HashiCorp, etc.

Mobile technology: In this pandemic situation, many people were depended on the mobile instrument for their information needs. Even today many Schools/ Colleges are Educational institutions are depending on the mobile for the information or educational purpose. It is affordable and easy to access by the common people.

Challenges: Copy Right issues: Before going to share any e-content, have to verify whether it will come under copy right or not. Otherwise have to face copy right infringement. Cost effective: Libraries are non-profit organization so they cannot purchase all the resources to maintain quality educational resources. Skilled Professionals: There may be lack of skilled professionals. It may be difficult to maintain the e-collection. Lack of Infrastructure: For maintaining e-resources we need systems, all the equipments, proper internet speed, well equipped labs, etc. International standers: For maintaining the MARC standards, IPRs, Information Technology, etc, It may be difficult for every individual libraries.

Conclusion: For providing the quality education, libraries will play a creatural role. Libraries suppose to upgrade their traditional service to skill based service with making use of new technology for the benefit of the users. Every individual library suppose to collaborate with other libraries and it suppose to be in different level. Government suppose to encourage the libraries by providing funds, manpower and infrastructure. Quality education will give solution for many problems which were pointed out in the UNSGDs. So there suppose to be a strategic action plan for providing quality education through library services.

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Our World Towards Unsustainability Due To Natural Resources Is Running-Out: Causes and Consequences Under Global Population

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Abstract:

Our current worldwide population is 7.2 billion and growing. The world population is threatening to rise in the next few decades to 8 or 10 billion. Overpopulation is a major cause of most of the world's problems and issues. Whether it is a question of food shortage, lack of drinking water or energy shortages, every country in the world is affected by it or will be. With a population of 8 to 10 billion, welfare per person on a world scale will drop to that of a poor farmer who can scarcely provide sufficient food for himself and knows nothing of welfare. Thus, we will have to share everything fairly in order to avoid disputes or war. The climate is changing and it matters little whether this can be blamed on human activity or on changes in the solar system. The sea level only has to rise slightly in order to cause a great deal of valuable agricultural land to disappear. At present we seem to think that we can keep ahead of famine with the use of artificial fertilisers, by the inhumane breeding of animals and other survival strategies. Let's do the math, and it is obvious that the result is a negative. Earth's total resources are only good for 2 billion people at the current demand (6). The way we're living, we are already using 2 to 3 times more of the Earth's natural resources than what is sustainable. If we do not act now, we will see the consequences of depletion of natural resources and it's not going to be pretty. A desolate, dry Earth is not a fun place to live. Are we using up more than what is available?

Introduction:

Natural resources are classified into Two Types:

- 1) **Renewable:** Without a well-managed mechanism for consuming renewable resources, we will not be able to bring resources back in the future for future generations to use. Water, plants, livestock, and fresh air are examples of scarce resources. Water, air, sunshine, ground, wood, soil, plants, and animals are examples of renewable resources that can be reclaimed and reformed after use.
- 2) **Non-Renewable:** Non-renewable natural resources are those that cannot be duplicated and are only available in finite amounts on the globe. Minerals, Metals, petroleum, and coal are located under the earth's surface. Both of these items are in short supply and are extremely useful and valuable in everyday life.

Causes of Depletion of Natural Resources:

- 1) **Over-Population:** When the world's population grows at an exponential pace, so does the demand for natural resources.
- 2) **Urbanization:** More cities and towns are springing up to meet the ever-increasing demand for housing and other necessities. Some resources have been exhausted as a result of this.
- 3) **Industrialization:** Several new industries are springing up in both rural and urban areas to create jobs and manufacture consumer goods for everyday use. As a result, our natural resources have been over-exploited.
- 4) **Deforestation:** Deforestation is the degradation of trees on a wide scale. Forest degradation has resulted in a reduction in other natural resources such as soil, water, and wildlife (12).
- 5) **Mining and Quarrying:** Resources have also been exhausted as a result of unscientific mining and quarrying for the production of minerals and ores.
- 6) **Overgrazing:** Soil erosion is exacerbated by overgrazing by cattle in general, and sheep and goats in particular.
- 7) **Intensive Agriculture:** Excessive use of fertilisers and pesticides, as well as cultivating the same crop year after year, decreases soil fertility and leaves the soil sick.
- 8) **Insecticides:** Insecticides and industrial waste products have depleted biodiversity in the forest, rivers, wetlands, dams, and oceans.

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- 9) **Soil Erosion:** is the process of water or wind transporting nutrient-rich topsoil away. This harms both the soil and the plants.

Our top three natural resources are running out and being depleted.

Water:

As the global population grows and water resources shrink, greater numbers will face the challenges of inadequate water accessibility. What will we drink without water?

Only 2.5% of the world's total water volume is fresh water. Of that 2.5%, 70% is frozen.

The depletion of our water resources is more serious than the current oil depletion. There are substitutes for oil but nothing can replace our drinking water.

70% of the available fresh water that remains in use is in agriculture, 20% in industry and only 10% is being used for human consumption.

Consequences of a Global Water Shortage:

In this paper we discuss five consequences of a future with widespread water shortages. According to one recent study, by 2040 there will not be enough water available to meet global demand for both drinking and energy production (3). The shrinking freshwater resources and growing demand will have negative ramifications for billions of people.

- 1) **Increased Global Conflict:** Freshwater resources are often shared by two or more countries which may lead to more international conflicts as freshwater becomes scarcer.
- 2) **Lack of Access to Clean Water:** Without access to clean freshwater, these vulnerable populations are exposed to deadly water-borne illnesses and water gathering can limit educational and economic opportunities. Currently 1.1 billion people in the world lack access to clean freshwater.
- 3) **Food Shortages:** With a global population on pace to reach 9.6 billion by 2050, shrinking water resources will make it difficult for food production to keep up with rising demand. Increased farm water conservation through water saving irrigation techniques is needed to slow the unsustainable withdrawals from groundwater sources.
- 4) **Energy Shortages:** World energy requirements are rapidly increasing with modernization and population growth; however, energy production is one of the world's greatest consumers of freshwater resources. Alternative energy sources like wind and solar energy require far less water to produce but only make up a small fraction of today's energy production (3).
- 5) **Economic Slowdown:** It is difficult to have a thriving economy when fresh water is not easily accessible for industrial, farming, and individual use.

A. Oil:

Nothing can be moved, manufactured, transported, built, planted, mined or harvested without the liquid fuels that we get from petroleum.

Oil reserves are a non-renewable resource. Oil accounts for 40% of all energy we use.

EIA's International Energy Outlook 2013 shows that we have enough oil to last for 25 years.

Efforts are underway to develop cheaper and more sustainable energy such as solar power, wind power and other forms of renewable energy that can replace oil and fossil fuel.

Consequences of Oil Depletion:

- 1) **Less Transportation:** Within the transport sector, road transport is the largest contributor to global warming. Possibly help push the transition to green energy with reduced CO₂ emissions and pollution (11).
- 2) **Smaller Economies:** Economic recessions are often portrayed as short-term events. However, as a substantial body of economic literature shows, the consequences of high unemployment, falling incomes, and reduced economic activity can have lasting consequences.
- 3) **Higher Prices:** Why is everyone so concerned about crude oil prices all of a sudden? That's because the global crude oil prices have been steadily rising over the past few months. For the first time since 2014, the international benchmark for global oil prices crossed the 80 dollar per barrel mark in May 2018 (5).

B. Forests:

Deforestation, which is the loss of wild forest habitats due to human activity, has grown into a global problem as demand for wood climbs. Imagine a world without trees (12).

Half of the world's forest has been cleared. Estimate shows 18 million acres of forests are destroyed each year. Forests are the habitats of millions of species.

Deforestation contributes 12 to 17% of global greenhouse gas emissions annually.

They produce the oxygen we breathe, and absorb greenhouse gases and carbon dioxide.

Consequences of Forest Depletion:

- 1) **Soil Erosion:** It's easy to think of soil as compact and unmoving, but that isn't always accurate. Soil can be surprisingly loose, and it doesn't always stay in the same place. It can be washed away by rain or blown away by wind if it isn't properly anchored. This is especially true of trees, which have roots large enough to anchor large swaths of soil. When humans' clear large forests, soil erosion can become a serious problem (9).
- 2) **Water Cycle Disruption:** The water cycle is the process by which all water on earth is distributed. Water from Earth's oceans as well as from the surface of bodies of fresh water evaporates and condenses into clouds (10). Trees and other plants also extract groundwater and release that water into the atmosphere during photosynthesis. However, when large numbers of trees are cut down, cleared forests, which once had moist, fertile soil and plenty of rain become barren and dry. This kind of change in climate is called desertification.
- 3) **Greenhouse Gas Emissions:** Trees are still living; they function as efficient greenhouse gas filters. The moment they are cut down, the carbon dioxide that was stored in their trunks and leaves is released into the atmosphere, further contributing to the build-up of greenhouse gases. It is estimated that deforestation contributes as much as 30% to global greenhouse gas emissions each year.
- 4) **Biodiversity Losses:** Biodiversity losses affect ecosystems. It is worth noting that biodiversity losses can lead to what some would argue is deforestation's worst consequence of all a loss of natural beauty and wonder. Wild forests are incredible places, filled with all sorts of life. In places like the Amazon, new species are discovered almost every year. This life is beautiful to behold and amazing to learn about, but it can only be protected if people work to put a stop to rampant deforestation.

Conclusion: You Can Make a Big Difference

You can do something, if every person contributed to the conservation of our natural resources and reducing their CO₂ emissions footprint, we can make a difference (11). It may seem like there is nothing you can do as an individual to stop the factors that are depleting our natural resources. Plant a tree wherever you can. Participate in tree conservation projects. Save trees by going paperless or by using only recycled products. Harvest rainwater when you can. You can use it for cleaning or watering your plants. Stop polluting the ocean. Fix leaky faucets and use recycled water for flushing your toilet. Conserve electricity, by turning off all appliances when not in use. Use cycle, walk or use public transportation whenever possible. Reduce CO₂ emissions by buying energy efficient appliances.

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Natural Resources Management And Sustainable Development

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Introduction

In the present era of rapid urbanization, over-population. Industrial growth of around the world, a constant need to shift focus from development to Sustainable Development is necessary. The industrial technological and economic development registered by the humankind during the past 100 years has not proved to be real development in so far as it has created imbalances in the environment. Ozone depletion, global warming, barren lands, lifeless forests, greenhouse effect and toxic atmosphere have threatened the development. No doubt, industrial and infrastructural projects have been key in development in the past, the utility and feasibility of such projects used to be determined only in terms of economic gains, however, with environment and human rights, issues gaining currency, it is considered essential that such projects be formulated, planned and executed in such a way as may ensure the environment and without in any way harming the human rights of the people. The concept of 'Sustainable Development' denotes this new positive approach. Sustainable Development is now held to be an essential condition for securing stable and sustainable world peace, security, and development. Meaning of Sustainable Development: - Sustainable Development stands for sustainability and in represents an approach to development which is concerned with such fundamental human concerns like poverty, environment, equality, democracy, development, and peace.

Aim

The term 'Sustainable Development' was coined by Barbara Ward the founder of the international institute for Environment and Development, who made the point that development and environment protection must be linked. The term 'Sustainable Development' was popularized in 1987 by the World Commission of Environment and Development through the Brundtland Report. The report, which was entitled "Our Common Future", produced the most widely accepted definition of Sustainable Development. "Development that meets the needs of the present without compromising the ability of future generation to meet their own needs." In 1992, the U.N. Conference on Environment and Development (UNCED) In Rio de Janeiro, the Earth Summit, called for sustainable development, "to ensure socially responsible economic generation. In the words of Robert Repetto, 'Sustainable Development is development strategy that manages all natural resources and human resources as well as financial and physical assets for increasing long term wealth and well-being."

Discussion

Sustainable Development is the that process of economic development which aims at maintaining the quality of life for present and future generations without interfere with natural resources, environment, it is the process of development which can be sustained over a long period of time without causing fall in the quality-of-life future generations.

There are implications of Sustainable Development: -

First, the development work undertake by state must be related not only to the present but also to the future. That is, the planners should keep it in their view that today's development does not become a disaster for tomorrow. Second, development work should be total or comprehensive. That is while undertaking development in one direction, other directions must also be considered, for instance, while making new colonies, fertile land should not be used for the purpose. Third, the development work of a state should keep in view its effect on other countries. Thus, no state has the right to make its development at the cost of the interest of other countries. The link between development and peace is also realized. Meeting the basic needs of poor communities holds the promise of eliminating many types of situations which favour the outbreak of violence and wars, not development, but sustainable development alone can contribute to or benefit the process of conflict resolution and to the need to

check and prevent armed conflicts. The 1992 Rio Declaration asserted in its principle 25, that " peace now forms an integral part of the idea of "Sustainable Development. "

Efforts for Attainment of Sustainable Development: -

The champions of development and the defenders of the environment have been battling each other ever since the UN Conference on the Human Environment held in 1972 in Stockholm, launched the ' Sustainable Development' debate. This conference for the first time, articulated the theme of harmony between humankind and nature. Global environment governance systems such as the Un Environment programme (UNEP) were also put in place. In 1987 World Commission on Environment and Development under the Chairmanship of Norway's PM Gro Hiram Brundtland went through the problem related with environment and prospered a "Global Agenda for Change " to overcome the inability of governments and the international community to address these vital global issues and to help them deal effectively with them. In 1992 the Un Conference on Environment and Development (UNCED) held in Rio de Janeiro also called Rio Summit attended by more than a hundred heads of state and thousands of political, technological, scientific & private sector delegates. They discussed them touching on the complex, reciprocal relationship between the environment and the economy. Key areas of concern including massive deforestation, the encroachment of desert zones, acid rain and the damaged ----- is layer of the atmosphere. It also discussed the endemic poverty of the Third world and the excessive consumption of advanced nations. The future agenda for Sustainable Development was clearly defined at the conclusion of the Rio Summit when the assembled leaders signed the Framework Convention on Climate change (FCCC) and the Convention on Biological Diversity (CBD), endorsed the Rio Declaration on Environment and Development and the Forest Principles and adopted Agenda 21, a 300-page for achieving Sustainable Development in the 21st century, The Rio Summit was a watershed in bringing environmental concerns to the mainstream. Since this conference, the concept of "Sustainable Development" has become a part of the Vocabulary of governmental; inter-governmental and non-governmental institutions in practically all languages. As follow-up to Agenda 21 Rio Summit, Commission on Sustainable Development (CSD) was created in December 1992 under the UN Economic and Social Council to ensure the effects implementation of what was agreed upon at Rio. Council to ensure the effects implementation of what was agreed upon at Rio. The five years review of the progress of the Earth/Rio Summit by a special session of the Un General assembly called Earth Summit+5 held in June 1997. It adopted a comprehensive document titled "Programme for the Future Implementation of Agenda 21" prepared by the Commission on Sustainable Development (CSD). It also adopted the programme of work of the Commission for 1998 - 2002. It was decided in the programme that poverty eradication should be an overriding theme of sustainable Development for the coming years. It is one of the fundamental goals of the International Community and of the entire United Nations system, as reflected not only in chapter 3 of Agenda 21 but also in Commitment 2 of the Copenhagen Declaration on Social Development. In 2002, the World summit for Sustainable Development (WSSD) or Rio/Earth+10 was held in Johannesburg from August 26 to September 4, attended by 70,000 participants from over 180 countries, to review the implementation of Agenda 21. Un Secretary-General Kofi Annan brought into focus five priority areas-water and sanitation, energy, health, agriculture and biodiversity and ecosystem management popularly called WEHAB. There was no set convention or agreement to be signed at the World Summit for Sustainable Development, but some vague commitments were made under Type-3 outcome & several plans announced under Type-II initiatives. Evaluation: - Let us evaluate the progress made under Sustainable Development in three fields Economic, Social and Environmental-the three pillars of Sustainable Development. Economic Aspect: - The world has registered tremendous economic development, but development has been inequitable. The most important aspect of economic development has been the breaking down of national barriers, trade, financial and production activities have gone global and was it the power of multinational corporations and multilateral financial institutions has grown multi-fold. This has had a tremendous impact on the poor. The rich-poor gap, across and within countries has grown even wider. For example, nearly 1.2 billion people live on less than a dollar a day; another one billion cannot meet their basic consumption requirements. The share in global income of the world's richest fifth is 74 times that of the poorest fifth. The world's 200 richest people more than doubled their net worth in

the four years ending 2000 to \$163 trillion. The poorest countries have seen their export earnings drop between 2.6% to 5% during each year of the Uruguay Trade Round. They will lose between \$292 billion and \$265 billion in export earnings while paying between \$145 million and \$292 million more to import food. The top fifth of the world's people in the richest countries enjoy 82% of the expanding export trade and 68% of the foreign direct investment, while the bottom fifth only gathers barely 1%. According to a report presented by A Food and Agriculture Organization 25000 people die every day due to hunger and poverty. This is one the world's biggest human tragedies, but it is least taken note of.

Social Aspect: -

The social effect of this kind of economic development have left 840 million people malnourished, while the consumption of the world's richest fifth is 16 times that of the poorest fifth. Over 160 million children are malnourished and over 250 million are working. More than 880 million people lack access to health services and 17 million die each year from curable infectious diseases. Of the 4.4 billion people in the developing countries, heartily 1.5 billion do not have access to clean water, 1 billion lack adequate housing and 2.6 billion lack access to basic sanitation. Nearly tow billion lace access to Commercial energy. The per capital vault ability of water in India has dropped form 5000 cubic meters a year in 1947 to less than 2000 cubic meters in 2002. It is expected to drop further to below 1500 cubic meters by 2025. On an average a rural woman walks 14000 Km a year just to fetch water. Their urban sisters are only slightly better off they do not work such distances but stand in long winding queues for hours on and to collect water from the roadside taps or the water lorries.

Environmental Aspect :-

In the environment5al sphere, carbon emissions globally have increased by over 9% since Rio, in the Us it increased by 18% Forested area has contracted at the rate of 2.2% every year since 1992, and the decline in coral reefs rose from 10% in 1992 to 27% in 2000, Species loss, estimated to be over 100 times since the pre-industrial era, has led biologists to describe the contemporary period as an age of mass extinction, the first such in 65 million years. Nearly 2 billion, a third of the World's population lack access to modern energy sources. Fossil fuels-coal, oil, and gas major source of pollution, blamed for global warming Accounting 80% of the total global energy consumption. The nuclear energy account for about 7%. The United States of America has been responsible for 36.1% Greenhouse gas. Its leads to more storms, floods, and rising ocean levels. To Check the Greenhouse gas effect Kyoto Protocol was singed but US backed out of the accord saying it would cost the Us economy \$ 400 billion and 4.9 billion jobs. Analysing what has been accomplished over the past 30 years and particularly after Rio Summit we find little evidence of a massive shift in attitudes and actions on the part of all major players upon which the realization of a sustainable development process Depends. The U N General Secretary Kofi Annan expressed dissatisfaction on the backtracking of the developed nations. He identified four broad areas where " gaps in implementation were particularly visible: A fragmented approach towards Sustainable Development. Policies and programmes at both national and international levels do not reflect the inextricable connections between economic, social, and environmental objectives. No discernible changes in the unsustainable consumption and production patterns, which are putting the natural life-support system at peril. Lack of mutually coherent polices or approaches in the areas of finance, trade, investment, technology, and Sustainable development, particularly in the context of globalising word. The financial resources required for implementing Agenda 21 have not been forthcoming and mechanism for transfer of technology have note improved.

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Distribution of Foundry Industry in Kolhapur

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Abstract:

Kolhapur foundry cluster is one of important and well established cluster in India. The present investigation mainly deals with distribution of foundry industry in Kolhapur to understand the current scenario of overall development. It consisting more than 300 foundry units, provides automotive castings requirement for local industries like oil engines manufacturing sectors, sugar mills, and machine tools industries. The foundry industry is spread across eight major industrial estates in Kolhapur. These include: Kolhapur city (15 units), Shirol MIDC (95 units), Gokul Shirgaon MIDC (90 units), Kagal 5-star MIDC (14 units), Ichalkaranji industrial estate (12 units), Jaisingpur industrial area (06 units), Laxmi industrial area (07 units), Hatkanagale industrial area (11 units) and Others (50 units) etc. It was observed maximum numbers of foundries are located in Shirol MIDC followed by Gokul Shirgaon MIDC as compared to other locations of Kolhapur foundry cluster.

Keywords: Foundry Industry, Kolhapur

Introduction:

The Indian Foundry Industry is the second rank in casting producer in the world [1]. The foundry industry is a major feeder to various other sectors, plays the role of a 'mother' industry in India. The growth of foundry industry is vital for comprehensive growth of engineering sectors and overall growth of Indian Economy. Exports and imports of castings have been growing consistently in India, with export value being much higher than imports. In India, foundry units are concentrated in region to form clusters. The major foundry clusters present in India are Batala and Jalandhar (Punjab), Kolhapur (Maharashtra), Ahmedabad and Rajkot (Gujarat), Belgaum (Karnataka), Howrah (West Bengal) and Coimbatore (Tamil Nadu) [3]. During period of "Globalization", Government of India promote industrial growth through different schemes. Therefore, the Government of India selected "Kolhapur Foundry and Engineering Cluster" to provide the benefits of these scheme [4]. As a result Kolhapur foundry cluster is well established and grown consistently. It is distributed in eight industrial estates of Kolhapur district [5]. The present investigation mainly deals with study of distribution of foundries in Kolhapur to understand overall development and different economic aspects.

Methodology for research:

The present study is based on secondary data drawn from published literatures from the annual reports, monthly magazines, and websites of concerned foundry industries and the associations of foundries of Kolhapur region. The collected data has tabulated and graphed to suit the analytical purposes.

History and Evolution of Foundry Industry in Kolhapur:-

Economy of Kolhapur district is mainly based on agriculture and agribusiness, due to fertile soil and irrigation through 14 rivers. Kolhapur is emerged as sugarcane cultivar belt in Maharashtra [6]. Farmers started to use oil engines and improved methods with new appliances for cultivation practices. The foundry industry started to complete the needs of agriculture and jiggy manufacturing during early nineteenth century. That time the skilled craftsmen were engaged in repairing and replacement of the damaged parts of machinery brought from England. Later on, these craftsmen started preparation of castings and installed domestic oil engine in Kolhapur. This was the first evidence of starting foundry industry in Kolhapur. During the Second World War (1939), blockage of import of machinery from England takes place. This condition enhanced the demand of agriculture machinery and oil engines in Kolhapur. Therefore, skilled craftsmen and mistries were started to

manufacture spare parts of imported machinery and agricultural implements. Thus growth of local engineering industries were emerged and established in Kolhapur also. The Oil engines manufacturing were the main industrial activity at that time in Kolhapur. For promotional industrial activities, the Shivaji

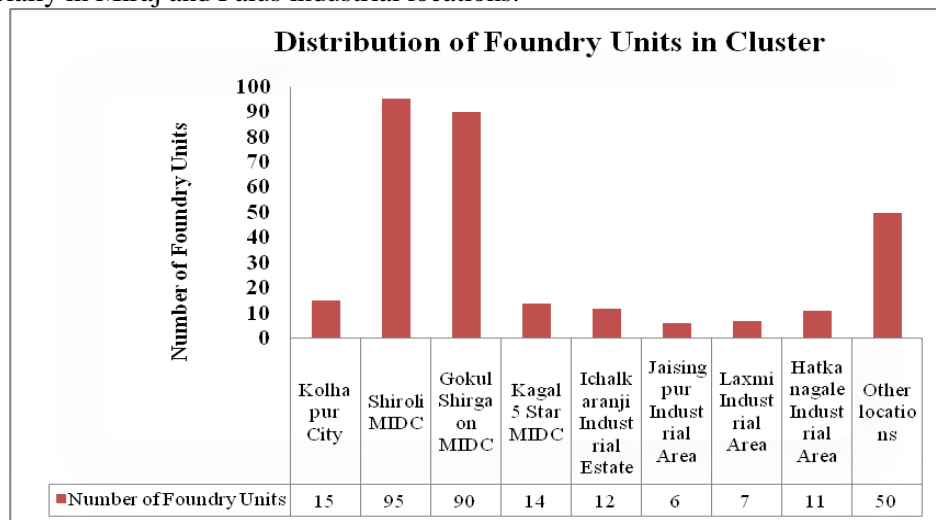
Udyamnagar was firstly distributed land for industry establishment. Simultaneously, the Kolhapur Engineering Association also distributed the land plots for industries. The industrial development of Kolhapur was started on co-operative basis. During 1940 to 1950, the several entrepreneurs were established and ensure rapid growth of Kolhapur Foundry industry. Now-a-days Kolhapur has established foundry cluster famous for good quality casting manufacturing in India[5].

Kolhapur Foundry Cluster:

Kolhapur foundry cluster is one of important cluster in India consisting more than 300 foundry units. It provides castings for automotive sectors of industries like oil engines manufacturing, sugar mills, and machine tools industries present locally and abroad. The foundries present in Kolhapur are different from each other in many aspects. However, the majority of foundries are small to medium size in range but many are belonging to class of jobbing foundries. On the basis of total investment in foundry plant infrastructure and their machinery, The Ministry of MSME classified the foundries into small, medium, and large sized foundry units. The small foundry units have 1,000 tonnes annual production, medium units have 1,001 tonnes to 10,000 tonnes annual production and large units have more than 10,000 tonnes annual production [5]. The foundry cluster of Kolhapur composed approximately 30 units of Small foundries (10%), 75 units of Medium foundries (25%) while 195 units of Large foundries (65%). Cluster showed maximum number of largest units of foundries in Kolhapur districts

Distribution of Units in Clusters:

The foundry industry in the Kolhapur district is distributed in eight major industrial estates. These include: Kolhapur city (15 units), Shirol MIDC (95 units), Gokul Shirgaon MIDC (90 units), Kagal 5-star MIDC (14 units), Ichalkaranji industrial estate (12 units), Jaisingpur industrial area (06 units), Laxmi industrial area (07 units), Hatkanagale industrial area (11 units) and Others (50 units) etc. It was observed maximum number of foundries in Shirol MIDC followed by Gokul Shirgaon MIDC as compared to other locations of Kolhapur foundry cluster. Sangli district also showed 20-25 foundry units especially in Miraj and Palus industrial locations.



Source:- IIF Kolhapur Chapter

Fig. 1: Distribution of Foundry Units in Cluster

Discussion:

The distribution of foundries in Kolhapur cluster is not uniform. The distribution of any industry is depend upon availability of raw material, available land, water, labour, power, transport and market. The distribution of Kolhapur foundry cluster is mainly along the National Highway no. 4 (NH 4) which connecting the major cities of India through road transportation. The raw material like Pig iron procured from Goa while ferrous alloy are from Karnataka. Some of the base metal is obtained locally from Western ghat and Konkan. The Kolhapur is nearest place for procuring raw materials from Konkan, Karnataka and Goa. The land availability was made through schemes of Govt. of India and water and power made available for establishment of foundry industry and other allied

industry in Kolhapur. The climatic conditions are favorable to enhance efficiency and working capacity of workers in industry. The other industrial sectors are also well established in Kolhapur. These industries requirements get completed by foundry industry. The cheap and skilled labours are available from nearby locality. The labours are trained by many institutes located in Kolhapur. The many favourable constraints are supporting the growth of foundry industry, therefore the foundry industry is well grown in Kolhapur. There is uneven distribution of foundry in Kolhapur in eight industrial estates. The Shirol MIDC and Gokul Shirgaon MIDC has highest number of foundries. This is because the land availability and exemption of entry tax from Municipal Corporation. The leading foundries on the basis of total casting production are Shriram foundry, Menon and Menon, Casprometal, Ghatge Patil group of industries, Yash Metallica, Mantri Metallica, Saroj Iron, Sound Casting, Marvellous metals, Jadhav Industries etc.

Conclusion:

The foundry cluster in Kolhapur is well established and grown constantly. The distribution of foundry units in Kolhapur is not uniform. Maximum foundries are located in Shirol MIDC followed by Gokul Shirgaon MIDC industrial estate. Government should give support through required schemes and subsidies for spatial growth and development of foundry industry in Kolhapur.

Acknowledgements:

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**Asymbiotic Seed Germination and Regeneration Response of
Spathoglottis plicata Blume through in vitro Seed Culture**

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Abstract

In vitro seed germination and effect of MS medium supplemented with different cytokinins (equimolar concentration), auxin constant and Coconut water (CW) on the germination, growth and development of orchid seeds with globular embryo from unopened pods has been described using capsule sections and free seeds in *Spathoglottis plicata*. Four types of media regimes were used using MS as basal medium supplemented with auxin [0.5µM NAA] and coconut water [15% v/v] as constant for all four compositions containing equimolar concentration of cytokinins [1µM Zn, ADS, BAP and Kn]. Seed germination was observed, protocorms formed were frequently transferred to fresh medium for regeneration of plantlets.

Key words: *Spathoglottis plicata*, Protocorms, Asymbiotic germination, MS medium, Mycorrhiza.

Introduction

It has been observed that fungi are important for the development, growth and germination of orchid seeds. Orchids live in symbiotic relationship with fungi, from the moment of germination. Symbiosis is the association of two organisms, to their mutual benefit. The symbiotic relationship between fungus and root is known as a mycorrhiza which literally means fungus root. The hyphae penetrate the protocorms and roots of the plants and digested possibly making nutrients and other material available to the orchids. The most important fungi that have symbiotic relationship with the orchids are from the genus *Rhizoctonia*. It was thought that orchids could only germinate in vivo in the presence of fungus. It was supposed that germinating and juvenile orchids were heterotrophic and were reliant on the fungi for the supply of materials; the main reason for this assumption was the small amount of reserve food in orchid seeds.

Orchid seeds are very small, only 1-2mm long and 0.5mm wide. They are produced in large number, the seeds consists thickened testa [seed coat] enclosing an embryo of about 100 cells. Most of the orchid seeds are hardly differentiated at all. There are no cotyledons, no roots and no endosperm. At the distal end of the embryo, there is potential growing point which at this stage is not recognizable. Cells of embryo have simple structure and poorly differentiated. When seeds are planted on nutrient media under in vitro conditions, not only percentage of germination is increased to 100% in some cases but it also takes less time for differentiation of seeds both biochemically and morphologically. A major advancement in germination of orchid seeds was the development of green pod culture. This technique reduces the time gap between pollination and seed sowing besides enhances germination frequency. In 1922 Knudson showed that seeds of *Cattleya*, *Epidendrum*, *Laelia* and many other orchids were able to germinate asymbiotically in vitro. Most orchids are sown in vitro because of following reasons: 1. Orchid seeds are very small and contain very little or no food reserves. Their small size makes it very likely that they can be lost if sown in vivo, and the limited food reserves also make survival unlikely. Germination is much more successful in vitro. 2. As the germination and more importantly the further development of the seedling is dependent on a symbiotic relationship with a fungus in nature, then in principle, a fungus should also be present *in vivo*; this is referred to as symbiotic germination. It is possible in vitro to be independent of the fungus by substituting its action with a nutrient medium; this is known as a symbiotic germination. 3. If limited number of seeds is obtained as a result of a particular cross, then by choosing particular nutrient medium all of these can be germinated in vitro. 4. Sowing in vitro makes it possible to germinate immature orchid embryos; this leading to the shortening of breeding cycle. 5. Germination and development takes place much quicker in vitro, since there is conditioned environment, and no competition with fungi and bacteria. Orchids from unripe as well as unopened capsules are able to develop and germinate *in vitro* [Valmayor and Sagawa, 1967], since 1. It is far

easier to sterilize a closed capsule, than individual seeds after they have come out. 2. Early propagation of still green capsule is exhausting to the plant. 3. There is less chance of embryo absorption with crosses between species and cultivar, which are not closely related. 4. Sowing immature seeds shortens the breeding cycle; the seeds can sometimes be sown 2-3 months early without having to wait for the capsules to ripen and burst open naturally. 5. To sterilize individual seeds is more likely lead to damage.

Materials and Methods

Plant material: *Spathoglottis plicata* Blume.

Family: Orchidaceae

Explant: Capsule sections (thickness 3 mm) with entire wall and seeds with placenta.

Procedure:

Mature explants were taken from maintained plant material from Botanical garden, Department of Botany, University of Pune. Capsules of *Spathoglottis plicata* in the size range 1-4 cm were harvested, these capsules were surface sterilized (washed with twin 20 treated with 0.1% HgCl₂ for 7 min. and washed thrice with sterile distilled water).

1)	MS	0.5µM NAA*	Control	15% CW*, v/v
2)	MS	0.5µM NAA	1µM Zn (zeatin)	15% CW, v/v
3)	MS	0.5µM NAA	1µM ADS (adenine sulphate)	15% CW, v/v
4)	MS	0.5µM NAA	1µM BAP (benzyl amino purine)	15% CW, v/v
5)	MS	0.5µM NAA	1µM Kn (Kinetin)	15% CW, v/v

*NAA-α Naphthalene acetic acid, CW-Coconut water, MS- Murashige & Sckog basal medium.

Sections of capsules with entire wall as well as free seeds were inoculated on the same media compositions. Inoculation was followed by incubation at 25±2°C. The culture tubes were daily exposed to light of intensity 2000 lux and with photoperiod of 8hrs/16 hrs dark. Observations were periodically recorded. Protocorms developed were transferred in liquid medium of same composition for further proliferation.

Discussion

According to Rao (1964) and Mitra (1971) germination of orchids is as follows-1. The embryo imbibes water via testa and becomes swollen. 2. The epidermal layer becomes distinct during germination, the cell at micropylar end of embryo shows variation in size, arrangement and contents. 3. An increase in cell number and size results in the formation of protocorm like bodies. 4. The organization of promeristem may be in the apical region of embryo or may develop laterally. 5. At the region of promeristem, a small notch appears at the inception of shoot apex. 6. The next stage of development is formation of leaf primordia. 7. The rhizoid develops endogenously from either middle or basal portion of protocorm after the formation of new leaves. 8. As soon as embryo differentiation begins (Shoot meristem on one side and rhizoid on opposite side) there is period of profuse growth. 9. In presence of light protocorms become green and at the same time more leaves are produced. 10. It takes 2-3 months for the protocorms to form 2-3 green small leaves.

Observations and Results

Table 1) Germination and protocorm formation immature to mature capsules (green pods)

No.	Capsule size [cm]	Results
1.	1-2	Least protocorm formation
2.	2-3	Moderate protocorm formation
3.	3-4	Highest protocorm formation & early initiation.

Table 2) Germination response of *spathoglottis plicata* seeds combinations of media with equimolar concentration of different cytokinins.

Medium	Germination	Protocorm formation	Remarks
MS + 0.5µM NAA+1µM	18 days	4 weeks	Very good response, vigorous

Zn+15% CW, v/v			protocorm formation, deep green vegetative apex developed within approx 30days
MS + 0.5µM NAA+1µM ADS +15% CW, v/v	18-20 days	4-5 weeks	Good response, moderate protocorm formation, deep green vegetative apex developed within 30-35 days.
MS + 0.5µM NAA+1µM BAP +15% CW, v/v	20-25 days	6-8 weeks	Less response, moderate protocorm formation, light green vegetative apex developed within 48-5 days.
MS + 0.5µM NAA+1µM Kn +15% CW, v/v	20-25 days	6-8 weeks	Less response, moderate protocorm formation, light green vegetative apex developed within 48-50 days.

Table 3) Results obtained from culture of capsule size 3.7 cm (Explant- TS with entire wall 3 mm thick)

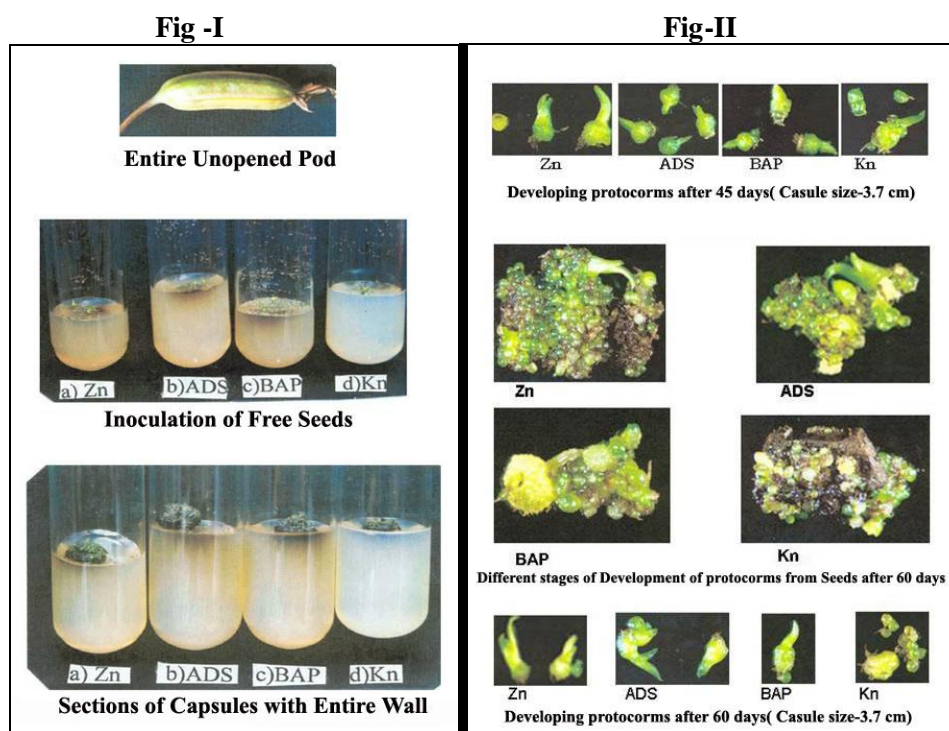
No.	Medium	Observation of growth of protocorms			
		1- 15 days	15- 30 days	30- 45 days	45- 60 days
1.	MS + 0.5µM NAA+1µM Zn+15% CW, v/v	No germination and medium turns brown due to pigmentation	Protocorm formation after 18 days & frequency of germination is very high	Swollen protocorms were seen and appearance of leaf like structures	Appearance of prominent leaves and rhizoid
2.	MS + 0.5µM NAA+1µM ADS +15% CW, v/v	No germination and medium turns brown due to pigmentation	Protocorm formation after 18-20 days & frequency of germination is very high	Swollen protocorms were seen and appearance of leaf like structures	Appearance of prominent leaves and rhizoid
3.	MS + 0.5µM NAA+1µM BAP +15% CW, v/v	No germination & very less pigmentation	Protocorm formation after 20-25 days & frequency of germination is moderate	Only swollen structures comparatively light green	Appearance of leaf like structures very less in number.
4.	MS + 0.5µM NAA+1µM Kn +15% CW, v/v	No germination & very less pigmentation	Protocorm formation after 20-25 days & frequency of germination is moderate	Only swollen structures comparatively light green	Appearance of leaf like structures very less in number.

Summary and Conclusion

Capsule sized 2.0cm, 2.5cm, 3.0cm and 3.5cm showed similar results but in size 3.7 early initiation of development of protocorms was observed (table 1). Maximum protocorm formation was seen in MS+NAA+Zn and MS+NAA+ADS as compare to medium containing MS+NAA+BAP and MS+ NAA+ Kn.(table 3).The onset and frequency of germination of seeds varies with equimolar concentration of different cytokinins supplied with MS+0.1ppm NAA+15%CW (table 2&3).When MS medium was supplemented with CW and cytokinin without auxin, poor protocorm formation was observed but after addition of auxin the germination was seen to be increased.Dependent up on the

action of different growth regulators (cytokinins) in the medium seed germination and protocorm formation behaved differently. When the explants were inoculated on medium supplemented with Zn and ADS (separately) germination frequency was found to be more as compared to BAP and Kn but pigmentation was more so frequent transfer are needed to overcome pigmentation. Taking everything into account, medium MS+ NAA+ Zn+ CW and MS+NAA+ADS+CW are suitable for the asymbiotic seed culture of *Spathoglottis plicata*. Seeds along with wall including placenta of capsule are to be used to get more germination frequency. Placentae will not proliferate but only seed embryos will grow and develop.

Figures and Illustrations



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Level of agriculture Performance in Bhandara district Maharashtra State

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Abstract:

Agriculture has always occupied an important role in Indian economy. The proportion of cultivation land per man has been decrease to a considerable extent during the recent past. The increase in crop production is a must in India since the areal spread of cropland has almost reached to its saturation limit. It need, therefore, to improve the agricultural productivity. Agricultural productivity is a measure of overall performance of a region, which is quite useful in planning the development programmes in rural areas. In the irrigated areas are these areas with assured water supply. Various machineries have contributed largely to enhance the agricultural production. The term of agricultural performance takes into consideration both the cropland occupancy and productivity of crop. In the present paper an attempt has been made to bring out the levels of agricultural performance in Bhandara district in Maharashtra state. The spatial variations in the level of agricultural performance are influenced by physio-socio-economic environment of the district.

The present research paper to study the impact physio-socio-economic environment on level of agriculture performance in Bhandara district secondary data has been used. The agriculture productivity defined as the level of existing performance of a unit of land which differentiates from one and another. Crop yield percentage of Grass cropped area and selected crops cultivated area. The agricultural performance of the study area is calculating of high, moderate and low levels of agricultural performance indicating with the help of maps. The present research paper is examined the impact of physio-socio-economic environment on level of agricultural performance in Bhandara district.

Keywords: Agricultural performance, Agricultural productivity, Agricultural technology.

Introduction:

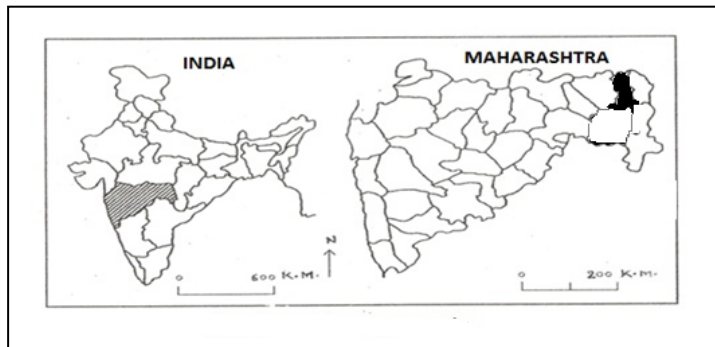
Agricultural productivity is a function of various factors like physical, social and economic, technical and organizational. The level of agricultural productivity as a concept means the degree to which the economic, cultural, technical and Organizational variables are able to exploit the biotic resources of the area for agricultural production (Singh J. 1984) The agricultural productivity is also defined as the level of existing performance of the unit of land which differentiate come one are to another. (Muhammad Ali, 1979). The differential partly by soil types, climate and farming techniques. Agricultural productivity is a dynamic in its spatiotemporal perspectives. The development of irrigation facilities, mechanization, Use of party fertilizers and high yielding varieties seeds adoption of other components a new technology leads to variation in agriculture efficient per unit of time and space. (Ajagekar B.A. 1988) Bing and interdisciplinary study, many scholars from different fields like economic agriculture have involved different methods to measure the agriculture productivity. The ranking Co- efficient of principal crops for a unit of area was used in analyzing and estimating the agriculture efficiency by Kendall (1939). This method was further applied by stamp 1952 for measuring the agriculture efficiency in India. Shafi 1960 in India did a similar work on Uttar Pradesh.

Objectives:

In the present study an attempts has been made to examine the spatial pattern of agricultural performance and to identify regional variations in the level of agricultural performance.

Study Area:

The Bhandara district lies between the north latitudes of 20°39 'and 21°38' and east longitudes of 79°27' and 80°42'. It is surrounded by Madya Pradesh State in the North, Gondia district in the east, Nagpur district in the west and Chandrapur and Gadchiroli district in the south. The district occupies 3717 sq. km. area and the total population 12.03 lakh which 80.52 % is rural and 19.48 % urban population. The district has made 07 tahsils and density of population is 294 persons per sq. km. (2011 census)



Database and methodology:

The present research paper is based on secondary data sources of data mainly collected from Socio- economic handbook and census in Bhandara district. Impact of agricultural technology on agricultural performance has also been attempted by overlapping the map of the levels of technology on the map showing the level of agricultural performance at tehsil level. This kind of relationship gives idea of the factors responsible for the emergence of certain level of performance, finally considering other Socio-economic aspects. The level of agricultural development has been examine which could be useful are painig too. The tehsil wise late indicates by employing statistical procedure discuss Jasbir Singh (1990) method. In order to assess agriculture performance Jasbir Singh method of weightage composite level of agriculture performance has been employed. The technique take into consideration both the cropland occupancy and productivity of crops for ascertain the level of agricultural performance which have been calculated from each tehsil based on the following formula-

$$V_w = \frac{Y_{ae}}{Y_{ar}} \times \frac{P_{ae}}{P_{ar}} + \frac{Y_{ba}}{Y_{br}} \times \frac{P_{be}}{P_{br}} + \frac{Y_{ce}}{Y_{cr}} \times \frac{P_{ce}}{P_{cr}} + \dots N = \frac{\sum LQs}{N}$$

Were,

V_w - Denotes weighted composite index of regional inequality in agriculture performance.

Y- Means crop yield of crop 'a' in kilograms per hectare.

P- Implies crop land occupancy of crop 'a' in percentage of gross crop area.

a, b and c - subscripts denote crops considered.

e and r- subscripts denotes the tehsils and district respectively.

N- Is a number of crops holding more than 5% of the total cropped area.

LQs - Mean's location quotient.

In the present study Rice, wheat, Tour, Chana and Moong are selected crops they have occupied cultivated area significantly. The sum off location quotient was divided by the number of crops considered in the tahsil and multiplied by 100 to obtain the weighted composite index for the level of agriculture performance. Thus, the formula is given bellow:

$$\text{Weighted composite level of agriculture performance} = \frac{\sum LQs}{N} \times 100$$

Regional pattern of the level of agricultural performance:

The index value in kilogram per hector giving the level of agriculture performance for each tehsils the level of agriculture performance the rate during the district; which are given below-

I) High-level of agricultural performance:

High-level performance region includes four two tehsils like Sakoli, Lakhandur in Bhandara district. These tahsils has characterise by assured supply of water mainly from Canal irrigation, tube wells, Gosikhurd Dam, dominance of Rice, wheat, Tour, Chana cultivation In two tahsils and after all closed network of village level cooperatives. As a result this tahsils possesses high level agricultural performance. In this tahsils farming is generally carried out scientifically and with commercial attitude recording highest agricultural performance.

II) Moderate level of agricultural performance:

This region includes fourth tehsils like Lakhni, Mohadi, Tumsar and Pauni in the district. This is the sales has development of Canal irrigation, mainly from Chandpur, Bagheda, and Bodhali Dam, wells and ponds , tube -wells , lift-irrigation why when Ganga and Chulband river. Besides, in this part of the district foundation Agro-based industries like rice mills are also playing vital role for promoting and introducing the agriculture technology. The farmers are well aware about new farming technology leading to moderate level of performance in this region.

III) Low level of agricultural performance:

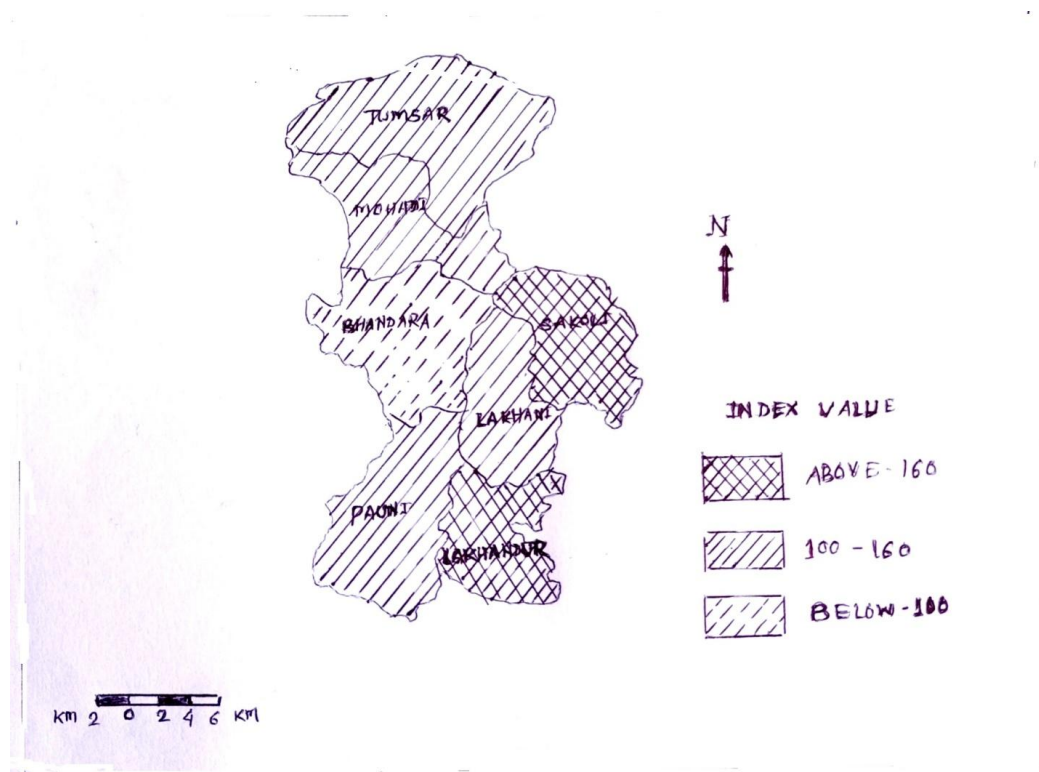
Low level performance reason includes only one tehsil like Bhandara in the district. The tahsil having variability of rainfall, in adequate water supply and low level of agricultural technology below hundred percent have led low productivity of land. This region more Urbanization and ordinance factory, the valuable agricultural land convert green belt to yellow belt area and industrial zone. Due to the industrialization and Urbanization which are the factors possessing poor performance of agricultural in the region.

Table -1: Regional Patterns of Agricultural Performance in Bhandara district.

Regions	Index Value	Tahsils
High-level of agricultural performance	Above 160	Sakoli, Lakhandur
Moderate level of agricultural performance	100-160	Lakhni, Mohadi, Tumsar and Pauni
Low level of agricultural performance	Below-100	Bhandara

Source: Compiled by Author

Figure-2: Agricultural Performance in Bhandara district: 2011



Concluding remarks:

Rajendrakumar K. Dange

Agricultural technology plays a vital role in enhancing the crop yield. The indices on Map show spatial variations of agricultural performance. The Sakoli, Lakhandur tahsils has assured supply of water, dominance Rice, wheat, Tour, Chana and Moong cultivation. The farming is carried out scientifically and commercial attitude leading to high level i. e. 210 %. The south and north part of district has development of Irrigation by goes through the dam come on foundation for Agro Based industries leading moderate level of agricultural performance. The middle part of the district development of Urbanization and ordinance factory valuable land covered in this industrial zone due to this reason low agricultural performance in this area.

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Self-Efficacy of Rural Women through Employment

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Abstract

Self-efficacy is a person's judgment about his or her ability to perform a particular activity. He found a positive relationship between self-efficacy beliefs and academic performance. Sources for increasing self-efficacy include past performances, the vicarious experiences of observing models who are like yourself, verbal persuasion, and physiological clues. Rural women form the backbone of the agricultural labor force across much of the developing world. According to the 2009 ILO Global Employment Trends for Women report, globally, more than a third of the female workforce is engaged in agriculture. The main specific objective of the study is to analyze the economic condition of rural women, to study of the working pattern of rural women, to search out the earning problem of the rural women, to assess the desire of rural women for earning source. 175 samples of kurkheda village have been selected for the study. Majority of the women respondents belong to the age group of 41-50 years. Most of the women respondents belongs to antoday economic condition. Majority of the rural women are working as laborer. The most of the women were facing family problems. Majority of the women respondents have strong desire to earn for their family. Happiness is one of the key elements to be self-satisfied. To lead a happy and healthy life self-satisfaction plays a key and vital role in the life of women.

Keywords: Rural women, Employment.

Introduction:

Self-efficacy is defined as an individual's judgment of capabilities to accomplish tasks based on previous life experiences. The main concepts related to self-efficacy are internal empowerment and self-trust. In other word, self-efficacy is the degree to which a person believes that he can accomplishment requirements in specific task. United Nations' International Day of Rural Women celebrates and honours the role of rural women on October 15 each year. It recognizes rural women's importance in enhancing agricultural and rural development worldwide. Cites that the main hindrances to socio-economic development in rural women are illiteracy, poverty, lack of employment opportunities, resistance to change and lack of infrastructural facilities. The most visible impact of teaching rural women some skills and getting them employed in paid work is the rise in household income and a relative sense of financial independence. Financial independence also boosts self esteem and confidence of these women. The rural women already have many problems which affected women because, at their age level and living condition, their education level is not possible to change. Hence by looking into the condition of the women we considered the working pattern, earning problems she faced and her desire for it because these can also help women integrate into society. Employment is essential for living, to fulfill the basic needs of the family and to have a good prestige in the society. It is truly probable that female's employment plays an important role in shaping women empowerment because of the collective efforts of women with favorable institutional support may promote the process of empowerment. The relationship between female labor force participation and decision making has long been of interest in contemporary developmental context and of population policy interest in India.

Objectives:

1. To analyze the economic condition of rural women.
2. To study of the working pattern of rural women.
3. To search out the earning problem of the rural women.
4. To assess the desire of rural women for earning source.

Hypothesis Of The Study:

1. The economic condition of rural women found to be low, if it is, it is by a chance.

2. The working pattern of rural women found to be low, if it is, it is by a chance.
3. The earning problem of the rural women found to be more, if it is, it is by a chance.
4. The desire of the rural women for earning source is more, if it is, it is by a chance.

Research Methodology:

Kurkheda Panchayat Samitee of Gadchiroli was selected in which kurkheda village was chosen for the study. 175 samples were selected using the Lahiri method of simple random sampling. The survey method was used to collect data by the interview method.

Result And Discussions:**Table No. 1 Age level of the rural women**

Sr.no	Age	No. of Respondent	Percentages
1	18- 30 years	14	08%
2	31- 40 years	63	36%
3	41-50 years	98	56%
Total		175	100%

The above data presented in the table shows that 56% of rural women's age belongs to 40-50 years whereas 36% women respondents come under the age group of 31-40 years and negligible percentage i.e. 8% of rural women belongs to 18-30 years respectively.

Table No.2 Economic condition of rural women

Sr.no	Condition	No. of Respondent	Percentages
1	APL	17	10%
2	BPL	62	35%
3	Antoday	96	55%
Total		175	100%

The data presented in the table indicated that 10% rural women having APL Condition. 35% rural women having BPL economic condition and 55% rural women having Antoday economic condition.

Table No. 3 Working pattern of the respondent

Sr. No.	Working pattern	No. of respondents	Percentage
1	House wife	70	40%
2	Business	17	10%
3	Govt. employment	4	2%
4	Labor	84	48%
Total		175	100%

The data presented in the above table indicates that 40% of the respondents are house wife and 48% of respondents are having labor work whereas 10% having business and 2% of respondents are Govt. employees respectively.

Table No. 4 Earning problem of the rural women

Sr. No	Problems	No. of Respondents	Percentages
1	Personal	44	25%
2	Economical	17	10%
3	Family	114	65%
Total		175	100%

The above data presented in the table indicate that so many rural women having capacity to get the earning but some of the special problem they 10% of rural women having economic problem and there for they have not earns 70% rural women's have family problem and 20% of rural women having personal problem so there for they have not earns.

Table No. 5 Desire for earning of the respondent

Sr. No.	Desire for Earning	No. of respondents	Percentages
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1	Strong desire for earning	149	85%
2	Nodesire for earning	26	15%
Total		175	100%

The data presented in above table shows that 85% rural women having strong desire to have better earning and 15% rural women are not at all interested to do some work for earning because of many reasons.

Conclusion:

Rural women form the backbone of the agricultural labor force across much of the developing world. Rural women in India are less literate than rural men. There is a negative attitude of the family towards the girl child. Most of the women respondents belongs to antoday economic condition. Majority of the rural women are housewife. The most of the women were facing family problems. Majority of the women respondents have strong desire to earn for their family so that they have satisfied life. Only you know what truly will make you happy. Never let other people to rule your life. Take your own path without fear of judgment even if you are not sure whether the path is right or wrong. When you are suspicious about something its quite natural you seek advice from your friends and relatives, but it's ultimately your decision whether you take that advice or follow your own ideas. Every individual has just one life to live with, so just remember and live your life how want to live it with full satisfaction.

Suggestion:

1. To help to the rural women to upgrade the economic status of rural women.
2. To develop the employment to the rural women as per their capacity.
3. To develop the rural women by various media to raise the standard of living.
4. The training institution should be provided for the education and employment to rural women so that they can have a satisfied and healthy life.
5. Government should take necessary steps to provide loans for rural women at cheaper rate.
6. Government should make the facility from formal sources of credit.

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Legal Aid in India: Issues and Challenges

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“Without equal access to law, the system not only robs the poor of their only protection, but it places in the hands of their oppressors the most powerful and the ruthless weapon ever created.”

- Reginald Heber Smith, Justice & Poor, 1919

Abstract.

The world changes so rapidly that one is not able to judge what is happening around him. It is like a nature that every second we are on this earth something new is going to be experienced by us. Every time evolution happens, something it is noticed by us and sometime it is not. But there is always a moment when you realize that something is changing around and you are also a part of that change. This change could be of any nature sometimes very important for the society as a whole or sometime to a person as an individual. Legal Aid is also such an evolution which affects in both an individual capacity as well as the society. For an individual it is like an impregnable thing which is needed at every time when he is taking some step whether it is a step that he used to take everybody, but as saying goes, “what may happen you never know”, the aid could be asked or needed that to special preference to legal aid.

Keywords: Legal Aid

This research purely based on secondary data collection method and researches try his best for justifying current research topic, "There are hell lots of skills to master out there in the world."

What is legal aid?

In laymen language it is a legal assistance to the person whenever he is in the trouble and that to also in the legal perspective. This is because nowadays every act of yours is included in the legislations of the state whether how to walk, what to speak and even where you move. And for this purpose to keep oneself within the coordinates of the predefined legislations one needs legal aid. It could be either charged or uncharged. But if it is charged for then, it will not be included in the parameters of word “Aid”, so for this reason it should be uncharged. Now according to legal personnel, Legal aid denotes legal assistance to the poor persons free of cost in any judicial proceedings before the court or tribunal. It is provided to those poor persons who are not in a position to enforce their legal rights or involved by others in court cases.

“Jus in bello: to protect and assist the victims of injustice”

Also the important features of legal aid is that it should for the people who are in real of it that is, one who are not able afford it due to several reasons like that of the poverty, lack of awareness, time consuming i.e., delay in access to justice.

“.....to prevent the strong from oppressing the weak”

Thus, from the very outset, the rationale behind Legal Aid is the supposition that in every society there are individuals who are unable to participate in the Legal System. Therefore, it is of prime importance for the system of justice and for the society as a whole to provide such individuals voluntary services of advocates. In the beginning, legal services was not provided on humanitarian grounds as a grant of legal services from advocates to poor clients who they met by chance.

In a country like India with 200 billion population, only 75% literate that is could either read or write (approx. according to Census 2011), with the 118 rank in Human index, with such a high corruption rate and where with every second or two scam or scandal or crime taking place it is very difficult to

imagine the judicial system and its accessibility. And indeed it leaves a question mark about the existence of legal aid.

Every society has got some loopholes, some are definite to be pointed out and others are needed to be pulled out. But the concern or issue is that which society accepts the defect and tries to work for its improvement or solution. There is no sense in boasting qualities or defectiveness but one should know about the real situation so that the work could be done for its improvement.

Legal aid – a movement

As tracking back the existence the first legal aid, it first took place in United States of America. In the United States, an organized Legal Aid Movement for the poor began in 1876 with the establishment of an organization for providing legal assistance for the then recently arrived immigrants¹ by the German Society of the New York. Then Legal Aid was a diffused movement till 1919, when Reginald Heber Smith, an advocate with the Boston Legal Aid Society, published a work- 'Justice and the Poor'- which gave way to some outstanding new ideas. The important idea was that there was a 'collective social responsibility' on the Bar to provide opportunities for the unrepresented masses to secure access to the justice system and it was indeed a crucial development in Public Interest Law. Then came an organized form of Legal Aid in which there was an 'independent private office' – separate from any commercial law firm- with salaried lawyers working full-time on the problems of clients. This organization was, however, critical to the development of Public Interest Law. It was a new kind of institution that moved away from the concept of individual service performed on a voluntary contribution basis. It was a model that had been followed because of its effectiveness. Under this model, those running the organization, the advocates did not have to treat Public Interest service as an uneconomic enterprise, in contrast with an otherwise lucrative commercial practice. It was indeed a radical beginning. However, Legal Aid was too big an objective for charity to support. But, surely, the Legal Aid Movement accomplished a great deal.

Legal Aid in India

The meaning and objects of the Legal Aid has been clearly explained by Justice P.N. Bhagwati. According to him, legal aid means providing an arrangement in the society so that the machinery of administration of justice becomes easily accessible and is not out of reach of those who have to resort to it for enforcement of rights given to them by law. Poor and the illiterate should be able to approach the courts and their ignorance and poverty should not be an impediment in the way of their obtaining justice from the courts. The rule of law plays an important role in administration of the country. In India the rule of law is regarded as a part of the basic structure of the Constitution and also of natural justice.³ Free legal aid has been held to be necessary adjunct of the rule of law. The Supreme Court in *Hussainara Khatoon's* case,⁴ which was decided as far back as 9th March, 1979, held that the right to free legal services is clearly as essential ingredient of reasonable, Fair and just procedure for a person accused of an offence and it must be held implicit in the guarantee of Article 21 of the constitution and the State is under a constitutional mandate to provide lawyer to an accused person if the circumstances of the case and the needs of justice so require, provide of course the accused person does not object to the provision of such lawyer. In *Khatri v. State of Bihar*⁵ the Supreme Court after quoting *Hussainara's* case observed that it is unfortunate that though this court declared the right to legal aid as a fundamental right an accused person by a process of judicial construction of Article 21, most of the states in the country have not taken note of this decision and provided free legal services to a person accused of an offence. It further observed that it regrets in regard of the decision of the highest court of the land by many of the States despite the constitutional declaration in Article 141 of the constitution that the law declared by this court shall be binding throughout the territory of India. India has also many committees for the purpose of development of the concept of Legal Aid. India formed its first committee on 'Legal Aid and Advice' 1949 under the chairmanship of Justice N.H. Bhagwati following the Rushcliffe Committee of England which set up free legal aid for the benefit of the poor and needy during the Second World War through its 'Legal Aid and Advice Act 1949'. However it was only after 1952 that the Government of India undertook systematic measures to counter the inadequacies of the system. Several Nyay Panchayats were established to bring justice to the needy and deprived. Reports of N.H. Bhagwati Committee (1949), Trevor Harries

Committee on Legal Aid and Legal Advice, 14th Report by the first Law Commission (1958) came up but could not be implemented due to inability to acquire and allocate funds. Similar was the fate and outcome of the 1960 Union Government and the Third All India Lawyer's Conference (1962), National Conference on Legal Aid and Legal Advice (1971). Some progress in this direction was made with the incorporation of Article 39(A) through the 42nd Amendment Act, 1976, based on the recommendations of the Expert Committee on Legal Aid, 1973, on "Procedural Justice to the People" under Justice V.R. Krishna Iyer. The Amendment added Directive Principles of State Policy which prescribed that:

"The State shall secure that the operation of the legal system promotes justice on a basis of equal opportunity, and shall in particular, provide free legal aid, by suitable legislation or schemes or in any other way, to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities."

For the purpose of effective delivery of legal aid Indian government has passed the legislation Legal Services Authority Act, 1995. The act gives many recommendations for the development of legal aid movement in India.

Area where legal aid needed

1. Over tapping of resources
2. Economic divides of class and region
3. High environmental pollution
4. Legal counseling
5. Lawsuit agent service
6. Penal defense
7. Non-lawsuit agent service
8. Long pending decisions
9. Poor person who is unaware of his legal rights

Legal Aid services have developed in the last decade and have been almost merged into the mainstream judiciary so as to help and maintain judicial justice in an evolving society.

Providing Legal aid is an obligation incumbent upon the government in any society under the rule of law. Given the enormous legal ignorance in society, high cost, uncertainties during the long time gap to delivering a judgment and rampant corruption in judiciary, the greatest guarantee for justice to the poor is in refining the procedures of access to justice framework. In India, the provision of legal aid has been written into the Constitution as a State obligation. The year 1987 proved to be very significant in the Legal Aid history of India, as the "Legal Services Authorities Act" was enacted by the Parliament to give a statutory base to legal Aid programs throughout the country and bring about a uniform pattern.

Setup of legal Aid organs in India

The legal aid organs in India are located in the building of the courts led by the sitting (also include retired) senior judge. They are composed of judges and staff lawyers. In accordance with The Legal Services Authorities Bill, India has set up legal aid authorities at four levels including nation, state, region and Taluk. The legal aid authorities build the Court's Legal Services committee at different levels. The function of legal aid organs is to provide legal services to people in accordance with the regulations and conduct preventive and strategic legal aid campaign etc. India's legal aid organs pay all the expenses of lawsuit when providing legal aid. In India, every court's Legal Services Committee employs full time legal aid lawyers who can provide direct Legal Aid to the parties. There are some legal aid cases which are handled by private lawyers and paralegals.

Legal Aid can be divided into two categories: one category embraces seven groups as follows:

1. Members of SC/ST
2. Victims of trafficking in human beings or beggars as referred to in Article 23 of

Constitution

1. Women and children
2. Mentally ill or otherwise disabled persons

3. Persons under circumstances of undeserved want such as being a victim of a mass disaster, ethnic violence, caste violence, caste atrocity, flood, drought, earthquake or industrial disaster
4. Industrial workmen
5. Persons in custody

The other category embraces people with economic difficulty, namely persons with an annual income less than rupees nine thousand (\$225) or such other higher amount as maybe prescribed by the State Government if the case is before a court other than Supreme court and less than rupees 12000 or such other higher amount as may be prescribed by the Central Government if the case is before the Supreme Court. In accordance with this Act the number of people eligible for legal aid could be around 75% of the population.

Accessibility of Legal Aid to Poor

“Perhaps- and it is only a perhaps- there was once some justification for restricting access to the courts to prevent their being bogged down in a morass of ineffectuality. But today’s better-informed, better-educated, more literate and more politically-aware citizens should certainly not be barred from the courts by tradition. The law can no longer be a close shop.⁸ The process of transformation of non-beings into human-beings and what it involved is eloquently described in the beautiful lines of Rabindranath Tagore:

*“Into the mouths of these dumb, pale and weak, We have to infuse the language of the soul,
Into the hearts of these weary and worn, dry and forlorn, We have to minstrel the language of
humanity.”*

Poverty and lack of access to justice are intrinsically connected. Poverty, which creates a vicious circle of disempowerment,⁹ is not merely an indicator of economic deprivation but also an indicator of the social, political and above all legal deprivation of people. Poverty disables people to approach the formal legal system for assertion of their rights and for seeking remedial action in cases of violation of legal rights. Poverty compounds obstacles to access to justice-ignorance of the legal provisions and one’s rights, procedural technicalities, lacking awareness about the complexities of the legal system, very little or no access to legal services

fany kind, along with lack of resources to manage the high cost of litigation are some of the consequences of poverty.¹⁰ Mauro Cappelletti referred it to what he called the problem of “legal poverty” and considered it as one of the most important obstacles to access to justice.¹¹ Access to justice is not a clearly defined phrase. It covers a wide variety of matters including accessibility to court, adequate legal representation, availability of legal aid, legal advice and legal education (Parker 1999:3). All these approaches are merely facilitative in nature. However it should rather refer to a system which is not only equally accessible to all but also leads to results that are individually and socially just. Therefore mechanisms that merely pave the way for approaching the justice delivery systems and are devoid of consequent substantive justice are merely empty formalities. The *raison d’etre* of the legal Institutions¹⁴ is to secure legal justice for all on an equal basis. Legal justice here implies deciding cases and imparting judgments in courts under the auspices of law and Constitution wherein like cases are treated alike. It rests upon the three notions, namely, rule of law, legal equality, and accessibility to the institutions of law (Parker 1999) and relies heavily on the idea of supremacy of law and of legal institutions. However, the idea of legal justice stops at this juncture. It seems to be satisfied with the prevalence of norms that guarantee equal rights and liberty through the various mechanisms and institutions designed for the purpose. It fails to realize that mere existence of law and legal institutions is not a sufficient condition. The requirements of the freedom and justice have been so demanding and complicated, and the procedures of the courts so slow and expensive, that only the people with appropriate means and resources at their disposal are able to take advantage of these arrangements. Thus, much more is required to enable the legal machinery to realize the goal of equal justice to all and the protection of the weak and the underprivileged sections of the society.

Suggestions

For the purpose of making the Legal Aid as an effective tool following more could be done or have been done:

1. Strengthening the Role of NGO’s.

2. Setting up the International body for the better regulation like in case of International Humanitarian Law, International Committee of the Red Cross (ICRC) has been set upped.
3. Preventing people from the abuses which they are subjected to while aware of their rights.
4. Laying down the principles for restoring and preserving the contacts between the digressed family members due to social abuses which theyface.
5. Helping in restoring the contact between the detainees and theirfamilies.

Conclusion

India has done quite well in setting up the mechanisms which could help in efficient dispensation of legal aid by introducing the concept of PIL (Public Interest Litigation), Nyay Adalat, Lok Adalat etc. But like in every action something misses every time, the legal aid also misses many things. And it should be accolade for this. Firstly it is limited to very small universe of people, means to say that its scope should be increased to the section of society like General category of people. This is because people from this category also people are socially and economically poor. Secondly, there should be setting up of International body for this area which could regulate the affairs regarding legalaid. And thirdly, the role and scope of NGO's should be increased. They should be motivated to enter into this area of law where they can help the general public because in present time they are most near to the common people.

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Interdisciplinarity in Education and Sustainable Development

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This paper aims to present the effectiveness of interdisciplinary study to achieve sustainable Development Goals. The paper also focuses on New Education Policy 2020 of Government of India. This daily seeks to refine the association between sustainability and interdisciplinarity as an input to furthering certificate and ritual towards sustainability oriented interdisciplinarity in beliefs and education in advanced edification. Paper also focuses on the role of teachers in education for sustainable development.

Meaning of Interdisciplinarity

Interdisciplinarity is a term that is used to designate the collaboration between disciplines. The term discipline is adapted from the Latin word disciplina, meaning “a branch of instruction or education; a department of learning or knowledge”. Although the term "discipline" has been used as a type of knowledge transfer for teaching and learning since the early Middle Ages, the idea and practice of interdisciplinary knowledge exchange has been in use since the mid-1920s.

Sustainable Development

Sustainable development is an organizing principle for meeting human development goals while simultaneously sustaining the ability of natural systems to provide the natural resources and ecosystem services on which the economy and society depend.

Need of Interdisciplinarity in Education

This type of study allows the student to learn by making connections between ideas and concepts across different disciplinary boundaries. Students learning in this way are able to apply the knowledge gained in one discipline to another different discipline as a way to deepen the learning experience. Studying topics thematically is one way to bring ideas together resulting in more meaningful learning. This can occur by allowing students to choose their own subjects and their learning is deepened when they reflect on the connections between what they are learning in different disciplines. One of the chief barriers to achieving right interdisciplinary lessons in instruction environments is the essential for collaboration of educators. This preserve is hard to achieve, but not impossible.

Benefits of Interdisciplinary Study

Making connections between different concepts is essential in interdisciplinary study. Benefits of studying in this way are Students are highly motivated as they have a vested interest in pursuing topics that are interesting to them. As a result, the content is often rooted in life experiences, giving an authentic purpose for the learning and connecting it to a real world context. Consequently, the learning becomes meaningful, purposeful and deeper resulting in learning experiences that stay with the student for a lifetime. Students cover topics in more depth because they are considering the many and varied perspectives from which a topic can be explored. Critical thinking skills are used and developed as students look across disciplinary boundaries to consider other viewpoints and also begin to compare and contrast concepts across subject areas. Students begin to consolidate learning by synthesising ideas from many perspectives and consider an alternative way of acquiring knowledge. Exploring topics across a range of subject boundaries motivates students to pursue new knowledge in

different subject areas. Transferable skills of critical thinking, synthesis and research are developed and are applicable to future learning experiences. Interdisciplinary knowledge and application of different disciplines can lead to greater creativity. Worthwhile topics of research can fall in the 'spaces' between the traditional disciplines.

Interdisciplinary, Sustainable Development and New Education Policy, 2020 (India)

Government of India declared that New Education Policy proposes the revision and revamping of all aspects of the education structure, including its regulation and governance, to create a new system that is aligned with the aspirational goals of 21st-century education, including SDG4, while building upon India's traditions and value systems. "The UN has declared the decade of 2020-2030 as the 'decade for action'. However, it is also starting as the decade of resilience as the world is shaken up by the pandemic. In an unprecedented move, the government has decided to make a bold and transformative statement with the release of the New Education Policy. Purpose of New Education Policy is to provide students as well as teachers a strong platform for all round personality development programmes from pre-primary level to Higher Education. All languages in India, and their associated arts and culture will be documented via a web-based platform/portal/wiki, in order to preserve endangered and all Indian languages and their associated rich local arts and culture. According to New Education Policy 2020, students enrolled in each of the ten schools – law, business, international relations, liberal arts, architecture, journalism, public policy, banking, environment or psychology – take up foundational interdisciplinary courses within their schools, and also study cross-listed electives across the board. They also participate in interdisciplinary research alongside their peers and mentors. Faculty from diverse backgrounds and disciplines also come together to prepare interdisciplinary courses, which further enriches the value of interdisciplinarity throughout the institutional culture. The policy brings major changes in the areas of early childhood care and education wherein the pre-schooling years are in focus now. Attaining Foundational literacy and numeracy is also well considered in the policy which is well packaged with reforms in school curricula and pedagogy. The policy considered well the social determinants of education and suggests significant reforms towards Multilingualism and the power of language. India has been quite rigid in its higher education structure but with the NEP, multiple exit points have been provided which would benefit students in signaling their education status better as well as their employment readiness which will help India utilize its demographic dividend. The following are the areas where the policy reforms intersect with the Sustainable Development Goals, SDG 4 on Quality Education along with the indicators:

- # Equal access to quality pre-primary education.
- # Equal Access to Affordable Technical and Vocational Education
- # Increase the number of people with relevant skills for financial success
- # Eliminate Discrimination in Education
- # Universal literacy and numeracy

The National Education Policy 2020 is expected to play an important role in the creation of a new India. As the first educational policy of the 21st century, it replaces the 34-year National Education Policy of 1986.

Teacher's contribution for Sustainable Development

The role of teacher is very important in nation making. They play a crucial role in forming, changing and establishing attitudes and values. A teacher is the friend, philosopher and guide of the students. Importance of sustained Development and environmental Education must be taught. Teachers should make connections with faculty from other departments, industry, and the community,

informally talk with them, learn what they do, and draw connections to your teaching. Invite guest speakers to give a presentation. Guest speakers can provide a way for teachers and their students to learn about topics outside the teacher's expertise and speakers from the community or industry can serve as a model for how what students are learning in class is applicable to their life and the importance of building a culture of collaboration to solve problems. A teacher can partner with faculty from other departments to develop projects that incorporate aspects from different disciplines. Make use of pedagogies that lend themselves to interdisciplinary teaching such as service learning, teaching with the local environment/campus, teaching systems thinking and teaching with real world examples. Students should learn about and receive general information about the sustainable development goals. They also learn about global issues relating to their daily lives. For example, students gain knowledge about pollution, then the teacher should discuss with them the perfect measures taken by the community. Students can create posters to raise awareness about the hazards of Pollution. The linked course/curriculum approach involves cohorts of students taking multiple coordinated courses being taught during the same semester or in sequence by different instructors who may be from different departments. This is a topical or thematic approach, where one key topic or theme is integrated into different courses and disciplines, or an individual faculty member draws information from across disciplines to address a key theme. Teachers also need knowledge about ESD, to map challenges together, find suitable learning materials for their students, and realise the philosophy of 'no one left behind', Inoue stressed. To support teachers, a core group of other teachers promote ESD, implement peer learning, and modify teaching practices.

Conclusion

Interdisciplinary study allows students a deeper understanding of ideas than disciplinary study. It develops critical thinking, creativity and develops perspective across a wide range of topics. To achieve the goal of sustainable development there is a need to acquaint teacher educators with the latest techniques, methods and innovations of education. NEP 2020 also gave more emphasis on meaningful, approachable learning for all. The need of skill development is being emphasized with renewed vigour in recent times by Government policy makers based on the embedded rationale that an educated and appropriately skilled workforce is instrumental in increasing national productivity. To achieve sustainable development in the future, universities need to instill interdisciplinary skills for sustainable development.

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Effectiveness of Flipped Classroom Learning On Problem Solving Ability of the Students of Sixth Standard

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Abstract:

Researcher is teaching at college of education and very much interested in experimenting the new teaching techniques and methods. Researcher has selected the flipped classroom learning and its effectiveness on problem solving ability English grammar of sixth standard students of English medium school of Nashik city. Researcher has focused on 1 point of English grammar such as parts of speech of sixth standard. Researcher identified the problems of students in English grammar of sixth standard using one questionnaire. Then researcher checked the effectiveness of flipped classroom learning.

Introduction

Grammar is called the backbone of any language. It is said that English language is very easy language for learning but at the same time it very complicated also. There are many aspects of English grammar which are just avoided by teachers in their teaching plan. This is the general observation when researcher came across the English teachers and school students. Researcher did the discussions with the school teachers and students regarding the teaching and learning of English grammar in schools. Researcher came to know the scope of research in English grammar and teaching strategies applied by school teachers. For this research paper Researcher has selected one topic of English grammar i.e. parts of speech. Can a teacher use flipped classroom strategy for teaching and learning of parts of speech to 6th std. students of English medium school.

Statement of the Problem

A Study of Effectiveness of Flipped Classroom Learning for Teaching English Grammar on Problem Solving Ability of Sixth Standard English Medium Students in the Nashik City.

Significance of Research

Most of the work on Flipped Classroom Learning has been done in United States of America and Hong Kong for Engineering and Mathematics. In India also it is need of time to use Flipped Classroom Learning from Standard Fifth onwards.

Objectives of the study

1. To assess the existing status of teaching English Grammar – **parts of speech** in English Medium schools in Nashik City.
2. To assess the effect of existing status of English Grammar- **parts of speech** on Problem Solving Ability of the Sixth Standard Students in Nashik City.

Assumptions

1. Students have difficulties while learning English Grammar. (Researcher often talked with students of Sixth standard regarding it)
2. Flipped Classroom Learning facilitates English Grammar learning. (Researcher uses Flipped Classroom Learning in his college to teach English language education)
3. Flipped Classroom Learning facilitates Problem Solving Ability in English Grammar learning. (Researcher has observed it while using Flipped Classroom Learning for teaching English language education and grammar)

Hypothesis of the Study

Research Hypothesis

1. The Package based on Flipped Classroom Learning for Sixth Standard Students enhances Problem Solving Ability in English Grammar.

Null Hypothesis

1. There is no significant difference between pre-test and post-test mean scores of problem solving ability of Experimental group.
2. There is no significant difference between post-test mean scores of problem solving ability of experimental group and controlled group.
3. There is no significant difference between pre-test and post-test mean scores of Problem Solving Ability of male and female in Experimental group.

Definitions of key terms:**Conceptual definition****1. Flipped Classroom**

A flipped classroom is an instructional learning and a type of blended learning that reverses the traditional learning environment by delivering instructional content, often online, outside of the classroom. It moves activities, including those that may have traditionally been considered homework, into the classroom. (Bergmann, J. y Sams, A. 2012)

2. Problem Solving Ability

“The systematic process by which a problem and its best possible solutions are identified and implemented.”(Chopra,R.,2009)

3. Effectiveness

The ability to be successful and produce the intended results. (www.dictionary.cambridge.org)

Effectiveness: It is the indicator to evaluate the standardized achievement criteria test of secondary school students for teaching Science including Biotechnology and Biodiversity topics for grade IX. By two strategies i.e. traditional system and Self Instructional computer assisted program (SICAP).

Operational Definition**1. Package based on Flipped Classroom Learning**

Package based on the teaching learning using flipped classroom learning refers to the activities planned by the researcher based on flipped classroom learning

2. Problem Solving Ability

Score obtained by students in the Problem Solving Ability test.

3. Effectiveness

The present study it refers to the significant difference between the scores on the pre-test, post-test Problem Solving Ability test obtained by the students.

Scope, limitation and delimitation**Scope**

1. This study relates with all the English Medium both male and female students studying English Grammar in Sixth Standard in Nasik city.
2. This study is concerned to all the students and teachers in the SSC Board schools of English Medium in Nashik City.
3. This study is related to constructivist teaching technique of Flipped Classroom Learning.

Limitation

1. Findings are based on the response of the respondent.
2. Extraneous uncontrolled variables can impact on effectiveness of package.

Delimitation of the study

1. The present study is delimited to the SSC Board school curriculum.
2. The study is delimited to English Medium schools in Nasik City.
3. The study is delimited to the subject English of Sixth Standard.
4. The study is delimited to the selected topics of Grammar in English language - **parts of speech** at Sixth Standard of SSC board.
5. The survey includes response of only those teachers who teach English to the students of Sixth Standard in SSC board schools.
6. Researcher considers Flipped Classroom Learning as a constructivist approach.

Review of Related Literature

Review of related literature will give the guideline to the researcher. Due to it researcher will get the right direction. In review of related literature researcher will be helped by the research paper, books on research, online material such as website and journals.

Abubaker Kashada, (2017), Adoption of Flipped Classroom in K-12 Education in developing Countries: Challenges and Obstacles, Beijing University, Beijing, China.

Related research is experimental study conducted under following objectives and findings.

Objectives:

1. To find the effect of Flipped Classroom on Students' performance and attitude.
2. To study the challenges of use of Flipped Classroom in developed countries.
3. To suggest the possible solution to the challenges in use of Flipped Classroom Learning.

Finding:

1. All activities have positive impact on students' learning.
2. It makes complex exercise easy and interesting.

2. Bryce F. Hantla, (2017), Flipped Classrooms in the Humanities: Findings from a Quasi-Experimental Study, Liberty University, CPE Christian Perspective in Education Volume 10 Issue 1 winter 2017, The College of Biblical Studies.

Objectives:

1. To assess the implication for teaching in higher education.
2. To study the classroom environment in humanities classes.
3. To examine personalization, innovation and student cohesion.

Findings:

In general, the results of this research indicate that the Flipped Classroom environment for the humanities student better matched with their preferred classroom environment, as recorded in the pretest version of this assessment.

Research Methodology**Research Method**

Researcher will use **mix and multiple** methodologies for this study. In present research effectiveness of package of flipped classroom learning will be verified so that researcher has selected the **Experimental research**.

Present research is **quantitative and qualitative research**.

It is proposed that the study will be carried out in one English Medium school in Nashik city. Applying the **random sampling** researcher will select one school. Researcher will contact the Principal of the school to explain the purpose of the study and the help needed from the school, and to seek their permission for the students to participate in the study. The constraints of time and resources do not permit the researcher to select more than one school, negotiations with other schools will cease when one school will be selected and agree to participate in the study. It is proposed to select Sixth Standard English Medium Students applying the random stratified sampling the students who have scored above 75% in sixth standard such 60 students will be the sampling for this research study.

Population and Sampling**Population**

All SSC board English medium Sixth Standard students of Nashik City are the population of the research.

Sampling

Researcher will use **random sampling** for selecting one school. And for selection of two groups (Experimental and controlled) **stratified sampling** will be used. If there are 1000 students, sample will be 10% and further those 10% students will be divided in to two equal groups, one will be experimental group and another will be controlled group. Population and sample will be depended on actual number of students.

Variables

Independent Variable - Package based on Flipped Classroom Learning

Dependent Variable - Scores obtained by students in Problem Solving Ability Test

Controlled Variable

1. **Age of the students** is the major controlled variable.
2. There is **Test** such as Problem Solving Ability Test.
3. In English medium school coeducation is available so both **Genders** male and female are controlled variable.
4. Each **School Environment** is different for conducting a research project.
5. Researcher has selected the particular **Topics** for this research work.
6. There are **Equated groups** in this research work.

Research Tools

1. Questionnaire
2. Problem Solving Ability test
3. Feedback Sheet
4. Observation Sheet
5. Researcher's reflection

Statistical Tools - Mean, Median mode standard deviation, 'T' test

Data Collection and Analysis

Researcher collected the data from the selected school, teachers and students.

Analysis of the data has been done with the selected research tools.

Result

Researcher has come to know from the data analysis that Flipped Classroom Learning is very effective for the problem solving ability.

Finding

Researcher applied 't' test for analysis of the marks. Researcher has found the difference between the mean score of pre test and post test based on parts of speech given to the students of 6th standard. It is found in the statistical tools such as mean, median, mode and standard deviation; there is difference in the scores of controlled and experimental group.

Conclusion

In short, researcher has got the conclusion that flipped classroom strategy is very effective for teaching and learning of English grammar for school students especially for the students of 6th std. in English medium schools. Students of 6th standard can identify the problems and also can solve the problem in English grammar especially in parts of speech. Further, researcher is recommending the flipped classroom strategy for teaching and learning of other school subjects as well. Hence the null hypothesis failed to be accepted.

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Urbanization in Nandurbar District (MS)

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Introduction:

Urbanization has been regarded as an index of the level of socio-economic development of a country; hence, the study of urbanization assumes importance in the population studies. The degree of urbanization in an area is a fair index of level of its socio-economic development. It is in this context that the population geographers have their concentration in the study of urbanization (Chandana, 2001). Considering all aspects of urbanization Riessman interprets urbanization as the whole process of change and its consequences, when a society gets transformed from an agrarian economy to an industrial economy and from a small homogeneous society to a large heterogeneous mass (Riessman, 1964). The determinants of urbanization can broadly be categorized into three categories of economic, social and demographic determinants. The economically rooted determinants are the type of economy, the degree of commercialization of agriculture, the extent of diversification of economy, the changing size of agricultural landholdings, the stage of economic advancement and the degree of development of means of transportation and communication. The social factors that determine the nature and magnitude of urbanization are the degree of socio-economic awakening, the social value system, the stage of technological advancement, the public policies and the Government decisions. Urbanization is transmission of rural population to urban population. It means in this process increases the urban population to the proportion of total population in percent. Urbanization is higher in developed district.

Objectives of the Study:

The main aim of this present research work is to study rate of urbanization and degree of urbanization in Nandurbar district of Maharashtra.

Area Under Study:

Nandurbar district was created with the bifurcation of Dhule district on 1st July 1998. The region is bounded by Dhule district on east and south while on the west by Surat district of Gujarat state and on the north by Badwani and Jhabua districts of Madhya Pradesh. The district has a total area of 5955 sq km. Nandurbar district has been contributed 1.62 percent area of the Maharashtra state. The study area lies on 21° 00' to 22° 03' North latitudes and 73° 31' to 74° 32' East longitude. Nandurbar district is at North-West part of Maharashtra and most of the Northern area is occupied by the Satpuda ranges.

Materials and Methods:

The present study is based on secondary source of data. The secondary data is the available from Municipal Corporation of concern towns in Nandurbar district, directorate of Economics and Statistics of Maharashtra, District statistics office of Nandurbar District, Census handbooks etc. The methods applied includes bar diagram, Graphs, Maps, Statistical analysis like degree of urbanization and rate of urbanization etc.

Results and Discussion

According to 2011 census, there are 6 towns in Nandurbar district. Among them 4 are towns and remaining 2 are census towns. Akkalkuwa and Dhadgaon (Akrani) are census towns which are added in 2011 census which they were as rural settlements in 2001 census. Both census towns located in Satpuda hills which is hilly and tribal area hence relatively less developed. While Taloda, Shahada, Nandurbar and Navapur has better conditions and scope for development. Nandurbar town is most populous town of district which is administrative quarter also. In last decade low growth of urban population noted in Taloda town because of migration towards Nandurbar towns which is develop in

all manner. While highest growth observed in Navapur town due to immigration from surrounding rural settlements and Padas.

Table No. 1 - Nandurbar District: Distribution of Urban Population in 2011

Sr. No.	Name of town	Name of Tehsil	Total Urban Population		Decadal Growth of Urban Population in %
			2001	2011	
1	Akkalkuwa	Akkalkuwa	0	29887	--
2	Dhadgaon	Dhadgaon	0	6093	--
3	Taloda	Taloda	25036	26363	5.30
4	Shahada	Shahada	53290	61376	15.17
5	Nandurbar	Nandurbar	94368	111037	17.66
6	Navapur	Navapur	29997	40718	35.74

Source District Census Handbook, Nandurbar (2001 and 2011)

As other district of Maharashtra, in Nandurbar district also noted increasing trend of decadal urbanization rate from 1961 to 2011 but Nandurbar district has nature of urbanization quite different than other districts of Maharashtra due to its tribal nature.

Table No. 2 - Nandurbar District: Decadal Urbanization Rate (1961-2011)

Year	Total Population	Urban Population	Urbanization Rate
1961	570171	80508	14.12
1971	692467	104701	15.12
1981	848010	129491	15.27
1991	1062545	163632	15.40
2001	1311709	202659	15.45
2011	1648295	275474	16.71

Source: Census of India of Concern Year and Compiled by Researcher

Table- 2 shows that in 1961 urban population was 80508 and total population 570171, it means there were 14.12 percent share urban population to total population in Nandurbar district. The urbanization rate is increased slightly up to the 16.71 percent in 2011. According to 2011 census 275474 persons inhabited in urban areas out of total population.

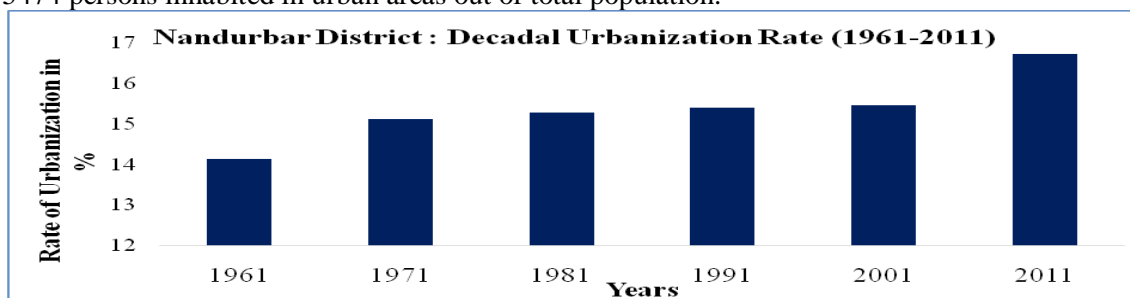


Fig. No. 1

Table No. 3 - Nandurbar District: Urbanization Rate in 2011

Sr. No.	Tehsil	Total Population	Urban Population	Urbanization Rate
1	Akkalkuwa	245861	29887	12.16

2	Dhadgaon	195754	6093	3.11
3	Toloda	159654	26363	16.51
4	Sahada	407728	61376	15.05
5	Nandurbar	367446	111037	30.22
6	Navapur	271852	40718	14.98
Nandurbar District		1648295	275474	16.71
Maharashtra State		112374333	50818259	45.22

Source: Census of India 2011 and Compiled by Researcher

According to Table 3 and Fig. 1, the rate of urbanization in Nandurbar District is 16.71% that is relatively less than proportion of urban population of Maharashtra (45.22%) in 2011. The highest urbanization is found in Nandurbar tehsil that is 30.22% and lowest urban population proportion is observed in Dhadgaon tehsil that is only 3.11%. In Nandurbar tehsil being there Nandurbar city proportion of urban population (30.22%) is high. Other hand in Dhadgaon tehsil urbanization rate is very low because of only one urban settlement (Dhadgaon) and being there Satpuda hills.

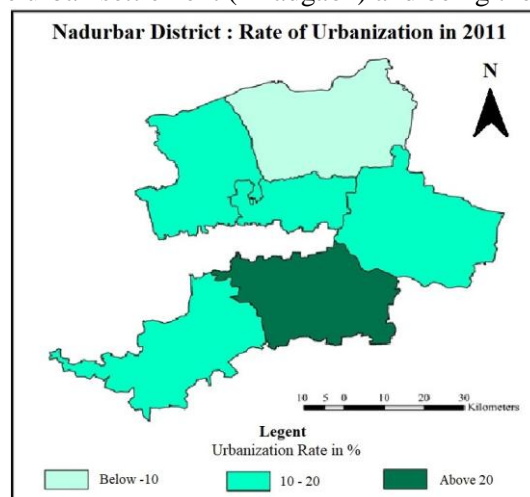


Fig. No. 2

Figure 2 reveals, less than 10 percent urbanization rate noticed in Dhadgaon district (3.11%) because of unfavorable condition for infrastructural development hence it is unable to attract population from surrounding villages and padas. While between 10 to 20 percent urbanization rate observed in Akkalkuwa, Taloda, Shahada and Navapur tehsils due to development of Educational, Health and recreational facilities. More than 20 percent rate of urbanization noted in Nandurbar tehsil because of being there Nandurbar town which is administrative headquarter of Nandurbar district.

Conclusion:

This research work reveals urbanization rate has been high in plain areas of Nandurbar district where transportation facilities are developed, high soil fertility, high purchasing capacity of people, rural to urban migration. In Shahada and Nandurbar tehsil has high rate of urbanization because of being there Shahada and Nandurbar towns which has overall development. These both towns attract the population from surrounding rural settlements.

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Sustainable Development and life of Indian's.

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Abstract:

Sustainable development is the term which refers to the process of development of present generation without making any kind of abrupt, sudden changes that will become the cause of destruction for the future generations to come. With the global definition of sustainable development it makes the democratic governments to take step accordingly with the support and participation of people. Without participation of people in this process it will just remain the paper work for the government and it may happen that the development work that would be carried out may cause heavily to the future and also the public exchequer.

Sustainable development concept largely comprises and affects the social, economical and environment of the world over. According to the UN resolution the sustainable development concept also includes climate change, environmental degradation, and social factors like poverty, inequality, justice and peace. In short we can say that it's a concept of development that considers the present and the future generations it's a development that is trying to connect without making any kind of compromise in meeting the needs.

Keywords: Climate, degradation, livelihood, economic development, etc;

Introduction:

sustainable development does not limits to the environmental factors but it does include in the cropping patterns, utilization of water, activities related to the green house effect, education, culture, politics, architecture, businesses, transportation, communication, technology etc; when we consider all these things in context of Indian people we need to analyze and calculate what we have understood about the very concept of sustainable development Cropping Patterns is the most important issue which needs to be discussed on a much wider platform because we find that there is not much changes made and the same methods of traditional cropping is being practice which has not only caused to the farms and fields but also the income generation for the farmers they are not able to cope up with the drastic situation arising every now and then. Doubling of the income of farmers is a mere political gimmick and this needs to be seriously understood by the leadership and for achieving this they need to bring in the modern technology and proper methods of change of cropping patterns should be taught to the farmers they need to made to understood the combination of market economy and what to grow in farms without damaging the fertility of farms. Transportation plays a very vital role in the process of sustainable development because many things related to this is to be brought in from many places or else to be export and in this process there needs heavy vehicles, fuels and etc; it has been proved through various surveys and researches that near about 20% to 25% pollution is caused due the transport system leave aside the public transport system that is carrying people from one place to another in urban to sub-urban and vice-versa. The roads that are being constructed are damaging the environment the trees that are cut down in the name of development are very less being planted this needs to be taken into serious considerations. We need to think over whether we going to give roads to the future generations without making any kind of arrangement of breathable oxygen which the trees and forest provide free of cost. India's diverse geography and climactic conditions have resulted in a variety of ecosystems such as hot and cold deserts, highlands, tropical and temperate forests, grasslands, swamplands, mangroves and plains to name a few.

Methodology: methodology used for the present study is based on the secondary data that is available on the internet, various reports, and surveys done by the environmentalist.

Conclusions:

1. Air pollution, Water pollution and Noise pollution are major concern in the Indian Context.

2. Tribunals need to be established and function with much independently.
3. Public participation is less than what is expected.
4. Responsibility of concern is not well defined.

Suggestions:

1. Measures need to take regarding plantations and forestation.
2. Attempt should be made to maintain at least 33% of forest.
3. More and more public participation needs to be mobilized.
4. More partners are to be brought in for effective implementation.

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The Status of Tribal Women in Rural Society

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Introduction:

“There is no chance for welfare of the world unless the condition of women is improved. It is not possible for a bird to fly on only one wing”, so said Swami Vivekananda by the turn of the present century. He was drawing attention to the fact that about one-half of mankind is suffering from prejudice, discrimination and oppression in a male-dominated society. In every society the status of woman is in accordance to her function in social organisation. As social functions change so do social status. If the socio-economic function of woman are higher and more valuable in a tribe her status is naturally higher. Traditional anthropological and sociological literatures assign higher status to tribal women compared to women in many non-tribal societies. In India the Committee on the Status of Women (CSWI) was set up in 1971 and a new era of investigating women’s issues in gender perspective emerged in the century. Thus there emerged a trend to break the paradigm of “male reporting” and seeing women in “men’s perspective”. Interpreting socio-cultural relations and action through female points of views necessitates the reworking and redefining anthropological thoughts on women and their relation to men, work and production and reproduction etc. This reading material will introduce the students to various as of tribal women’s relation to interpersonal interaction, social relations, behaviour pattern, work-role expectation, relations of women to the means of production and resources, the power relation in social, economic and political spheres of differences.

Status of Tribal Women:

The criteria for assessing tribal women’s status have been questioned by present day anthropologists and social scientists while they find that under the umbrella concept of “higher status”, the tribal women’s life is not so pleasant. On the other hand, if her economic functions are not very important she does not enjoy a high social status. For example, among Toda’s, the functions connected with dairy farming are the most important but women are not allowed to do important jobs in dairy farming, with the result that their status is considerably lower. But on the other hand, women get a lot of love and affection which compensates in their social status and raises it. Social function, however, is not the sole factor determining social status. For example, in Andaman Island women work side by side with men in social and religious functions. Hence they have to work with men also along with their own functions. This makes their social status even worse than that of Toda women. Among Kadar people, the division of labour among women is more scientific and exclusive. Thus the status of both men and women is equally satisfactory and comfortable. The above examples are from patriarchal societies. The status of women in patriarchal societies is determined by the restrictions attached to their functions. The restrictions may be preventive or productive. For example, the women in Toda tribe are prevented from working in dairies as they are considered impure. This lessens their social status. But in all the patriarchal tribes the status of women is not lower to that of men. Among Gond people the women enjoy equal freedom with men. For example, they are free in choice of mate, pre-marital relationships and divorce. But in other fields they work like labourers employed by men and most of the men evaluate their importance as labourers. Therefore, there are few bachelors among Gonds. Tharu tribe again, is patriarchal but their women dominate their men. Tharu women are beautiful and unrestrained in sex relationships. She is known to possess magical powers. In Khasi tribe there is the custom of fraternal polyandry. This naturally leads to much physical and psychological pressure upon women, but this is relieved through a strange custom. According to it though the woman has no freedom in the houses of the husband, she enjoys all freedom in paternal home and since she often visits her parents, she gets simple opportunities to relieve her tensions.

Objective of The Study:

Generally, it is believed that the status of women in matriarchal tribes is higher than that of patriarchal tribes, but a survey of Indian matriarchal tribes shows that it is not so. In India among Khasi one finds matrilineal residence and matrilineal traditions. They trace their lineage from some princess. In their mythology the creator is female. The lineage is traced through the mother. The daughter inherits the property of the mother. Man's earning belongs to the mother's family before marriage and to her wife's family after marriage. Most of the religious ceremonies are performed by women. Diseases, death and security are mostly connected with goddesses. Women work as priests on religious occasions. They are leaders in social and religious fields. In Khirim kingdom a woman is the highest priest and administrator. In spite of so much power of women one finds few causes of misbehaviour to men. On the other hand, they are highly respected and exercise wide powers after marriage. Khasi woman considers her husband as her master. Divorce is possible only by mutual consent and the non-consenting partner gets compensation. Just as the wives are free, the husbands are also free in so many matters. Thus it is clear that the matriarchal social organisation itself is not the sufficient cause to the lower status of men. It may be definitely higher in patriarchal societies and patrilineal residence. Another example of matriarchal society is found among Garo people. In it children are members of mother's family. Garo people consider themselves as descendants of some woman. Lineage is carried on from the mother. The daughter inherits the property of the mother. No one can transfer his property to his son though he may use the property of his wife. The proposal of marriage is made from the bride's side but the male may marry several women. However, more than three wives are exceptional. No party has to pay the price of the bride or the groom. Widows are not allowed to remarry for a sufficiently long period. This is in order that the minor may get time to become major and the property of the family may remain in the family. Thus the women have to pay the price of their higher status through mental strain. The widow has to marry the nephew of her dead husband. If she fails to do this she has to pay compensation to him. In Garo tribe there is no prostitution though instances of adultery are not common. Adulterous males are given death sentence though adulterous females are given minor punishment. But if she is guilty of adultery again and again she is also given capital punishment. Divorce is possible on the basis of adultery. Divorce is also possible if the woman refuses to work. The above discussion about the status of woman in patriarchal and matriarchal societies shows that nowhere the status of woman is compulsorily low or high. However, as a general rule, in comparison to patriarchal societies, there is no custom of matrilineal residence in all the matriarchal societies. For example, in Khasi matriarchal society the male establishes separate residence with his wife after marriage. On the other hand, even in some patriarchal societies some son-in-laws settle in the house of their father-in-laws. As a general rule the more restrictions on women, the lower is their status in society. But in this respect also there is no dearth of exceptions.

Analysis:

In many patriarchal societies also one finds a lot of difference in the status of women. For example, the Nagas of Assam are patriarchal but among them the status of women in Seema Nagas is higher than that among Ao and Angami Nagas. The Seema woman has a voice in deciding her mate. She enjoys a higher status in the house of her husband. In some societies where women have economic rights equal to male's rights, their status is not necessarily higher since sometimes they have to share male's activities in addition to female burden. In fact, rights alone do not determine the status of women. It also depends upon the male's behaviour towards them. Besides this, they have also importance as mothers. Hence in many societies barren women are very much neglected. Tribes which have been influenced by Hindu scriptures have a status of women lower than those which did not have this influence. In order to evaluate the status of women in tribal society, one will have to take under consideration her economic and political status besides her social status. The status of woman is known from her status in the family, the rights and duties of husband and wife, premarital rights and duties of a daughter etc. If exceptions are left aside, the status of women in tribal societies is generally not lower than that of the male. The rights of son and daughter are generally the same and both enjoy freedom of movement. Among the tribes where there are dormitories, boys and girls both live in dormitories and though their functions may be somewhat different there is hardly any difference in their status. The tribal woman has generally a free choice in selection of mate. Similarly, the rules of divorce are similar for both the male and female. Due to the custom of couvades the male also has to

suffer during the period of female's pregnancy. Concerning freedom about sexual relationships there is no distinction among male and female. Along with the social status, the economic status of the tribal woman is also not lower than that of the male. In productive activities, agriculture, animal husbandry etc. male and female work together. Generally the male's work is harder than that of females. In hunting tribes the males go out for hunting while the females perform domestic jobs. All the work is done by mutual cooperation and if there is no love or cooperation, marital relationships are dissolved. Thus the tribal woman has no occasion to suffer and face torture within the four walls of her home living as a slave of her husband like her so many civilized sisters. Her status here is certainly better. So far as political rights are concerned, the tribal woman's status is not lower though her rights are less than that of male's in political sphere. The tribal chief has so many rights but then he has also the burden of the protection of the tribe. If he fails to carry out this burden he cannot hold the high office of the chief. In fact political power among tribals is gained by physical strength and the power of arms. Therefore, naturally males enjoy better political rights. But there are some tribal societies in which political power lies in the hands of women. In brief, the status of women in tribal societies is no less than that of men.

Changing situations of Tribal Women:

Transition of traditional societies to capitalist ambit has introduced lots of changes in terms of status of women. Social scientists are not conversant on what makes such changes. It is argued that women's status is dependent on whether or not they control (1) access to resources, (2) the condition of their work, and (3) the distribution of the products of their labour. Consistent war or internal conflict in a region may affect women's socio-political status. For example in Burundi, the long lasting internal conflict have left behind many household to be headed by women only having little or no access to land and forest. This has increased the burden of women in home and economic front more than double (Shalini Gidoomal 2010). Unfavourable governmental policies that privatise or reallocate pastoral land, the ban on certain traditional methods of farming, an increased reliance on largely unfavourable market system for meeting basic dietary and household needs are some of the challenges the tribal women among the Barana pastoral communities in Ethiopia have been facing. Women's capacity to supplement household economy has decreased because of their increased workload in day to day activities due to the decrease in grass quality affected breeding of herds. As women and girls are responsible for household food security, decreased ability in this sphere definitely affect the socio-economic status of women, curtails their control over resources, market and earning etc. Following the governmental industrial policy tribal women in Uganda are unable to get access to forest resources. Loss of their traditional habitat forced them to discontinue their traditional income sources like piggyery, rearing cattle and goat due to lack of grazing land and availability of water. Different craft including mat making, weaving etc declined due to non accessibility to raw materials. But women's responsibility to household feeding and care did not cease at all. As a result of depleted natural resources and devaluation of traditional goods and services added with influence of monetary economy males among Husa society of Niger have to migrate to urban places in search of jobs leaving behind women to head the family. The women of such families have to come out to public domain for subsistence ignoring their religious code called kulben (seclusion) through which the women are allowed to enter public places only after dark escorted by the husband or close relatives. Thus poor, widow and divorced women come out to public place round the year reflecting their lower social status in the society (Marianne Haahr 2010).

Conclusion:

From the forgoing discussing we can come to the conclusion that situation of tribal women has to be looked at beyond conventional lenses. Women are an integral structure of gender system that encompasses almost every aspect of a society. Gender is an extremely important element of social structure in tribal societies. Gender relation is complex and varied. There is a need to re-look at and re-define social realities of women's world through gender perspective. Compared to the vastness of the tribal world in India, very little has been done on women's studies. Through gender perspectives a well integrated and well planned study programme can generate valuable and relevant data base which can be used for the practical benefits of tribal women in the country.

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**A Geographical Study of Land Resources of Wasteland
Development in Sikkim State, India.**

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Abstract:

The lands which are degraded unproductive and under productive are called wasteland. also the soil which alkalinity, acidity water logging etc because of presence of harmful salts. This land which are lying fallow, found to cause ecological imbalance due to soil erosion. Land as an asset plays an important role in rural and urban areas. Sustainable agricultural development and food security will be one of the key challenges for India in this country. Land degradation is a process in which the value of the biophysical environment is affected by a combination of human-induced processes acting upon the land. It is viewed as any change or disturbance to the land perceived to be deleterious or undesirable. Natural hazards are excluded as a cause; however human activities can indirectly affect phenomena such as floods and bush fires. This is considered to be an important topic of the 21st century due to the implications land degradation has upon agronomic productivity, the environment, and its effects on food security. It is estimated that up to 40% of the world's agricultural land is seriously degraded. Land Resource of Wasteland Development (LRWD) in Sikkim State in presented paper going out of cultivation due social and economic reasons are replenished by reclaiming these lands and by arresting further loss of production potential.

Key Words: Waste development, Land degradation, LRWD

Introduction:

There is a close relationship between the environment and the community living within that area as the community derives sustenance from it. Increase in biotic pressure leads to over-exploitation and degradation of natural resources. Paucity of resources also leads to internal conflict giving opportunity to others to exploit the situation. It is thus necessary for people to realize the intrinsic relationship between population, poverty and degraded environment they live in. the poor, in the developing country like India are left with no option but to degrade their own environment for their very own survival. Still, it is only they who can restore the health to environment thus ruined; outside actors can only facilitate but never substitute for stake holders. Hence, there can be no sustainable natural resources management unless it involves all inhabitants of the affected areas in an active manner and development plans are formulated and executed by them. Integration of indigenous technologies with development is vital. Rural people's knowledge and the technological advancements are complimentary in their strengths and weaknesses. Combined together, they may achieve what neither would achieve along. Low cost locally available technology with suitable intervention by latest advancements yields best solution. It is a natural entity and may contain different types of lands namely, forest lands, community lands, government lands or private lands.

Study Area:

Sikkim is the 22th State of India, attaining statehood in May 1975. It is a relatively small state which lies between the latitudes 27°04'46" to 28°07'48" North latitudes and 88°00'58" to 88°55'25" East longitudes covering an area of 7096 sq.km.and nestled in the lap of the Himalayas and bounded by some of the highest mountain peaks. The world third highest mountain Kanchendzonga is located in Sikkim and it is one of the youngest states within the Indian union. Sikkim is a unique mountainous state bounded by three different international borders with Nepal, Bhutan and China which lie in its West and shares its national borders with Darjeeling district of India. Sikkim is

situated in upper part of Tista basin. It extends approximately 114km from North to South and 64km from East to West with altitude ranging from 300 to 8598m. Sikkim has 447 villages with 6, 07,688 populations (2011).The annual rainfall of Sikkim is 2739 mm. The temperature varies with the altitude and slope aspect. The mean temperature in the lower altitudinal zone, it varies from 1.5 degree centigrade to 9.5 degree centigrade.

Objectives:

1. To Study the Distribution of TWA (Total Wasteland Area), TGA (Total Geographical Area) Wasteland region in Sikkim State.
2. To Find out the Categories wise wasteland in Sikkim State.
3. To Consequence and Strategy to Development of wasteland of Sikkim State.

Database and Methodology:

The Present Study work is based on Secondary data. it has been collected from Website of Land Resource and Wasteland development of Sikkim State.(2008-09 to 2015-16). Published, unpublished, various Research papers. The collected information is analyzed with the help of suitable technique map, table types of data and their interpretation which is supporting in research paper.

Result and Discussion:

A) Distribution of TWA and TGA of Wasteland in Sikkim State (2008-2016)

Table No.01 District - wise distribution of Wastelands Sikkim State (Area in sq.)

District	1.East Sikkim	2.North Sikkim	3.South Sikkim	4.West Sikkim	Total
TWA (Area in Sq.km)	265.92	5604	127.88	521.24	6519.88
TGA (Area in Sq.km)	954	4226	750	1166	7096
% to TGA	27.87	75.41	17.05	44.70	91.88

Source: Dept. of Land Resource_Sikkim_State (2008-16) (* TWA-Total Wasteland Area)

(** TGA-Total Geographical Area)

Above table shows that the status of wastelands in Sikkim State in 2008-2016 that is 6.51 lakh sq.km of land was categorized as total wasteland. In Highest Wasteland area is found North Sikkim district (75.41%), Low Wasteland area is South Sikkim (17.05%).Total comparison of the district wasteland area 91.88 % .

B) Categories wise Wasteland in Sikkim State

Table No.02: Sikkim - Category-wise distribution and changes in wastelands (2008-2016)

Sr.	Wasteland Categories	* TWA (Area in Sq.km)		Change Volume Wasteland in % (2008-09 to 2015-16)
		2008-09	2015-16	
	th Open Scrub	18.67	16.30	-2.37
	tilised/degraded notified and Scrub dominated	58.98	92.09	33.11
	rocky area	803.74	1116.92	313.17
	covered/Glacier	2340.59	2066.38	-274.21
	Total	5.09	3294.79	69.70
	** TGA	7096		

Source: Dept. of Land Resource_Sikkim_State (2008-16) (* TWA-Total Wasteland Area) (** TGA-Total Geographical Area)

Above table and Fig.01 shows the wasteland categories in different districts majorly land with open scrub is 18.67 sq.km in 2008 after 2016 in this category less of wasteland area 16.30 sq.km. soil erosion coupled with land dense and open scurb.while wasteland under the category of shifting cultivation wasteland in the category of mining and steep sloping area increased. Underutilized notified forest land is 2016 totally 92.09 sq.km. Finally change volume wasteland in percentage between 2008-2016 in 69.70 % . and also Comprehensive with Total TGA is 7096 in Sq.Km.





**Promoting Pro-Environmental Behaviour Among Stakeholders For Sustainable
Development: An Approach To Address Value –Action Gap**

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Abstract

There is hardly a day, which can go by when we do not confront with some environmental issues. What these issues really tell us? When our numbers were small and technology was still in its childhood, we had little impact on global ecosystems. With easy access to the un-despoiled lands and other resources, we had no incentives to look beyond our short-term self-interest. We have become predators on the biosphere, full of arrogant entitlement, always taking and never giving back, until we are a danger to ourselves and the other beings with which we share the planet. As a result of human beings' despot like attitude and predatory superiority, humans are threatened by self-inflicted and swiftly moving environmental changes. Human beings are still painfully ignorant about the long-term biological and ecological consequences of environmental changes like, global warming, air pollution, and toxic wastes. So, it is imperative to think seriously on the environmental issues and make people aware about environmental problems and motivate them to behave responsibly for a sustainable society. In this endeavour, an attempt has been made to emphasize the means to achieve wider societal change to catalyze, support and reinforce pro-environmental behaviour by focusing on cognitive, social and motivational process which provides insight into effective ways to promote change. This contribution also critically examines that whether the individual environmental concerns are transformed into pro-environmental actions and its underlying barriers. As environmental problems have their origin in human behaviour, so any solution to environmental issues will require changes in behaviour but addressing the value-action gap and pro-environmental behaviour consciously seeks to minimize the negative impact of one's actions on the natural and built world. Thus, recommendation is made for people-oriented approach and its optimal use to foster pro-environmental behaviour among the stakeholders for a just and free world to live in. The contribution concludes with a strategy that how the proper socio-individual transformations minimize the value-action gaps of the stakeholders and thereby to enable them to exhibit pro-environmental behaviour to make the planet Earth a clean, green and safe place to sustain.

Key Words-Environment, Sustainable Development, Pro-environmental Behavior, Value, Action
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"Man has learnt to fly like bird, swim like a fish but he has not learnt to live as a human being" Dr. S. Radhakrishnan

Introduction-

There is hardly a day, which can go by when we do not confront with some environmental problems. The issues of global warming, forest destruction, different kind of pollutions, species extinction, clean water crisis, depletion of ozone layer surround us. What these issues really tell us? When our numbers were small and technology was still in its childhood, we had little impact on global ecosystems. With easy access to the un-despoiled lands and other resources, we had no incentives to look beyond our short-term self-interest. We have become predators on the biosphere, full of arrogant entitlement, always taking and never giving back, until we are a danger to ourselves and the other beings with which we share the planet. As a result of human beings' despot like attitude and predatory superiority, humans are threatened by self-inflicted and swiftly moving environmental changes. Human beings are still painfully ignorant about the long-term biological and ecological consequences of environmental changes like, global warming, air pollution, and toxic wastes and so many environmental issues. To address these issues education that is education for sustainable development (ESD) is considered to be a very effective tool for people awareness and behavior modification toward environmental sustainability. In this context, Agenda 21 was the first

International document that identified education as an essential tool for achieving Sustainable Development (SD) and highlighted areas for action for education. ESD allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future by incorporating key SD issues into teaching and learning. ESD seeks to engage people in negotiating a sustainable future, making decision and acting on them.

Rationale of the Study-

Various environmental problems pose a great threat to environmental sustainability, which is the key factor of SD. Many of these problems like climate change, global warming, environmental pollutions, loss of bio-diversity, fresh water availability are caused due to the unsustainable consumption patterns of behavior and over exploitations of natural resources by human being. The environmental protection may be described as a social dilemma that is collectively we are comfortable if the environment is protected but rational self-interest often dictates environmental pollution as in this fastest growing world, changes in human behaviours are necessary because individual need to accept and understand physical and technical innovations. Environmental protection presents a conflict between collective and personal preferences, collectively we prefer environmental protection but few wish to pay associated costs. It is therefore desirable to achieve wider societal change to catalyze, support, encourage and reinforce pro-environmental behaviour (PEB) of stakeholders for a sustainable world of tomorrow.

Conceptual Framework-

Sustainable Development- “sustainable development is the development which meets the needs of the present without compromising the ability of future generations to meet their own needs”. (WCED-1987, Harris, 2003).

Pro- environmental Behaviour (PEB)-

Behaviour engaged in that are environmentally protective is pro-environmental behaviour. (Scott & Willits, 1994) Actions which contribute towards environmental conservations and /or preservation are called pro-environmental behavior. (Axelrod & Lehman, 1993) The behaviour that harms the environment as little as possible or even benefits the environment is called pro-environmental behavior. (Stag & Vlek, 2009)

Pro-environmental behavior is any activity in which people engage to improve or diminish the impact on environment.

Sustainability- Sustainability is understood as the development that meets the present needs without compromising the capacities of future generations, ensuring the balance between economic growth, environmental care and social welfare.

Need For Sustainable Development-

Environmental problem become a widespread concern only recently. Our Common Future, the report of the World commission on Environment and Development, marked a turning point. The commission demonstrated clearly the interdependence between environment and society: services provided by the natural environment are not free. A continuous non-sustainable development jeopardizes the existence of humankind. Technology has become increasingly disciplinary, compartmental, and consumptive. The primary goal of science and technology must be to diminish the gap between the parsimonious natural cycle and wasteful human exploitation and production. But the sustainability of ecological systems is an innate property to create and maintain life systems that organize themselves into network of species. Adaptation, diversity and resilience are fundamental features of ecological sustainability. The present exploitations of the natural resources has reached a point where radical changes of economic, social and cultural processes towards sustainability are required (Brink, P). As Kofi Annan stated (UN-2001), our biggest challenge in this new century is to take an idea that sounds abstract “Sustainable Development” and turn it into reality for the entire world’s people. Hence, for large scale applications of SD we need conceptual tools to formulate societal strategies with a holistic approach while maintaining disciplinary competence and education is considered as an essential tool for achieving SD, as it encourages people to synergize between the internal and external factors to behave in an environmentally responsible manner to lead a prosperous life.

Need of Pro-Environmental Behaviour-

For many years, the International Community has been looking for answers on how to create economic growth in a socially just and environmentally safe way. But all previous approaches fell short. They were not comprehensive enough, neglected certain connections and laid emphasis on activities in developing countries. On 18th Sept. 2015, the UNs 'General Assembly' finally adopted the 2030 Agenda, an agreement for all its member states which includes 17 global Sustainable Development Goals and 169 sub-goals. It has been effective since 1st January, 2016, serves as a plan for all people in all countries, aiming to create SD including all of its social, ecological and economic aspects. The Agenda names five dimensions that need to be equally addressed: The People, The Planet, Prosperity, Peace and Global Partnership (the five 'P's'). The ultimate vision of the 2030 agenda is a healthy mankind, living in a peaceful, fair society and a sound environment-everyone in the world, and, the most important dimension is the people, who can play a prominent role in the process of SD. Hence, with a universal approach all countries have to bear responsibility for its success together. All the 17 goals can be reached in global partnership. Hence, in this context, If we want today's and tomorrow's generation to have the same chances for a fulfilled life, we have to act sustainably on all levels, as, sustainable living addresses the question of how everyone of us can contribute to a life style that protects our environment and resources. For this ESD is the panacea to change the mind sets, values, beliefs of every single individual and to minimize the existing value – action gap thereby to behave in pro-environmental manner.

Pro-Environmental Behaviour

Environmental behavior would include all activities regardless the fact, how insignificant their impact on the environment is, e.g.- A walk, any human activity or movement, even breathing, cutting flowers, waste production and pollutions. So, in narrow sense, environmental behavior is such behavior which has a significant impact on the environment. (Stern-2000) Pro-environmental behavior is such behavior which is generally judged in the context of the considered society as a protective way of environmental behavior or a tribute to the healthy environment. In the other word, PEB refers to behavior that harms the environment as little as possible or even benefits the environment. (Sharma 2014) The following terms are used interchangeably with PEB, 'environment –protective behavior', 'environment-preserving behavior', 'environmentally responsible behavior', (Kaiser-1999), Ecological behavior and Sustainable Behaviour etc. (Clayton and Myers-2009) which includes – recycling, composting, energy and water savings, economical consumerism, political activism, cooperation with ecological organizations, etc. (Kaiser-2009) Many educators claim that Environmental Education contributes to environmental literacy, knowledge, skills, values and attitudes and thus strengthen their PEB. There is no absolute standard for determining what is pro-environmental behavior (Schultz & Kaiser, 2012) However, PEB is defined as "the extent to which it changes the availability of materials or energy from the environment or alters the structures and dynamics of eco systems or the bio-sphere itself. (Stern, 2000) But as defined by Kollmuss & Agyeman (2002)-PEB simply means behaviour that consciously seeks to minimize the impact of one's actions on the natural and built world. (e.g- minimize resource and energy consumption, use of non-toxic substances, reduce waste production), also according to Osbaldeston and Schott (2012)- All people consume materials and energy in their daily lives and as such, each person can choose to adopt behaviours that are comparatively better for the environment. These behaviours are called **PEB**.

Factors Responsible for PEB-

Human behavior is very complex, so it is quite difficult to predict the kind of behavior an individual can exhibit. Through behavioural theory we can better understand how to foster PEB among stakeholders. According to **Social -Cognitive Theory of Bandura & Rotter**, the personality reflections of an individual is the combinations of –individual interactions with the environment and how people think about world and interpret happens to them. But, according to **Lewin** – Behaviour is a function of a person and his environment.

$$B = f(P+E)$$

Further, according to David Regis D , the individual behaviour is directly related to the behavioural intention and it is based on the analysis and judgement about the relative importance of attitudinal and normative considerations, which has direct relations with the evaluative beliefs (about consequences of behaviour) and Normative beliefs (Of how others would view performance of the behaviour and the motivation to comply with these views.)

How ever , the behavioural interventions for PEB could be more effective if they are aimed at important antecedents of the relevant behaviour and at removing barriers for change. Therefore , it is important to understand the factors which promote or inhibit environmental behaviour. As mentioned in the above diagram, factors underlying environmental behaviours have been studied from different theoretical perspective, broadly these can be categorised in to three- 1. **Motivational Factors** 2.

Contextual Factors 3. **Habitual Factors**

Barriers In Peb- Researchers in pro-environmental fields have repeatedly shown that holding pro-environmental attitudes or intention does not necessarily lead to PEB. There may be several individual, social and institutional constraints between thinking and behaving because being rational individual humans make systematic use of information available to them. This attitude behaviour gap is commonly referred to as the value –action gap. (Sharma-2014)

Blake (1999) identified three kinds of barriers of **PEB**

Individuality 2. Responsibility 3..Practicality

Kollmus and Agyeman (2002) suggested a model of PEB, which categorizes barriers into two broad categories ;internal and external. According to them there exist no direct relationship between environmental knowledge and pro-environmental behaviour rather environmental knowledge, values, and attitudes together with emotional involvement make up a complex ‘pro-environmental consciousness’. This complex in turn is embedded in broader personal values and shaped by personality traits. The biggest positive influence on pro-environmental behaviour is achieved when internal and external factors act synergistically. Environmental problems are constructed in such away that behaviour is dependent on a greater range of influences than merely a linear process of information to action, which seeks to fill the value –action gap in a system that has been described as A-I D-A (Awareness, Information, Decision ,Action) Barr,S Also, framework for environmental understanding and action can not be imposed from outside such context. (Burningham and O’ Brien,1994) Individual people simply do not appreciate environmental problems for what they are.

Interventions-

When the environmental behaviour has been selected and its casual factors are identified, interventions strategies can be targeted on the relevant factors. Ex.-when behaviour is strongly related to attitudes, one can try to promote attitude changes towards particular pro-environmental behaviour. When contextual factors inhibit particular behaviours, one can try to remove those barriers.

However, the barriers can be removed by antecedent strategy or consequence strategies

1. Antecedent strategy- It aims at changing factors that precede behaviour.
2. Consequence strategy- It aims at changing factors that precede behaviour.
3. (feedback, rewards, penalties)
4. Another couple of strategies may be adopted to remove those barriers
5. Informational strategies- aimed at changing prevalent motivations, perceptions, cognitions and norms. (with out changing the external conditions)
6. Structural strategies- aimed at changing the circumstances under which behavioural choices are made .(attitude towards organic food may become more favourable when prices decrease)
7. Informational strategies in themselves are especially effective when pro-environmental behaviour is relatively convenient and not very costly (in terms of money,time, effort and/or social disapproval) , and when individuals do not face severe external constraints on behaviour. Besides, informational strategies that force individuals to change their behaviour. (Ga’rling & Schuitema,2007) Obviously, which strategy will be more effective in encouraging pro-environmental behaviours depends on the specific barriers that inhibit individuals to act pro-environmentally.(infrastructure measures, financial measures, legal measures may be effective in some cases) In general, a combination of strategies for behaviour change will be most successful ,

as there is often more than one barrier to any pro-environmental behaviour, informational and contextual.

Strategies for Promoting Behaviour-

Promoting pro environmental behaviour is not that easy. Tackling environmental issues requires change at every level. Even with the large powerful organisations change has to begin with some one acting differently. Behavioural change is not enough on its own, but it is vital. Changing attitude is important but not enough.. we need to use methods that change attitudes and behaviour to be an environmentally responsible individual. However, the different strategies (James, Rachel-2010) those we may adopt to promote pro-environmental behaviour for sustainable development at our own level are as follows.

Association 2. Reciprocation 3. Scarcity 4. Situational change 5. Commitment-6. Prompts- 7. Feedback 8. Modelling But, now, the question arises – should we approach different person in different ways? The answer is KYA- know your audience/ target group

To adopt any strategy, we need to think about our specific target group and might want to consider some research and a pilot study to ascertain the barriers to change, which may vary from place to place. It is also important to know

1. How much do they know?
2. How much do they care?

After that the target group needs to be classified in to easily identified groups, which will approach in different ways. But approach them with three ways- Pick your moment- Be nice- Ask in person

Conclusion-

Achieving environmental sustainability and Sd will not be that easy. There are no quick fixes for this complex challenge. Recognising the need for action is the first important step toward finding solution and many have taken the steps in the recent past. Now the time has come for the HRM and HRD practitioners and scholars alike to demonstrate that they can contribute to the success of Environmental sustainability there by the Sd initiatives in the work place. As, individual can contribute significantly in achieving long-term environmental sustainability by adopting PEB patterns. But behavioural interventions are generally more effective when they are systematically planned. Interdisciplinary collaboration is needed to effectively address these issues, because environmental problems are not just psychological problems, they are also ecological, technological and socio-cultural. The challenge before us is to understand the cognitive, motivational and structural factors and processes that threaten environmental sustainability and respond to the immense threat to our planet and act accordingly to transform the intention of the individual to pro-environmental behaviour, there by the pro- environmental behaviour could be facilitated and emerge world wide and we have a clean, green and safe planet to sustain.

To Follow nature

First follow NATURE, and your judgement frame.

By her just standard, which is still the same

Unerring Nature, still divinely bright

One clear, unchanging and Universal light

Life, Force and Beauty, must to all impart

At once the source, and End and Test Of Art.

Sarve bhabantu sukhinoh, sarve santu niramayah, sarve vadrani pasyantu, maa kaschit dukhah bhabet Thank You

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**Impact of Nitrogen fertilizers on the sustainability of *Alternaria porri*
(Ellis) in the field of onion.**

Dongre Mayur Arun

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Abstract:

Alternaria porri is the most common pathogen associated with the leaf of onion causing the disease purple blotch (Dongre, M.A and Borse, K.N. 2015). It affects the green mature leaves of onion (Suheri and Price, 2001). The spores which are present in the soil as well as in the air get germinate on leaves and produce minute water-soaked spots, which later turn to brown and dark brown. Onion crops require high nitrogenous fertilizers (Gebretsadik, K., Dechassa, N. 2018). At least 1 to 1.5 kg of Nitrogenous fertilizer per 100 feet row of onion crop. The ammonium sulfate or ammonium nitrate are the main fertilizers use to compensate the N₂ level for the onion crop (Andreas *et al.* 2003). This leads to reducing the pH of the soil and increases the acidity of the soil (www.blinc.com/role-nitrogen-fertilizer-soil-ph).

Keywords: *Alternaria*, Blotch, Fertilizer, etc.

Introduction:

In Maharashtra 3 seasons are well remarked with weather conditions hot, rainy, or cold. On this basis summer, rainy season, and Winter are the main seasons (Maharashtra tourism). Farmers also grown crops that are suitable in their respective seasons. Some crops are affected by season while others are affected very less or unaffected by seasonal changes. One of such crops is the Onion crop, grown throughout the year in some parts of Maharashtra like North Maharashtra specifically the Khandesh region. Crop grown in three seasons in this area requires at least 7 to 8 months for seed sowing to harvesting. Early Kharif (February to September), Kharif (May to December), and Rabi (October to May) (Vinod Kumar 2012).

The pathogen *Alternaria porri* remain as mycelium in onion leaf debris of diseased plant, the older leaves are more susceptible to this (Ambayeba, 2018).

Material and Method:

Identification and isolation of pathogen *A. porri* (Ellis) (Barnett and Hunter 1998 and Sehu Aliero 2010)

Diseased plants were collected from the field of onion in a sterilized plastic bag. In the laboratory, the diseased portion was inoculated on a PDA medium supplemented with ampicillin to check bacterial growth. The inoculated plate was later placed in the dark at 28- 30°C for a week. Later culture was placed on a glass slide with cotton blue, staining, and morphology to confirm the pathogen.

Disease symptoms

spores which are present in the soil as well as in air get germinate on leaves and produce minute water-soaked spots, which later turn to brown and dark brown. The spots are rarely round but mostly oval, fully grown diseased with loaded spore, the spot looks purple or dark purple with a yellow margin.



Plate 1: Section of leaf of onion showing *Alternaria* conidia and hyphae and Conidia of *A. porri*.

1. Culture character and morphology of pathogen

Initially on PDA media colony seems white which later converted to dark coloured. The mature colony is blackish in colour on the ventral side slightly yellowish in colour. Conidiophores are brownish which may arise solitary or in groups, generally cylindrical and septate. Conidia ranges from 89 to 295 μm in length while the thickness varied from 12 to 18 μm . each conidia show distinct beak, transverse and longitudinal septation is prominent. Transverse septa may be 5 to 10 and longitudinal septa are 2 to 4 in number.



Selection of plot

In field some area of onion crop is purposefully kept untreated with N2 fertilizer throughout the growing season i.e., from transplanting to harvesting. While remaining field were supplied with N2 fertilizers. Other chemicals including phosphate, potash and pesticides were applied to both control plot and N2 treated plot in same ways.

Plate 2 : Pure culture of *A. porri* isolated from diseased onion leaf.

Collection of diseased plant from field

Analyzing untreated or control plot and counted the numbers of plants on which leaves shows distinct disease symptoms of purple blotch. Same are of N2 fertilizer treated plot were also analyzed for same purple blotch disease. Data for successive three years were analyzed and use to calculate chances of occurrence of disease in control and N2 fertilizer treated plot.

Same process of counting and analyzing of plant were repeated in interval of month and tried to analyze any difference. The data were collected after transplanting and before harvesting time September, October and November.



Plate 3. Collection sites

Observations

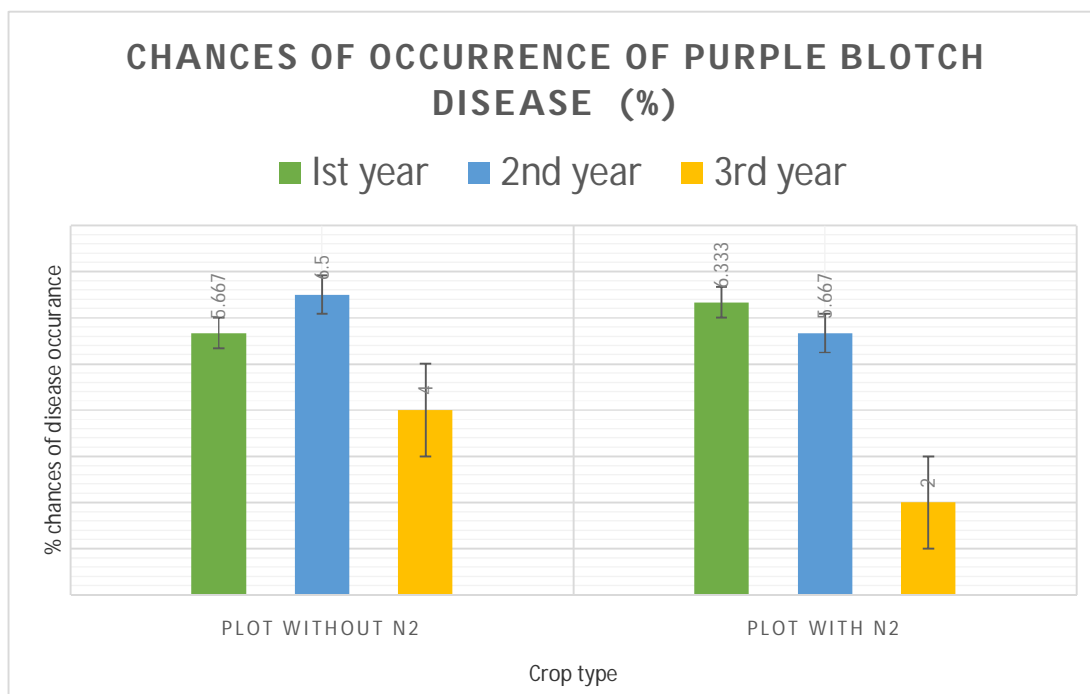
1. Observation table

Observation number	N2 free crop / Crop treated with N2 fertilizer	No. of plants analyzed			Number of plants shows symptoms of disease			Chances of occurrence of disease (%)
1 st year								
		September	October	November	September	October	November	
1.	Control	200	200	200	3	14	17	5.667%
2.	Treated with N2 fertilizer	200	200	200	6	11	21	6.333%
2 nd year								
3.	Control	200	200	200	09	13	17	6.5%
4.	Treated with N2 fertilizer	200	200	200	7	11	16	5.667%
3 rd year								
5.	Control	200	200	200	04	09	11	4%
6.	Treated with N2 fertilizer	200	200	200	08	10	12	5%

Table1: Three-year data of incidence of disease in respective three month for successive three years.

Result

In three successive year it was observed that N₂ fertilizer is not significantly affecting the growth of *Alternaria porri*. The chances of occurrence of disease in N₂ free plot is ranges from 4% to 6.5 % while in plot where N₂ fertilizer were supplied it ranges between 5% to 6.333 %.



Graph: - Chances of occurrence of *Alternaria porri* causing purple blotch disease on leaves of onion in N₂ free crop and crop treated with N₂ fertilizer.

Discussion

Alternaria porri (Ellis) causing purple blotch on onion leaves. The field in which N₂ fertilizer is not supplied, the onion crop is stunted in height and bulb size is also small. In spite of that incident of occurrence of purple blotch disease seems to be unaffected. There is no any direct impact of nitrogenous fertilizer supply and disease development and growth of pathogen.

Acknowledgements

Author is thanking to all people who permit for visiting and collecting samples and also thankful to principal of Shri Shivaji Vidya Prasarak Sanstha's Late Karmaveer Dr. P. R. Ghogrey Science College, Dhule, for providing laboratory support.

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**A study on Utilization of water supply and sanitation in slum households
of Siliguri Municipal Corporation, Darjiling district, West Bengal**

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Abstract

Rapid urbanization in India leads to development of slums in urban area. These increasing number of slum dwellers are the key concerns for the urban planner. This study will help us to know the present scenario of accesses to safe drinking water and availability of adequate sanitation of selected slums in Siliguri. Objectives: To find the linkage between watersupply, sanitary facility and health conditions of slum dwellers. Materials and Methods: An observational descriptive study with cross-sectional design was conducted in Slums of siliguri, West Bengal. The study period was from 1st April 2021 to 30th April 2021. 200 households were selected by simple random sampling. Each household was selected randomly. One adult member from each household was interviewed at their home using predesigned and pretested. The total population of 200 households is 1852. Statistical analysis was performed using Microsoft Excel 2016 software. Results: About 94% of the selected households were using piped water supplied by Siliguri Municipal Corporation and 6% were using bottled water for drinking purpose. Among the surveyed slum households only 21.07 percent of the respondent's households had toilet facilities available. The remaining people use unhygienic latrines or practice open defecation. 40 percent of the respondent use hanging latrines which are found more than the pit and sanitary latrines and 28 percent use sanitary latrines. Conclusions: All the household had access to safe drinking water. There is a need for improvement in sanitation facilities in the slums. The result also shows that incidence of illness is significantly associated with type of toilet facilities .

Keywords: Children, diarrhea, improved drinking water, improved sanitation, slum

Introduction

Sanitation is the science of safeguarding health. Due to lack of safe and adequate drinking water and basic sanitation many illnesses, including diarrhea, have affected civilizations since ancient centuries; especially in the developing countries. The rapid increase in the slum population due to urbanization and industrialization compel the dwellers to live in unhygienic overcrowded conditions with inadequate drinking water and sanitation facilities. As per Census 2011, 17.4% of urban households in India live in slums, West Bengal, accounting for about 12% of all slums in India

Study Area

Siliguri Municipal Corporation(SMC) is located in Darjiling District of West Bengal. There are 47 wards in SMC out of which 33 wards have slum population.

Objectives

To find Linkage between watersupply, sanitary conditions and health condition of slum dwellers

Materials and methods

Study Design

It was an observational descriptive study with cross-sectional design.

Study Setting

The study was conducted in slums of SMC .The study was conducted from 1st April 2021 to 30th April 2021.

Study Population

200 households were surveyed on the basis of random sampling technique. The total population of 200 households is 1852.

Study Technique & tool

One adult member from each household was interviewed at their home using predesigned and pretested schedule.

Data Analysis

Statistical analysis was performed using Microsoft Excel software. Chi square is applied to show the linkage between sanitary facility and incidence of illness.

Results

A total of 200 households were surveyed for this study. All of them had access to intermittent (fixed 2 times a day) piped water supply by Siliguri Municipal Corporation within an average of 20 m from their household. Among the selected households, 188 (94%) were using that supplied piped water for drinking purpose. Packaged drinking water (20 l bottle) purchased from market were used for drinking purpose by 12 (6%) households. Distribution of the source of drinking water revealed that 32 (16%) households had the source of drinking water within their dwellings, 44 (22%) outside yard/plot and 112 (56%) households had the source within their yard/plot. All households stored the drinking water in small plastic bottle (usually 0.5 l/1 1/2 l). Among the piped water user, 37 (20%) households were filtered and 28 (15%) households were boiled the water before drinking. All 200 households were using the supplied piped water for cooking, bathing and washing purpose. Water was stored in open plastic or metal container for those purpose.

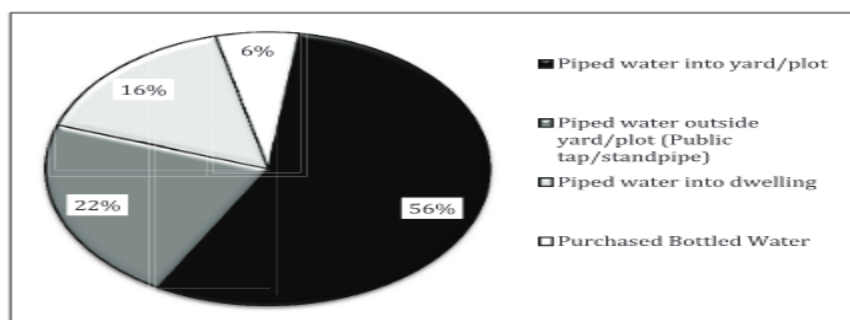


Figure 1: Distribution of households by source and location of drinking water (n = 200)

Linkage sanitary conditions and health condition of slum dwellers

Sanitation system and incidence of illness In Siliguri Municipal Corporation it is already documented about the lack of sanitation facilities, including public and private toilets, sewage disposal system in slum areas. Among the surveyed slum households only 21.07 percent of the respondent's households had toilet facilities available. The remaining people use unhygienic latrines or practice open defecation. 40 percent of the respondent use hanging latrines which are found more than the pit and sanitary latrines and 28 percent use sanitary latrines. Most of the slums near rivers use hanging latrines. Many depend on the community latrines. But respondents complained that these latrines are unclean and are not conveniently located. People had to stand in queue for community latrines. As these community latrines are owned and managed by local businessman sometimes they charge Rs. 5 per person for each visit to latrines. It was also reported during survey by the respondents that due to inadequate toilets there is increase of 'flying toilets' specially women during late hours have problem in accessing toilets located far away from their households. They also feel insecure travelling long distance at night for community toilets. There is uneven distribution of these community latrines. Children are vulnerable to inadequate toilets. It is observed that children less than 5 years do latrines on ground and sometimes use drains for latrines. Children are vulnerable to pathogens which are related to their level of immunity and exposure. Children play and come in close contact with the ground and also excreta which is the source of diarrheal, intestinal parasites and other pathogens. They don't wash their hands and eat food with their dirty hands and get exposed to pathogens. When they are infants their mother controls them but when they became mobile the risk of getting affected by pathogens become more. Bottle fed infant are affected more by pathogens as the slum dwellers due to lack of water do not wash and they get affected by intestinal parasites, dysentery etc. Due to inadequate toilet water and hand washing materials the diseases spread very rapidly among the respondents specially the children.

Distribution of Population by Incidence of Illness and Toilet Facility

Toilet Facility	Illness		
	Suffering From Disease	Having No Disease	Total

	Nos.	%	Nos.	%	Nos.	%
Neighbours Toilet	156	8.42	11	0.59	167	9.02
Open Space	892	48.16	6	0.32	898	48.49
Public Toilet	369	19.92	15	0.81	384	20.73
Hanging Toilet	144	7.78	21	1.13	165	8.91
Pit Toilet	104	5.62	30	1.62	134	7.24
Sanitary Toilet	51	2.75	53	2.86	104	5.62
Total	1716	92.66	136	7.34	1852	100

Source: Computed from primary data

The above Table shows the distribution of population by incidence of illness and toilet facility. The percentage of respondents using open space for defecation is found highest (48.49 percent). 21 percent respondents use public toilets. The percentages of private toilets are very low only 21 percent. The percentage of respondents suffering from disease is higher (92.66 percent) than the percentage of respondents having no disease (7.34 percent). The percentage of respondents using sanitary toilet have lowest percentage of disease (2.75 percent). People practicing open defecation are having highest percentage of disease (48.16 percent). The calculated Chi-square value is 408.02 which is greater than the tabulated value at 0.05 significance level. The p-value is less than 0.00001 and the result is significant. This shows that incidence of illness is significantly associated with type of toilet facilities.

Conclusion

Although utilization of drinking water in Siliguri slums has increased towards globally comparable levels, household connections of piped water supply are still lacking and many people do not have access to basic sanitary services. Association between diarrhea and water and sanitation facilities might suggest fecal contamination of water sources. Shifting from unimproved water sources to improved sources by providing piped connection to houses will help in health gains by declining probable water contamination. Increasing access to basic sanitation at the household level remains important but ignored public health intervention for preventing diarrhea. The local administration needs to accelerate action on providing safe water and basic sanitation to those currently unserved. The provision of advanced levels of service, which protect whole communities from fecal exposure, might provide significant additional protection from diarrhea.

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Ichthyofaunal Diversity Of Dongergaon Tank Dongergaon Dist Latur (M.S.) India

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Abstract

The present work deals with the study of fish fauna of Dongergaon tank, Dongergaon Dist Latur (M.S.) India. The work was carried out during the year 2019 (January to December). The tank is mainly constructed by drinking water, irrigation and fisheries activities. The results of the work shows that the fish fauna of this tank contains fishes belonging to 06 orders, 10 families and 16 species.

Keywords:- Ichthyofauna, Dongergaon tank.

Introduction

Fishes are cold blooded, aquatic vertebrates animals and evolved 300-350 millions years ago. Fishes are rich source of protein and become an important and delicious food of man they also produce by products. The freshwater sources contains about 20,000 fish species in world and 2179 species in India. Many workers have studied fishes of India i.e. Day (1878), Trivedi and Jayram (1981), Talwar and Jhingran (1991), Ghate and Wagh (1994-95), Rao (1998), Datta et al (2003), Sughran V.V. (1995). The Dongergaon tank located near Shirur Anantpal in Latur district. There is no authentic record available so this work was undertaken.

Material and Methods

The Fishes were collected from the fishermen from local fish market and brought were preserved in 10 % formalin. For identification standard literature was used i.e. Day (1878), Mishra (1959), Shrivastava (1984), Datta Munshi and Shrivastava (1988), Talwar and Jhingran (1991).

Results and Discussion

During the period of investigation following sixteen species were recorded which belonging to six orders and 10 families.

The fishes are shown in table below.

Table I – Ichthyofaunal Diversity of Dongergaon Tank, Dongergaon Dist- Latur (M.S.) India

Order	Family	Species
Clupiformes	Notopteridae	NotopterusNotopterus
Cypriniformes	Cyprinidae	H.Moltrix, Ella, Cyprinus carpio, Carla-Catla, Labeorohita, Cirrhina mrigala
	Balitorinae	Nemachilus obita, Labeobata
Siluriformes	Bagaridae	Rita rita
	Bagirinae	Mystus seenghala
	Siluridae	Wallago attu
	Claridae	Clarius batrachus
Mugiliformes	Mugilidae	Mugil corsula
Channiformes	Channidae	Channa auratus
Perciforme	Gobiidae	Glossogobius aureus

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Socio-Economic Consequences of Covid 19: A Case Study of Lakhanpur Town of Kathua District in J&K.

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Abstract

The outbreak of covid-19 brought social and economic life to a standstill. Coronavirus (Covid-19) pandemic has created an unprecedented loss and disruptions over all across the world. From developed to developing, no country has been spared from its brunt. Social distancing, self-isolation and travel restrictions have led to a reduced workforce across all economic sectors and caused many jobs to be lost. Schools have closed down, and the needs for commodities and manufactured products has decreased. In this paper, we have analyzed the implications or consequences of Covid-19 on the economy and society of Lakhanpur Town of Kathua District in J&K. Significant reductions in income, a rise in unemployment, and disruptions in the transportation service, loss in studies, fearful and panic behavior of the peoples etc. are the major consequences of Covid-19 in the Lakhanpur Town of Kathua District.

Keywords: Coronavirus, Covid-19, Economy, Social Life, Socio-economic

Introduction

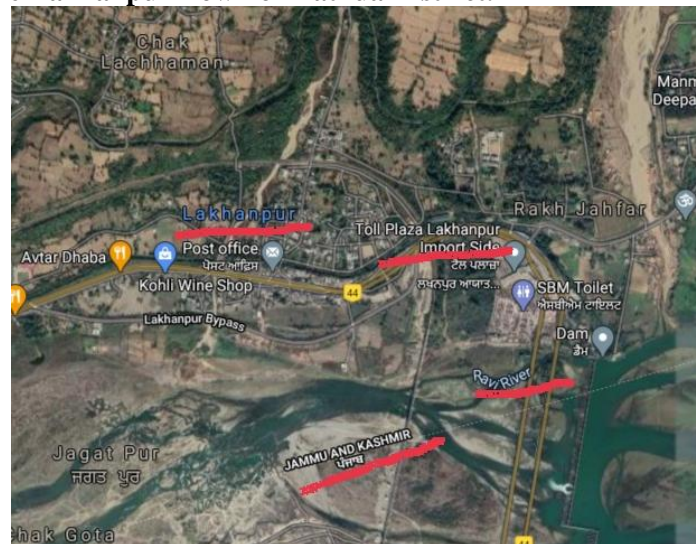
The Socio-economic impact of covid-19 has put a tremendous pressure on individual, family and community levels. Several Nations used quantitative easing and fiscal measures to reduce the anticipated economic recession. The UN's Framework for the immediate Socio-Economic Response to the COVID-19 Crisis warns that "The COVID-19 Pandemic is far more than a health crisis: it is affecting societies and economies at their core. While the impact of the pandemic will vary from country to country, it will most likely increase poverty and inequalities at a global scale, making achievement of SDGs even more urgent. Assessing the impacts of the COVID-19 Crisis on societies, economies and vulnerable groups is fundamental to inform and tailor the responses of governments and partners to recover from the crisis and ensure that no one is left behind in this effort. Without urgent socio-economic responses, global suffering will escalate, jeopardizing lives and livelihoods for years to come. Immediate development responses in this crisis must be undertaken with an eye to the future. The outbreak of Covid-19 has impacted nations in enormous way, especially the nationwide lockdowns which have brought social and economic life to a standstill. A world which forever buzzed with activities has fallen silent and all the resources have been diverted to meeting the never experienced before crisis. There is a multi-sectoral impact of the virus as the economic activities of nations have slowed down. However, Government announced an economic stimulus package of Rs 20 lakh crore and big-bang systematic reforms under the Aatmanirbhar Bharat Abhiyan (self-reliant India). The intended objective of this plan is two-fold. First, interim measures such as liquidity infusion and direct cash transfers for the poor will work as shock absorbers for those in acute stress. The Second, long-term reforms in growth-critical sectors to make them globally competitive and attractive. Together, these steps may revive the economic activity, impacted by Covid-19 pandemic and create new opportunities for growth in sectors like agriculture, micro, small, and medium enterprises.

Study Area

Lakhanpur is a town and a notified area committee in Kathua district in the Indian union territory of Jammu and Kashmir. Lakhanpur is the entrance to Jammu and Kashmir from Punjab and rest of India. It is a sparsely populated area about 20 kilometers from the center of Kathua district. Lakhanpur is located at 32.41°N Latitude and 75.61°E Longitude. Lakhanpur is situated just below the Shiwalik Hills. The town is sandwiched between Ravi River to the south and east while the

Shiwaliks rise abruptly 400 meters (1300 ft) high to the north. The town starts from the Madhopur Ravi bridge and is spread on both the sides of NH1A. Kathua city is just 6 km ahead of Lakhanpur. The Lakhanpur town is divided into 7 wards. The Lakhanpur Municipal Committee has population of 3461 of which 2250 are males while 1211 are females as per report released by Census India 2011. In Lakhanpur Municipal Committee, Female Sex Ratio is of 538 against UT average of 889. Moreover, Literacy rate of Lakhanpur town is 92.66% which is higher than UT average of 67.16%. In Lakhanpur, Male literacy is around 95.35% while female literacy rate is 87.50%. [Census of India, 2011] Climate- Lakhanpur has a monsoon-influenced humid subtropical climate. Lakhanpur generally experiences extreme rainfall during the monsoon being on the windward side of shiwalik. Because of its proximity to rivers, the climate is moderate to very hot in summers and mild to very cold in winters. Summers are hot and temperature may reach 40 degrees, while in winters, the temperature can dip to 3 degrees. Lakhanpur is the major entry and exit point of the state. It touches the border of the Madhopur town of Punjab state. It connects the J&K with whole of India with the help of bridge on River Ravi. Lakhanpur is also known for bigger income generator to the state of Jammu and Kashmir through imposing passenger tax, toll tax and sale tax on passenger vehicles and load carriers.

Satellite Image of the Lakhanpur Town of Kathua District.



Impact Of Covid 19 On Lakhanpur Town

The Lakhanpur Town have been amongst the worst affected by Covid-19 as it is the gateway town which connect J&K with whole of India and as per the law of land, every vehicle entering or going out of the union territory has to pay toll tax. Also, there is stop of every Interstate buses. So, there is always huge rush of vehicles and passengers which also play important role for income generator for the peoples of the Lakhanpur Town. Many street vendors and shopkeepers are relied on them for their incomes. But due to covid-19, Lakhanpur town is the worst affected area and is still in containment zone. No public vehicles are allowed in the UT of J&K and for peoples it is compulsory to get a corona report who come inside to UT. During lockdown many street vendors and shopkeepers suffered a lot and their work remains closed for months. Many peoples changed their work during covid-19 pandemic due to which they lost a lot in the economy. As Interstate movement is closed, many peoples trouble to reached their work places who worked outside the UT due to which some people lost their job. The impact of Atamnirbhar Bharat also didn't show the positive outcomes in the town. During Covid-19 pandemic, Students had to attend online classes for their studies, but in UT of J&K there is 2g Internet and due to this Students lived in the society of Lakhanpur as well as all students of UT faced problems in online studies. People were more health conscious and they think that Covid-19 changed the way that they lived earlier.

Statement Of The Problem

The Present study deals with Covid-19 Pandemic and its impact on Economic and Social Life of the Peoples of Lakhanpur town of Kathua District. The study area has mostly varied categories of Human Resources working in different economic activities like Agriculture and its allied activities,

Government Jobs, private sector as well as self-owned business etc. And to Analyze the impact of covid-19 on these economic activities is the core concern of the study area.

Objectives

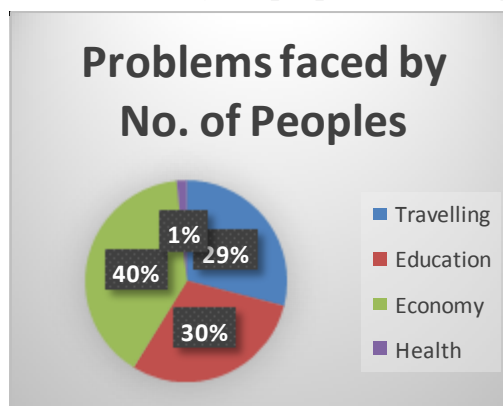
1. To Analyze the impact of covid-19 on the economy of the peoples of the Lakhanpur town.
2. To Analyze the impact of covid-19 on the social life of the people of the Lakhanpur town.

Research Methodolgy Methodology is the systematic approach towards the attainment of desirable objectives of the study through empirical, technical and scientific tools. For the present study, the data information shall be collected through Primary and secondary sources. The primary data was mainly collected through Questionnaire and most of my Research work is based on primary data collected through questionnaire. The Secondary data collected from the Municipal office Lakhanpur, Census of India which shows the population, literacy rate etc. of study area.

Results And Discussions The various results which I shown below are mainly interpreted through the primary data collection and these results shows the socio-economic impact of Covid-19 in the Lakhanpur Town.

Major Problems faced by people during lockdown. The Major problem arise during lockdown in lakhanpur town are in Economy, Education, Travelling, Health etc.

Figure1. shows the major problems faced by the peoples of Lakhanpur town.



Source- Primary data collection through Questionnaire.

The Figure 1 shows that 40% of the people of Lakhanpur Town faced the problem in Economy and majority of the peoples who suffered in the economy are Street Vendors, Shopkeepers, Factory workers, micro entrepreneurs. And 30% faced the problem in Education and majority are students who are unable to attend online classes in proper way due to poor connectivity of Network (2g Internet). And 29% faced the problem in travelling as many Govt. Employees, Factory workers etc. have to face problem to reach their work place during Lockdown.

Impact of Interstate Movement during lockdown

During lockdown, there was no inter-state and inter-district movement in Ut of J&K and Lakhanpur Town is the gateway town to Jammu and Kashmir bordering Punjab. So Lakhanpur town remain in Red zone during covid-19 which created a lot of problems for the people living in the town.

Figure 2 Shows the impact of Interstate movement in Lakhanpur Town.



Source- Primary data collection through questionnaire

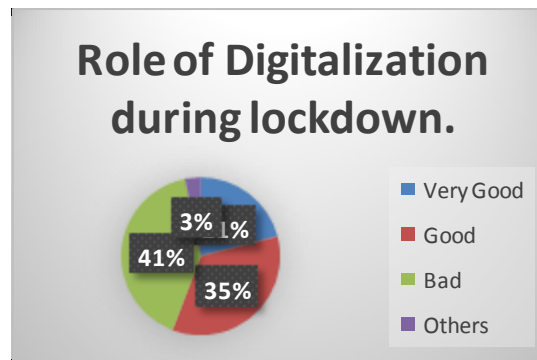
The Figure 2 shows that the impact of Interstate movement on the peoples of Lakhanpur town is very high during lockdown. This reason for this is Lakhanpur is the Gateway town of UT of J&K and there

is Interstate bus terminal due to which there is a huge rush of passengers which generate the income for street vendors and small shopkeepers but during lockdown these peoples were affected. Also, many of peoples of lakhanpur town were doing their job in Punjab so they also faced problem during lockdown. Also, many shopkeepers or businessman ships their goods, raw materials from Punjab or other states so they also faced problem in lockdown.

Role of Digitalization during lockdown.

Digitalization plays very crucial role during lockdown in all over the country as it is accessibility to information, easy and immediate communication and ability to share information. Also, it improves the Education system in India. But in my study area Digitalization doesn't show the positive outcomes because of poor connectivity of Internet (2g).

Figure3 Shows the Role of Digitalization during lockdown in Lakhanpur Town.



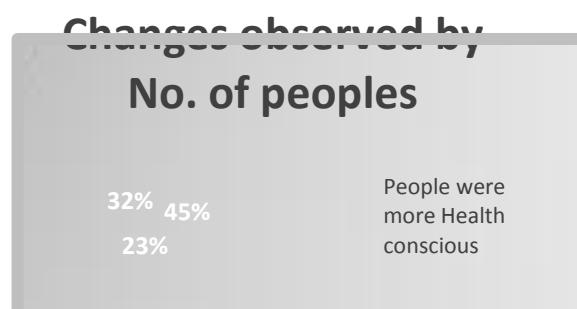
Source- Primary data collection through questionnaire.

The Figure 3 shows the Role of Digitalization during Lockdown in the Lakhanpur Town. We know Internet has become unavoidable in our daily life. Appropriate use of the Internet makes our life easy, fast and simple. The Internet helped us in many ways but for the peoples of Lakhanpur town it was not good. As Majority of peoples said that it is bad and the reason for this is 2g Internet working in my study area due to which most of the students suffered and they faced problems for their online studies.

Changes Observed in Society during Lockdown.

It is really appreciable that almost everyone is cooperating with the government by staying at home. One hopes the pandemic will leave an indelible impression on many of us. People lived in the society of Lakhanpur town were more Health conscious as they maintain cleanliness and follow good discipline in life.

Figure 4 Shows the changes observed in the society of Lakhanpur during covid-19.



Source- Primary data collection through questionnaire.

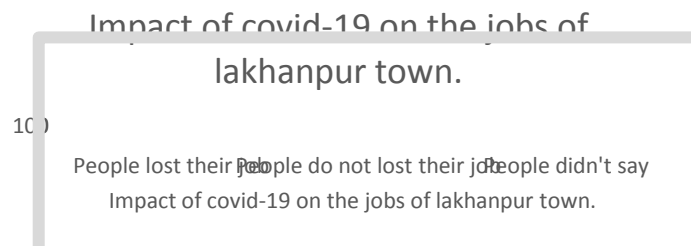
The Figure 4 Shows the changes Observed by No. of peoples in Lakhanpur town. As majority of peoples of lakhanpur town were more health conscious. The Pandemic exposed how important nutrition is for the body, especially when it comes to the immune system. People are more conscious of the type of food they consume. Also, some peoples were panic and fearful for covid-19. But there were also some peoples in the society who said that they don't take covid-19 seriously.

Impact of Covid-19 on the Jobs during Lockdown.

“For India, the report estimates job loss for 4.1 million youth. Construction and Agriculture have witnessed the major job losses among seven key factors,” said the ILO- ADB report, titled ‘Tackling

the COVID-19 youth employment crisis in Asia and Pacific'. But in my study area majority people did not lost their job but there was reduction in their income during lockdown.

Figure 5 Shows the impact of covid-19 on the jobs of Lakhanpur people.



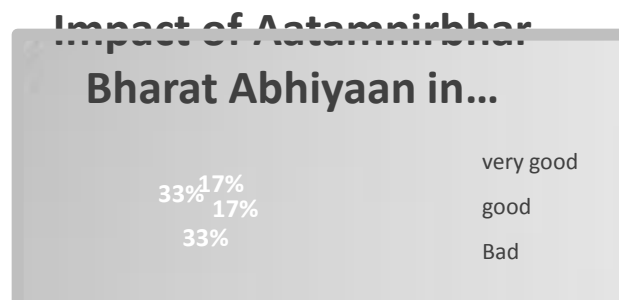
Source- Primary data collection through questionnaire.

The Figure 5 shows the peoples of lakhanpur town who lost their job. As most of the people did not lost their job the reason was most of them were Govt. Employees and students so there was no effect in their job. But peoples who lost their job were mostly the street vendors, daily wagers, factory workers etc.

Impact of Aatamnirbhar Bharat Abhiyaan during lockdown.

The Aatamnirbhar Bharat Abhiyaan is an important mission for the economic revival and progress of the Indian economy during lockdown. But in my study area it didn't show the positive outcomes because majority people didn't know or did not get any benefit from this Abhiyaan.

Figure 6 Shows the impact of Aatamnirbhar Bharat Abhiyaan in Lakhanpur Town.

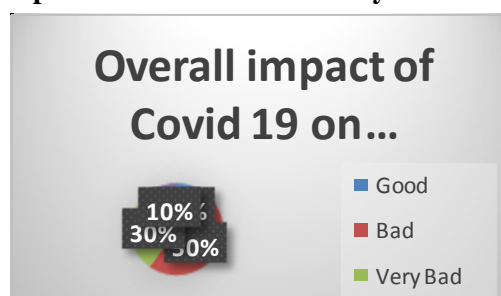


Source- Primary data collection through questionnaire.

The Figure 6 shows the Impact of the Aatamnirbhar Bharat Abhiyaan in Lakhanpur Town. As majority of the peoples said that they don't know about Aatamnirbhar Bharat and the reason for this is the Lack of Awareness among the peoples of the lakhanpur town. Also, some peoples said it is bad because it was not helpful for them as it helped the rich people. Also, some section of the society said that it was good and it was helpful for them in covid-19 to start a new business.

Impact of Covid-19 on Economy India faces a huge decline in government revenues and growth of the income for at least two quarters as the coronavirus hits economic activity of the country as a whole. The impact of coronavirus pandemic on India has been largely disruptive in terms of economic activity as well as a loss of human lives. In my study area, the impact of covid-19 on economy also hit badly.

Figure 7 Shows the overall impact of covid-19 on Economy in the Lakhanpur Town



Source- Primary data collection through questionnaire.

The Figure7 shows the overall impact of covid-19 on the Economy of Lakhanpur Town. As 50% of the peoples said that it is bad because many shopkeepers and businessman faced losses in their business during lockdown. And 30% of the people said that the economy is very bad and reason for this most peoples suffered such as street vendor, factory workers, daily wagers they were lost their job during pandemic.

Conclusion

The socio-economic condition of the Lakhanpur town is among the worst affected. And the economy of the town goes decreased. Many peoples faced problems during covid-19. Many street vendors and small shopkeepers changed their work. People lives in fearful and panic conditions during lockdown. Studies of Students also affected as there is 2g Internet in J&K and students didn't attend the online classes much effectively. People of the town were also unaware of the concept of Aatmanirbhar Bharat Abhiyaan so they do not take much benefit from this. As Lakhanpur town is bordered with Punjab so most of the peoples of this town are working in Punjab But during lockdown these people were most affected as they didn't reached their work place and most of them lost their job during lockdown. With fears of a new recession and financial collapse, times like these call for resilient and strong leadership in healthcare, business, government and wider society. Immediate relief measures need to be implemented and adjusted for those that may fall through the cracks. Medium- and longer-term planning is needed to re-balance and re-energize the economy following the crisis. A broad socio-economic development plan including sector by sector plans and an ecosystem that encourages entrepreneurship is also needed so that those with robust and sustainable business models can flourish. It is prudent that governments and financial institutions constantly re-assess and re-evaluate the state of play and ensure that the 'whatever it takes' promise is truly delivered.

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Reflections on the Geographical View of Man in the Ecosystem

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Abstract :

Man is a difficult subject to be realized, and no science has been able to achieve this distinction, since the concept of man can be developed only in a unified and integrated science alone. Unlike other sciences Geography as a science does not confine itself to the geographical aspects of man alone but carries the entire spectrum of knowledge centred around man - nature syndrome. The basic premise, the unity of all that objectively exists, has saved it from fragmentation, Geography recognises that to the extent a body of knowledge qualified to be called a science, it is both natural and social.

Keywords: Ecosystem, Agriculture, Food chain.,

Introduction:

The holistic approach incorporated in its central objective the Study of spatial dimension of natural and social phenomena so as to synthesize them within a regional frame is essential to geography. The fundamental problem in geography is man-nature interaction, The non-humanized nature is of only marginal interest to the geographer. Nature comes within the orbit of geography primarily as a constituent element of social practice. Man is the focus of geography. According to the author the realm of Geography is 'noosphere', the sphere of planet earth which has been humanized by rational human activity, The pre-eminence of man in geography emerges not from his adaptation to nature but his capacity to interact with it. In order that the humanizing of nature proceeds in the desired direction, man builds social and political institutions. The sphere of man-nature interaction is viewed as a triangle of forces, there being the nature, technology and human institutions. It is this triangle of forces which is the primary concern of geographers, Nature provides the base, technology bends the natural processes, and institutions regulate the man-nature interaction, The concept of ecosystem is a unifying principle which offers an integrated view of reality and serves as a basis for the most relevant view of the functioning of nature, The concept, no doubt, is similar to, and may have even originated from the pre-scientific monistic view of reality. The unifying property of the concept of eco-system has broken the constraints imposed by the complementary inadequacies of the social and natural sciences, The role of geography is particularly important, since it can unify knowledge divided into natural and social sciences and thus attain an ecological perspective, By its very nature, it can significantly contribute to the current debate on ecology and development, particularly in the third world. In Geographer's view of the eco-system, there is no contradiction between ecology and development. His concern with ecology within the framework of an eco-system approach is directed to optimizing, and not maximizing, development. Planning for harmonious development recognizes the unity of nature and man and such planning is possible only on the basis of a comprehensive appraisal of environmental issues. Along with effective conservation and rational use of natural resources, protection and improvement of human environment is vital for the well being of man, This could form the basis of strategy for an accelerated socio-economic development without impairing ecology. Like the seven blind men, sciences grope in the dark to conceptualize the multi-dimensional reality of man; only, the darkness is darker, eyes are more atrophied and the object is far more complex than the elephant. The obscurity is that of the well of discipline; the blindness is that of the subject who is also the object; and the complexity is that of the realm of freedom along the highway of bio-social evolution. Each science, in its own specifically sophisticated manner, ends up with an aspectual distorted and limited vision of that which is definitionally total-dissected limbs of a cadaver being mistaken for the integrated, living, ever-changing organism. Sciences (in the plural) flounder and fall in the quicksand of their own inadequacies, for the concept of man can be developed in a unified and integrated science alone. But spurious claims of false pretenders notwithstanding, such a science has yet to emerge from the shambles of fragmented empires. That the geographical science has

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successfully resisted the temptation of producing a 'geographical man' to compete with the 'political man', the 'economic man' or the 'social man' in the race of stuffed and yet hollow men, is an indicator of its essential weakness and, at the same time, of its inherent strength. It is a symptom of its theoretical anaemia in the sense that the overwhelming concern with the specific minute has, in the recent past, inhibited the development of concepts in general the discipline tending to acquire the dimensions and characteristics of a dinosaur; a huge body, a long tail and a tiny little head. Geographical science having failed like Hamumana to identify Sanjivani, carries the whole mountain of infinitesimal facts on its hefty shoulders. It may, however, be noted that the geographers did not, unlike some of their more revered counterparts in other disciplines, lose touch with the earth while soaring into the ethereal heights of airy nothings, so as to end up in vacuous quibbling, semantic jugglery and meta-theoretical acrobatics in the search for ever elusive profundity. Geography, fortunately, still smells of the earth. The inherent strength of Geography, which has enabled it to steer clear of the pitfall of fragmenting that which cannot be fragmented, flows from the very nature of the discipline. It is rooted in an essentially monistic view of the material world. Its basic premise is the unity of all that objectively exists. Geography does not Only reject the segmentation of the human condition for analytical purposes and consequently the fragmentation of the social Sciences but proceeds much further along the line. It denies the Validity of a taxonomy of knowledge, where in the categories of the first order are the natural and the social sciences. To the extent that a body of knowledge qualifies to be a science at all, it is both natural and social, for, it studies the cause-effect complexes which transcend these distinctions. Such is the nature of matter in motion through space and time. Objectively, it is certainly so: but Geography, perhaps alone, among the natural and social sciences, almost self-consciously, recognises it to be so. Such a recognition is the *raison d'être* of geography. The Separation of the whole into man and his environment", said Herbertson, "is a murderous act the living whole is no longer the living whole when it is so dissected, but something dead and incomplete."

In the process of the systematization of knowledge of that which objectively exists along the space-time continuum, the complementary principles of Geography (space) and History (time) are of crucial significance. Shorn of its idealistic content, the following equation developed by Kant, provides the necessary tool to place History and Geography on the map of knowledge: History: Time: : Geography : Space Viewed thus, Geography is concerned with the spatial dimension of the entire system of inter-dependencies and not with one of its aspects or facets. The holistic approach is, thus, essential to Geography and has enabled it to sustain its basic macro-cosmic concerns in the face of the evolving specialisms within its generic fold. It is able to do so by identifying as its central objective the study of spatial dimension of natural and social phenomena so as to synthesise them within a regional frame. It builds a hierarchy of totalities from the micro to the macro — along the spatial scale.

Viewed in the above perspective, how does Geography contribute to the conceptualisation of man? What is the basic question about the nature of man that it poses? From this point of view, the fundamental problem of Geography is that of man-nature interaction. The work of the geographer is contingent upon the recognition of the unity of the material world through the mechanism of interactions between social man and nature. The essentiality of man and nature is based on man as a natural being and natural nature as a human reality. Since the naturalization of man and the humanization of nature proceed simultaneously through man's Interaction with nature, human history may be viewed as a continuation of and a qualitatively new stage in, natural history—the two constituting a differentiated unity. It is no doubt true that primeval nature is prior to man and continues to exist without him everywhere except on the micro-dot of a planet in the vastnesses of the universe. This non-humanized nature, which has not naturalized man, is of only marginal interest to the geographer, Nature comes within the orbit of geography as a constituent element of social practice. Man interacts with nature through labour, transforms it and himself gets transformed in the process. This man, who makes himself in remaking nature, is the focus of Geography.

In the process of transforming nature and himself, social man moves from the realm of necessity to that of freedom in the sense in which Spinoza conceived the latter: "recognized necessity". It may, however, be noted, as Engels has rightly stressed, that "freedom does not consist in the dream of independence of natural laws, but in the knowledge of these laws, and the possibility this gives of systematically making them work towards definite ends". Freedom and necessity are not, therefore,

mutually exclusive categories. Freedom should not be confused with the self-determination of the spirit', or the so-called "freedom of will" which puts it outside the purview of the compulsions of nature. Neither should necessity be equated with mechanistic determinism, which negates the role of human will and considers the action and behaviour of man as the function of objective nature alone.

To the extent that man does not understand the processes of nature through social practice, he is in the realm of unrecognised necessity; to that extent he is unfree, a slave crouching in awe and supplication before the rising sun or the mighty mountains. As man marches onwards on the basis of understanding natural laws and systematically making them "work towards definite ends", he steps into freedom though continuing to be within the gravitational field of necessity, which no longer remains blind but becomes an Instrument of conscious social practice. The hold of necessity continues, nevertheless. In fact, it becomes more and more rigorous with every technological advance-with every step towards freedom. With rudimentary knowledge about the property of stones and elementary acquaintance with the laws of applied mechanics, the palaeolithic tool maker became relatively free vis-a-vis his hominid ancestor, but was still at the mercy of nature—the vagaries of climate or the ferocity of predatory animals. The modern tool maker in an engineering workshop has extended the orbit of his freedom by recognising and utilizing a far larger number of very much more complex Laws of nature. Freedom, therefore, transforms the nature of the role of necessity; it does not weaken it. The freer man becomes, the more he recognises the chains that bind him. These chains cannot be broken; they can only be utilised through social practice. Even if we conspire with fate ala Omar Khayam, we cannot "shatter it to bits"; but we can certainly transform the external world of nature "closer to our heart's desire" by cognising the Laws that govern it. The realm of freedom is the noosphere, the sphere of the planet earth which has been 'humanised' by rational human activity. The traditional division of the planet into the lithosphere, hydrosphere, atmosphere and the bio-sphere may interest the geologist, the hydrologist, the meteorologist or the biologist; but it is of marginal concern to the geographer. However, when the alluvial fan in the Himalayan valley gets transformed into a system of terraces, when the mighty torrents are tamed to fertilise the thirsty earth, when a new crop rotation system is evolved to take advantage of a short growing season, when a wrong grazing practice leads to deforestation-then the segments of the litho, sphere, the hydrosphere, the atmosphere, and the biosphere get synthesised and transformed into the noosphere, the realm of cognized necessity. This is the realm of Geography. When Plewe stated that "in Geography, man is the measure", he was not repeating an anthropocentric platitude. Man is the measure in Geography not because he is the "* principal inhabitant of the plant", as Cholley put it or because he, of all living things, has a divine soul, as Ritter would have wanted us to believe, but because and only because he is the creator of the noosphere. He alone, among the known species of the planet, does not just adapt himself to nature but actually interacts with it; who is not only a passive element but is an active factor in the eco-system; who does not only vegetate and survive within the orbit of blind necessity but operates within a realm of freedom, cognising laws of nature so as to transform it. And yet, as the evolving crisis would show, there are very definite limits which he can dare to transcend only at his peril. Recognition of these limits would be the recognition of necessity today which would entail nothing less than freedom from illusive affluence for a tiny minority of the human race and at the 'same time from pangs of inexorable deprivation for the rest. When man emerges from the orbit of blind necessity, his labour casts off "its first instinctual form". The "naive utilization of nature solely through the medium of the organs of the body" is replaced by conscious production. The unity of man and nature, at this higher level, is mediated- by the tool. Marx has brought this out with inimitable elegance: 'The instrument of labour is a thing, or a complex of things, which the labourer interposes between himself and the object of his labour, and which serves to conduct his activity onto it. He makes use of the mechanical, physical and chemical properties of some things in order to set them to work on other things in accordance with his purposes.' In other words, nature provides the object of labour; the instrument of labour is appropriated nature; and human labour is the active principle through which already "appropriated nature" further appropriates nature. This is the basic content of man-nature relationship. By definition, this interactive system is dynamic and ever changing providing the basic foundation for bio-social processes of change. In order to be able to interact effectively with nature through the use of the instruments of labour, man has to come to terms with other men and, as a consequence, has to build a system of institutions economic, social and

political. The latter constitute facets of a complex but integrated system, which makes social life possible and the processes of humanising nature to proceed in desired directions. In the light of the above, the Noosphere, the sphere of man-nature interaction - may be viewed as a triangle of forces. Nature provides the base, lays down the limits of freedom and indicates the direction along which optimum appropriation through social labour is possible in the long run. Technology aids natural processes, bends them to human (and humane!) purposes, modifies them and thus extends the range of freedom. Institutions are either conducive to or restrictive of man - nature interaction. It is this triangle of forces which is the primary concern of Geography. What some-times appears to be an integration of heterogeneous phenomena is for the geographer a complex and interactive system, in which man plays the most crucial role. The earth, whose variable character is studied by geography, is the world of man. It is in this context that the concept of the eco-system acquires a specific connotation in geographical studies. The concept of the eco-system, as a holistic complex of inter-dependencies, is perhaps the most significant of the unifying conceptualisations of objective reality. This has arisen in the world of knowledge as a timely corrective to the academic tradition of the post-industrial society based on the disaggregation of the totality into facets, aspects, parts or fragments for deeper study and analysis, thereby engendering the knowing of more and more about less and less. The gap between the essentially holistic character of the objectively existing system and its fragmented cognition through disaggregated analysis has already become a serious constraint on and had led to crisis in knowledge. It is the experience of history that at such critical moments, unifying principles emerge which provide the basis for a *weltanschauung*, an integrated view of totality. The four-element four-humour universe of Hippocrates, Aristotle and Ptolemy, the principle of gravitation of Newton, the theory of evolution of Darwin, the dialectal and historical materialism of Karl Marx and the $E=MC^2$ equation of Einstein may be considered to be such unifying principles of knowledge, emerging on the scene as synthetical constructs integrating disorganised findings into a system of ideas and bringing the entire spectrum of sciences into their orbit of influence. It is being suggested that the concept of the eco-system is a unifying principle of this order, which though rooted in all the sciences still transcends them. It provides the closest conceptual approximation to the integrated complexity of objective reality and may, therefore, serve as the basis for the most relevant ideology for the contemporary world.

Like all the significant ideas of science, the scientific conceptualisation of the eco-system, which is a recent product of the intellectual crisis of the post-industrial society is rooted in a pre-scientific tradition of great chronological depth and is, in fact embedded in the basal psyche of the homo sapiens. The system of animistic and totemistic beliefs, characterising the proto-ideology of the Palaeolithic age, was based on unity of all that exists and transcended the duality of the biota and the abiota, of the animal and the human, of the material and the spiritual. The worship of the Mother Goddess, which has been the substratum of the spiritual ideas of the agricultural peoples all over the world, was similarly rooted in a holistic view of the Universe, which subsumed the man-nature dichotomy into a broader unity though in an inverted form. The mysticism of the orient, which continues to wield considerable influence over the mind, resolved the subject-object, man-nature contradiction through a monistic view of reality. The modern concept of the eco-system has such a distinguished parentage. Just as science has arisen out of magic; so has this scientific conceptualisation emerged from pre-scientific intellection by assimilating to kernel of truth and rejecting its pseudo-spiritual clap-net. A proper development of this concept both epistemologically as a model of the universe and methodologically as an analytical tool, has to contend with the continuing rigidities of the fragmented hierarchies in knowledge. While the social sciences have moved towards a certain degree of internal cohesion, the world of non-human nature is still alien to it, at best producing unnecessary noise in their sophisticated computer programmes. The agricultural economist would rather not dirty his hands with the soil, this nauseating residual in his regression model, which cannot be wished away. The incapacity of the natural sciences to go beyond the rigid limits of their sub-system is no less alarming. The internal integration of the natural sciences has at best produced the science of ecology. In their just concern with the autotrophs and the heterotrophs, the ecologists, tend to forget that the homo sapiens constitute a category qualitatively different from the other heterotrophs, that their explanatory system is incapable of accounting for the behaviour of social man; that they are asking only limited questions and can, therefore, get only inadequate and partial

answers. At best, they recognize man as an element in the man and nature syndrome and have shown a unique incapacity to recognise the reality of man in nature. They fail to see that the rationality of man is as much natural as the irrationality of the monsoon wind, the chernozem or the xerophyte. The unifying concept of the eco-system has arisen to break the constraints imposed by the complementary inadequacies of the social and the natural sciences. While the former cannot come to terms with the animality of man, the latter cannot come to terms with his humanity. It is in the background of such a serious crisis in knowledge that the geographical science has a modest but a significant role to play. Though deeply rooted in nature, the discipline has manifested a unique capacity to come to terms with man. This enables geography to bring a vitally important input in the current debate on ecology and development that is raging in the world, particularly in its third segment. The geographer's conceptualisation of eco-system helps him to steer clear of two erroneous strategies—first, the strategy of "development" at all costs leading to ecodestruction; and second, the strategy of rejecting development in the name of ecology. For Geography, the ecology development contradiction is a false contradiction. The laws of nature not only impose constraints on but also point to the direction of optimal development. Unless this dual relationship between the ecological correlates and the development process is fully recognized, one tends to get neck deep in the morass of "hippie" ecology, the spurious environmental concerns of the "flower people" for whom nature is a virgin which should not be violated through human intervention. The latter view, under different colours and hues is being assiduously sold by some of the ideologues of the developed world to the developing countries. The situation is rather ironical. The advice not to proceed along the path of development through proper resource utilization comes from those nations who are themselves the major culprits of eco-destruction through the dysfunctional monopoly of natural resources in an international system of inequalities, wherein 20% of the world population is permitted to misuse 80% of its resources, and wherein the city of Chicago alone is allowed to consume more oil than the second most populous country in the world.

There appears to be considerable weight in assessment of some scholars of both the developed and the developing world to the effect that the anti-development injections, being issued for the benefit of the innocents of the third world by the prophets of doom of the Club of Rome, or the dons of MIT and or Sussex, are really intended to widen the North-South gap and perpetuate the poverty and misery of the bulk of humanity. Our concern with ecology within the framework of an eco-systemic approach is directed to optimising (and not maximizing!) development so as to extricate our people from the vicious stranglehold of hunger and poverty; for, in the third world hunger continues to be a most potent pollutant - an eco-destructive force of tremendous magnitude for it destroys man, the crucial component of the contemporary eco-systems. Those who lose their night's sleep over the fate of a blighted tree or a faded flower should sometime also look at the bloated bellies, sunken eyes and the skinny arms of hungry children. It is heartening to note that as early as in the Fourth-Five Year plan, a fairly clear understanding about relationship between ecology and development was discernable. It was stated therein: "The physical environment is a dynamic, complex and inter-connected system in which any action in one part affects others. There is also the inter-dependence of living things and their relationships with land, air and water. Planning for harmonious development recognizes this unity of nature and man. Such planning is possible only on the basis of a comprehensive appraisal of issues—particularly economic and ecological.....It is necessary, therefore, to introduce the environmental aspects into our planning and development. Along with effective conservation and rational use of natural resources, protection and improvement of human environment is vital for national well being. It is particularly important that long term basic considerations should prevail over short term commercial considerations, the social costs and benefits be used as the yardstick rather than private gains and losses." The above statement provides the basic guidelines for formulating a proper strategy which would simultaneously strengthen the integrity of the eco-system, on the one hand, and, on the other, ensure an accelerated rate of socio-economic development.



Geographical Analysis Monthly Rainfall In Udgir

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Abstract:

Rainfall as the priming ecological parameter has created an variety of forming enterprises or system in the word The Nation has four seasons winter, summer, monsoon, rainy season and post monsoon period Climate change is a growing problem of the world. The changes to earthiest dimity will normality affect the plants future and the future of all who inhibit it. Summer monsoon rain fall in indiareflects multiannual and decadal changes in climate but content treats are not strong or ling enough to as climate change the climate of india comprises a wide range of weather additions across a vast geography scale and varied topography making generalizations difficult.

Keywords: climate, rainfall, monsoon, season.

Introduction:

The climate of india comprises a wide range of weather condition across a vast geographic scale and varied topography. Makng generalizations difficult. Based on the koppen system indian hosts six major climate subtypes ranging from und desert in the west alpine tundra and glaciers in the north and humid tropical regions supporting rainforests in the south west and the island territories many regions have starkly different microclimates. The notion has four seasons Winter (December, January, and February) sunumer (march, april and may) monsoon rainy season (june to September) and a post monsoon period (October to November). India's geography and geology are climatically pivotal the there desert in the north west and the Himalayas in thenorthly work a tandem to effect a culturally and economically important monsoonal region. As earths highest and mostmassive mountain range the Himalayas bar the in flux of frigid katabatic winds from the icy tibetan plateau and northerlycentral asia most of norindia is thus kept warm or is only mildly chilly or cold during winter the same thermal dam kerpsmost regions india not in summer. Rainfall as the priming ecological parameter has created on variety of farming enterprises types or systems in the world it isthe dominate single weather element influencing the intensity farming when it is characterized with scantiness concentrationintensity variability and unreliability It is all the more important in the minimal regions where average or normal rainfall isgenerally necessary of successful crop production climate change is growing problem of the world.

Objective:

1. To find out monthly rainfall in udgir Tahsil.
2. To find out impacts rainfall on the rainy season,

Study area

Udgir Tahsil is situated in south karnataka and Telangana state. west part of marathwada region in Maharashtra state it is bordered by on the northern side Jalkot tahsil and Ahmedpur tahsil in eastern side Mukhed tahsil and ShiruAnantpal Tahsil in Western side. 18° 23' 45.96''N and 77° 07'03''E repectively The Udgir tahsil in Latur district of Maharashtra in one of the sine 1982 the state it comes into existencas a result of the dicison of osmanabad in 16 August 1982 It consists of fair sub divison mainly laturnilangausa, udgir andahemdapur and (10) ten Taluka

Methodology:

The data used for this study has been collected from secondary sources. The data has been collected through fited visits and secondary data has been collected district collector office latur. The various methods and techniques has been used for the purpose of analysis and interpretation The details relabeling the barious methods and techniques are discussed in the thesis of appropriate place the data thus collected through primary and Secondary sources were processed the represented by statistical and cartographic techniques as the study prosecutes to be geographical spirit the chrographic and cherology methodologies have been adopted,

Discussion:

Average rainfall data monthly rainfall in Udgir Tahsil for year-2020

Month	Rainfall (mm)
January	0.5
February	0.5
March	0.5
April	0.5
May	4
Jun	8.5
July	8.6
August	8.9
September	8.7
October	4.7
November	0.7
December	0.6

(Source: Agriculture office Maharashtra govt)

Climate of Udgir tahsil in latur district is not and dry. The mean annual rainfall of Udgir Tahsil ranges 400 to 1700 mm the highest rainfall was recorded in sw monsoon raining from 80 to 85% of the total annual rainfall in different taluka. If you see the rainfall data of one year it suggests that rainfall in 2020 i.e. 23.803 mm generally the rainfall in 2020 months of January to December in considering The highest rainfall is 8.9 mm in July and the lowest rainfall is 0.5 mm January to April months.

Conclusions

If you see the rainfall data of one year it suggests that rainfall in 2020. 23.208 generally the rainfall in 2020 month of Jan to Dec is considered the highest rainfall is 8.9 mm in August any lowest rainfall is 0.5 mm Jan. to April month

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Appraisal of Primary Education Facility and Education background of Girls/Women in Dhule

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Abstract

Basically very little research has been made on the following stated research topic in the field of Geography so the research wants to bring forth the nature of women development through the education with keeping Geographical perspective. Indian culture regards Earth as "Dharti Mata" (Mother) as a symbol of women. This paper aims at finding out the likely determinants of such wellbeing and their intense relationship. It examines factors influencing primary education of respondents on interrelated question based on the objective of the study. The basic objective of the study analyses the distribution and development of education facilities in the changing geographical nature of settlement of the respondent girl/women.

Introduction-

Here, begins general comments on the important role of education in the development process. These are seen as determinants of growth and development as well as objectives of the development process. Basically very little research has been made on the following stated research topic in the field of Geography so the research wants to bring forth the nature of women development through the education with keeping Geographical perspective. Indian culture regards Earth as "Dharti Mata" (Mother) as a symbol of women. There are several factors which are responsible for the wellbeing and quality of life of the women in terms of education. This paper aims at finding out the likely determinants of such wellbeing and their intense relationship. It examines factors influencing primary education of respondents on interrelated question based on the objective of the study. Education is closely related to health of the women and their population. The continued improvement health of women is closely related to her educational attainment has within their reach and means. The declining fertility rate in Dhule district has been attributed to several reasons, such as educational attainment of the women, better health and family planning, delivery system, higher perception income, beside overall economic development of Dhule district. Economic conditions of the Dhule district over a period clearly prove the relationship between economic development and declining fertility rate. There are several studies that prove the fact very clearly highlight on literacy in 2011 Census.

Study area ____-

Dhule district is one of the important districts of Maharashtra state, located in the north direction lays Madhya Pradesh, the district in terms of location, shape, tribes and small size and administrative place. The Dhule district known as administrative headquarter of western Khandesh since British period. Dhule is a district headquarters and located in north western part of Maharashtra state. It is located at the tri-junction of Gujarat, Madhya Pradesh and Maharashtra state. The district having typical triangular shape, it extends between 20°28' North to 21°61' North and 73°50' East to 75°11' East Longitudes. The district has 8063 sq. km area which is 2.6 per cent of the Maharashtra state. There is Satpuda Mountain located in northern side and Sahyadri spurs in south-western part of the district. The central part of the district is covered by the Tapi basin having very fertile soil. Dhule district comes under the dry deciduous climatic region. The average rainfall of the district is 674 mm, from latter half of February; temperature increases steadily till May, which is hottest month of the year with mean maximum temperature 40.7°C, January is coldest month with mean daily minimum temperature at 16.2°C.

Objective –

To study the distribution of primary education facilities for the women/girls in the Dhule district.

To study girl/women development appraisal through education.

To examine relationship between primary education and geographical background of the women.

Hypothesis – There is an inequality in primary education institutes distribution in the Dhule district geographical region.

Methodology – The basic objective of the study analyse the distribution and development of education facilities in the changing geographical nature of settlement of the respondent girl/women. So it is planned to collect primary data covering wide range of demographic, economic, social and geographical factors and attitudinal aspect. A pre-tested questionnaire was prepared, tested used for this purpose. The interview scheduled was adopted and researcher directly collected data from all 169 samples with help of some investigators in the study area. For the purpose of this study following research methods have been used:- Literature Survey, Organization of field work, Secondary Data, Primary Data, Techniques and Processing Tools, Laboratory work and Review previous literature etc.

Conclusion -

Women Education Facilities-

The development of the society is influenced by many factors, such as education of the women but it is considered as not important one. Education sustains to think rationally about every element including women. The nation which is having strong base of education and equal participation of men and women with high literacy rate can enjoy the highest point of the development in all fields. In fact women education is most important for the overall development of the society, because they constitute nearly half population of the nation. Educated women can become sculptors of bright future of the society and nation. Educate women may perform their roles such as daughter, wife and mother with the perfection as well as can become economically self-reliant and achieve the proper status in the society. But still inequalities are found in men and women education participation is general all over the world. Women are lagging far behind in education than men. Mainly variation in physiographic and thereby many various socio-economics factors and geographical nature of the settlement impact on women education. Dhule district is well developed in the field of education, therefore participation and development of women in education is found to be at satisfactory level. However, disparity was found with geographical region and socio-economics factors has impact on the women education compare with the men in the different villages/settlements and tehsils of the district. The education has made phenomenal progress in Indian society. However, it had no equal influence throughout the nation. Even though the education institutes and financial budget is on increase in the urban and rural parts of India as whole but it has very low numbers in the rural compared to urban India. There is continuous increase in education at institutes in the district. The health of the women maintained in this district has been attributed to education progress. Education is most significant factor, accounting for the improvement of the women life. Women, an important component of balanced social environment, has a cumulative and chain effect, other issues such as income of the family, job opportunities, status and health of the women, standard of living, awareness and life style etc. This collectively impact on the achievement in human development. Here, education facilities and its distance from the residential place of women is influencing factor on participation and continuation in education.

Primary Education (School/Institutes) for Women –

In one of the tehsil of Dhule district, Shirpur tehsil has only 2 primary schools for girls, there are 298 primary schools working at present although girl student's participation percentage is 47.95 per cent. Shindkheda tehsil has 225 primary schools out of total only 8 primary schools for girls; there are 46.55 per cent girl students. Sakri tehsil has 517 primary schools, out of them only 11 primary schools for girl students. There were 49.90 per cent girl students learning in the primary school. Dhule tehsil has 428 primary schools; there are only 19 primary schools for girl students. There were 50.11 per cent girl students learning in the primary schools. While the district has 1425 primary schools, there were only 39 primary schools for the girl students. There were 49.08 per cent (92159+10740) girl students learning in the primary schools. Here, it is clear that the share of girl students in the primary education is same compared to the boy students but there is no special school for the girl students in the district.

Table. No. 1 - Primary School in Dhule District

Tehsil	Particular	No. of Institute	Total Primary School			Toilet Facility
			Teacher	Boys	Girls	
SHR	Total	298	1103	20844	17717	289

	Girls	03	31	0	1489	3
SNK	Total	217	964	17769	14380	217
	Girls	8	19	00	1101	07
SAK	Total	506	1545	24173	22286	459
	Girls	11	55	0	1794	10
DHU	Total	404	2204	43933	37776	394
	Girls	24	136	0	6356	24
District	Total	1425	5816	106719	92159	1367
	Girls	46	241	0	10740	44

Source: District Socio-Economic Report-2012, Statistical Dept. Dhule

Dhule district has large number of population belonging to Other Backward Class (OBC). Their social status, economical condition and educational development are having satisfactory level in the district. Majority population belongs to OBC category whose occupation is farming because they have agriculture land. OBC respondent women's data was collected through the surveying in the various geographical region of the study area.

Table No. 2 Education Background of OBC Category Girl/Women

Education	Settlement				Total
	Urban Area	Road Site Area	Hilly Area	Plain Area	
Educated	08	33	19	20	80
Non-Educated	15	24	09	26	64

Source: Field Work Jan & Feb.2015

A total of four types of geographical features for example urban area, Road site, Hilly Area and Plain Area in the rural settlement have been considered to study women education background of the district. A total of 23 sample taken from urban area, 57 from Road site settlement, 28 from Hilly area and 46 from Plain area settlement of women were surveyed in urban areas. Out of them 8 from urban, 33 from road site area, 19 from hilly area and 20 from plain area settlement women were educated and 15 from urban, 24 from road site, 9 from hilly area and 26 from plain area settlement were uneducated. This means that 65 per cent from urban, 42 from road site, 32 from hilly area and 56 percent women are deprived of this education due to the very limited and scattered distribution of women schools. The hypothesis - There is an inequality in primary education institutes distribution in the Dhule district geographical region have come true after analyzing the data collected while conduction research. Of course, there is a need for more facilities in the field of women education.

Result–

1. Education facilities are sufficient in relation to population in both rural and urban settlement but there are very less numbers of women participation in primary school education.
2. Financial budget is increasing day by day, but it has been low numbers of women registered in school in the rural settlement compared to urban settlement.
3. **There is an inequality in primary education institutes distribution in the Dhule district geographical region hypothesis is true.**

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Geographical Study of Cotton and Sugarcane Crops under Landuse in Parbhani District (Ms).

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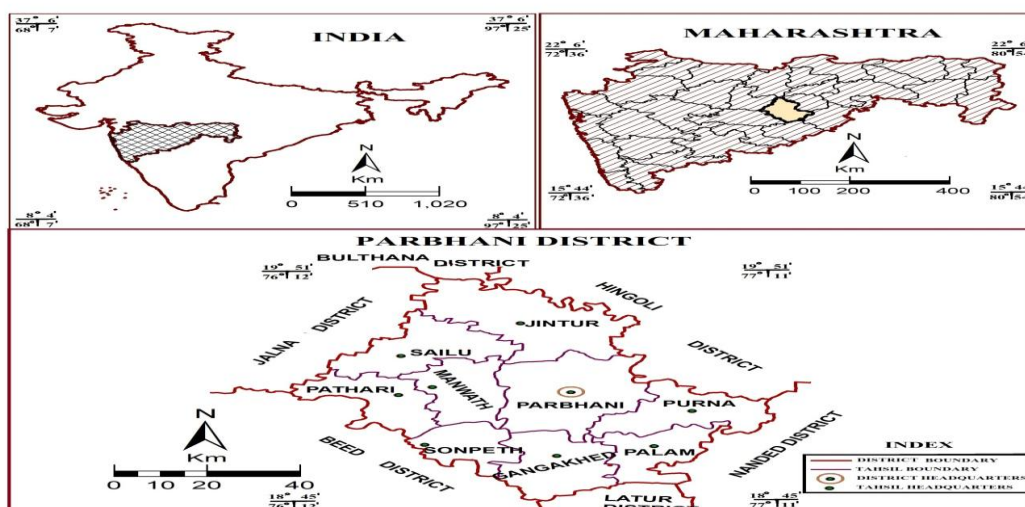
Introduction:

In this paper an attempt has been made to analyse the two crops under agricultural landuse at tahsil level in Parbhani District of Maharashtra. Agricultural landuse gives a wider choice for production of variety of crops in any region in order increase production related activities. It is just opposite of crops specialization. The crops agricultural landuse was studied for twelve years (2001-2006 to 2007-2012) in order to find out two crops agricultural landuse. There are three cropping seasons in study region, namely kharif, rabbi and summer. Kharif season begins in June or July and ends in September or October whereas rabbi season starts from March and end in may. Cotton is the major kharif crops grown in study region while Sugarcane are grown in study region in both kharif and rabbi seasons in Parbhani district. Agricultural landuse grows on large number of crops which are practiced in rain fed land to reduce the risk factor of crop failures either of drought or less rain. Raising a variety of crops on arable land is known as crops agricultural landuse. It is the reflection of physical, socio economic and techno organization inputs. Crops agricultural landuse indicates multiplication of agricultural crops which involves intense competition for region, scope for crop rotation and effect of double cropping. These obtained data was later on converted into percent to total geographical area and then categorized into various groups for identification of agricultural landuse. The Sugarcane and Cotton crops volume of change has studied for twelve years in present paper.

The Study Area:

Parbhani is chosen for a study region. Parbhani district located between $18^{\circ}45'$ north to $20^{\circ}01'$ North latitudes and $76^{\circ}13'$ East to $77^{\circ}26'$ East longitude. Administratively, it is bounded on the north by Hingoli District, on the east by Nanded, on the south by Latur, on the west by Beed and Jalana districts. The area of study region is 6511 km^2 , which is 2.11 percent of the whole area of the Maharashtra state. The population in the study region is 1527715 (2001 census) and 1836086 population in 2011 (Feb-2019 as per aadhar – 1964700) which is 1.63 percent of total population in Maharashtra. The study region is administratively subdivided in to nine tahsils respectively Parbhani, Pathri, Manvat, Selu, Jintur, Gangakhed, Palam, Sonpeth and Purna,.

Map:01 Parbhani District - Location and Boundaries



Objective of the Study:

The present research Paper has been undertaken to make on in-depth and comprehensive study of two crops agricultural land use in Parbhani district by evaluating following objectives:

1. To study the Cotton and Sugarcane crops under agricultural land use of study region
2. To study the regional variation and volume of change in Cotton and Sugarcane crops agricultural land use of study region.
3. Suggesting remedial measures for better Cotton and Sugarcane crops agricultural land use of study region.

Data Base and Methodology:

The given data was collected through primary and secondary sources, Secondary data obtained from socio-economic review, district census, were processed and presented by statistical and cartographic techniques, Researcher studied spatial as well as temporal changes in area under major Cotton and Sugarcane crops agricultural land use in Parbhani district. From 2001-2006 to 2007-2012 for the present research paper work author has been used the following method to calculate different aspects.

Explanation:

Spatial analysis of Cotton and Sugarcane crops under agricultural land use in Parbhani district. Agriculture is the main economic activity in the study region. 70.50 % population is engaged in agriculture in study region. Cotton and Sugarcane are grown in study region in both kharif and rabbi seasons in Parbhani district Due to the location and physical setting, Irrigation and soil the agricultural land use pattern of the region under study differs from tahsil to tahsil crop under agricultural land. The pattern of agricultural land use was shown in map. Table appears to have been resulted from a process of land exploration within the frame of crops extension of the under area change of volume in 2001-2006 to 2007-2012. Physical and socio-economic complex are modified by the expansion of irrigation and growth of population. There is a change in geographical factors as physical features, soil, slope, climate, temperature, and rainfall trend study of cropping in the entire study region. Tahsilwise trends in agricultural land use pattern in Parbhani district is shown in table with this Cotton and Sugarcane are generalized picture of two crops agricultural land use pattern of the study region.

Table:01 Tahsilwise Volume of Change in Cotton and Sugarcane crops under land use in Parbhani District (Area in 000 hectare)

Tahsil / Land use crops	Cotton Crop			Sugarcane Crop		
	2001-2006	2007-2012	Volume of change in %	2001-2006	2007-12	Volume of change in %
Parbhani	34594 18.66	37567 21.15	+ 2.49	4559 2.46	4279 2.41	-0.05
Gangakhed	31432 34.58	15733 24.59	- 9.99	881 0.97	894 1.40	+0.43
Pathri	21943 32.36	29400 39.76	+ 7.40	1540 2.27	3472 4.69	+2.42
Jintur	31360 35.42	29600 25.19	- 10.23	955 1.08	48 0.04	-1.04
Purna	17806 25.24	21250 25.08	- 0.16	1135 1.61	4771 5.63	+4.02
Palum	14508 18.93	20600 31.42	+ 12.49	679 0.89	168 0.26	-0.63
Selu	27769 26.16	28717 26.45	+ 0.29	4383 4.13	337 0.31	-3.82
Sonpeth	21979 38.31	16667 25.11	- 13.20	1634 2.85	1707 2.57	-0.28
Manvat	6015 22.87	20117 29.91	+ 7.04	800 3.04	1021 1.52	-1.52

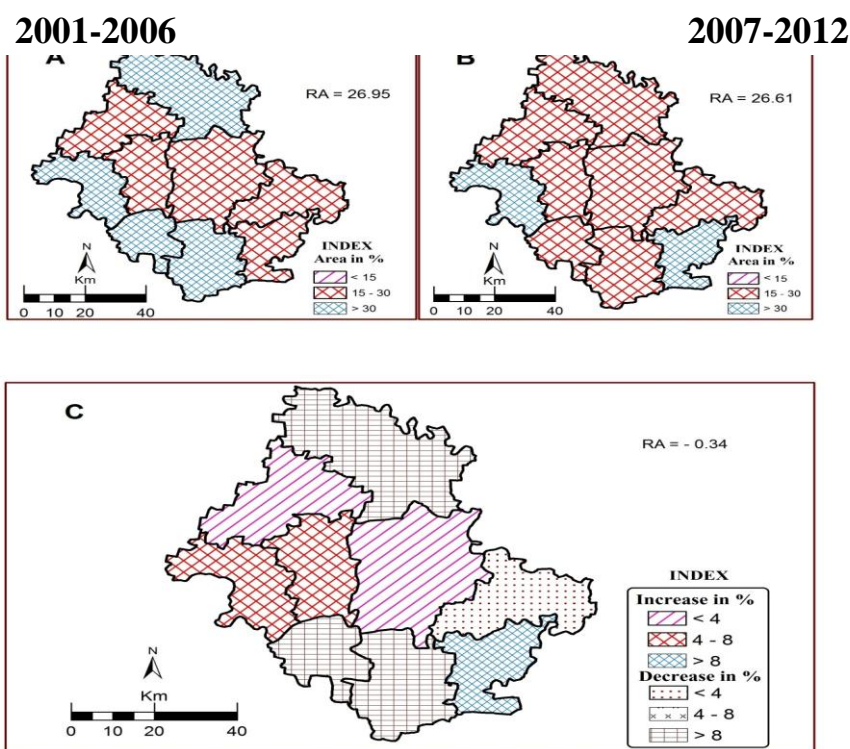
Parbhani District	207406 26.95	219651 26.61	- 0.34	16566 2.15	16697 2.02	-0.13
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Source: Agriculture Department, Land Record Office, Parbhani & Computed by author.

1. Cotton Crop

Cotton is one of the leading and most important crops in the study region and it is raised in Khrup season in the Parbhani district. Cotton occupies 26.95% land of the total agricultural area in Parbhani district during 2001-2006. Out of the total gross cropped area about 26.61% area was under cotton during 2007-2012 in the study region. It is increased from 207406 hectare to 219651 hectare of the total gross cropped area in during the investigation period in the study region. The area under Cotton was 15 percent to 30 percent Cotton was found in Parbhani, Purna, Palum, Sailu and Manvat tahsils while above 30 percent area under Cotton crop area was observed in Gangakhed, Pathri, Jintur and Sonpeth tahsils in the study region in during 2001-2006 (Map No.2A). The highest area is found in Sonpeth tahsil (38.31%). The lowest area under Cotton is found in Parbhani tahsil (18.66%). This crop area has averagely decreased 0.34 percent during study period. In 2007-2012, Pathri (39.76 percent) tahsil has found higher percent area under Cotton. After a span of twelve years, the area under Cotton above 30 percent area under Cotton was observed in Pathri (39.76 percent) and Palum (31.42 percent) tahsils whereas 15 percent to 30 percent Cotton area was found in Parbhani (21.15 percent), Gangakhed (24.59 percent), Jintur (25.19 percent), Purna (25.08 percent) Sailu (26.45 percent), Sonpeth (25.11 percent) and Manvat (29.91 percent) tahsils during 2007-2012 in the study region (Map No.2B).

Map No. 2 (A & B) Tahsilwise Distribution of Cotton



Map No. 2(C) Tahsilwise Volume of Change in Cotton Area (2001-06 to 2007-12)

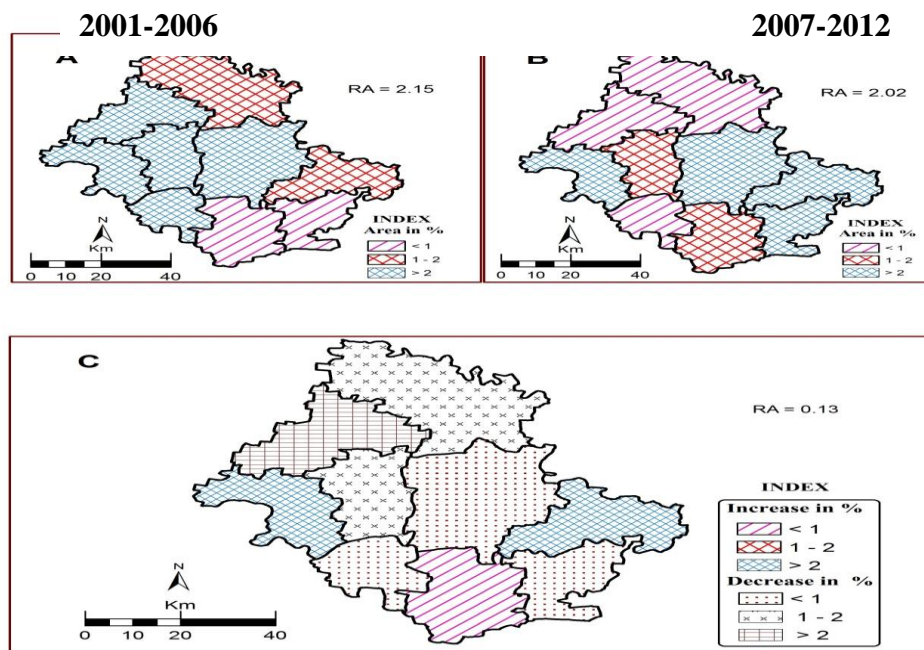
Parbhani district is under Cotton area decreasing volume of change in 0.34 percent in this investigation period 2001-2006 to 2007- 2012. Totally Cotton under Cotton crop area is decliner this study period of Parbhani district. Both positive and negative changes were observed in area under Cotton crop area in the study region. Below 4 percent positive change in Cotton crop area was experienced in Parbhani (2.49 percent) and Sailu (0.29 percent) tahsils whereas Pathri (7.40 percent) and Manvat (7.04 percent) tahsils have recorded moderate area under Cotton between 4 percent to 8 percent area and above 8 percent area was observed in Palum (12.49 percent) tahsil. Below 4 percent negative change in area under Cotton crop area observed in Purna (0.16 percent) tahsil while any

tahsils have not negative change recorded moderate area under Cotton between 4 percent to 8 percent area whereas above 8 percent negative change noticed in Gangakhed (9.99 percent), Jintur (10.23 percent) and Sonpeth (13.20 percent) tahsils in the study region in during the period under study (Map No.2C).

2. Sugarcane Crop

Sugarcane requires tropical climate. The temperature 20° to 26° centigrade's is suitable for sugarcane cultivation. The rainfall between 1100 to 1500 mm is adequate for the growth of sugarcane. Sugarcane was cultivated on 2.15 percent area in 2001-2006 on irrigation in central and west parts in study region. The distribution of Sugarcane in study region is mainly influenced by soil types, relief and rainfall amount. In 2001-2006, Sugarcane is sown on 16566 hectare (2.15%) of the gross cropped area of the Parbhani district was under Sugarcane crop area. It is increased from 16566 hectare (2.15%) to 16697 hectare (2.02%) of the total gross cropped area but decreased averagely Percentage area in during the investigation period in the study region.

Map No. 3 (A & B) Tahsilwise Distribution of Sugarcane



Map No. 3 (C) Tahsilwise Volume of Change in Sugarcane Area (2001-056 to 2007-12)

The area under Sugarcane was below 1 percent Sugarcane crop area was found in Gangakhed and Palum tahsils whereas 1 percent to 2 percent Sugarcane was found in Jintur and Purna tahsils while above 2 percent area under Sugarcane crop area was observed in Parbhani, Pathri, Sailu, Sonpeth and Manvat tahsils in the study region in during 2001-2006 (Map No.3A). The highest area is found in Sailu tahsil (4.13%). The lowest area under Sugarcane is found in Palum tahsil (0.89%). In 2007-2012, Purna (5.63 percent) tahsil has found higher percent area under Sugarcane. After a span of twelve years, the area under Sugarcane above 2 percent area under Sugarcane was observed in Parbhani (2.41 percent), Pathri (4.69 percent), Purna (5.63 percent) and Sonpeth (2.57 percent) tahsils whereas 1 percent to 2 percent Sugarcane area was found in Gangakhed (1.40 percent) and Manvat (1.52 percent) tahsils while below 1 percent Sugarcane crop area was recorded in Jintur (0.04 percent), Palum (0.26 percent) and Sailu (0.31 percent) tahsils during 2007-2012 in the study region (Map No.3B). Parbhani district is under Sugarcane area decreasing volume of change in 0.13 percent in this investigation period 2001-2006 to 2007- 2012. Totally Sugarcane under Sugarcane crop area is decliner this study period of Parbhani district. Both positive and negative changes were observed in area under Sugarcane crop area in the study region. Below 1 percent positive change in Sugarcane crop area was experienced in Gangakhed (0.43 percent) tahsil whereas any tahsil not recorded moderate area under Sugarcane between 1 percent to 2 percent area and above 2 percent area was observed in Pathri (2.42 percent) and Purna (4.02 percent) tahsils. Below 1 percent negative change in area under Sugarcane crop area observed in Parbhani (0.05 percent) Palum (0.63 percent) and Sonpeth

(0.28 percent) tahsils while Jintur (1.04 percent) and Manvat (1.52 percent) tahsils have negative change recorded moderate area under Sugarcane between 1 percent to 2 percent area whereas above 2 percent negative change noticed in only Sailu (3.82 percent) tahsil in the study region in during the period under study (Map No.3C).

Conclusion:

1. Sugarcane was cultivated on 2.15 percent area and Cotton is grown on 26.95 percent area in 2001-06. Cotton is decreed from 207406 hectare to 219651 hectare of the total gross cropped area in during the investigation period.

2. Sugarcane covers 2.15 percent in 2001-06 in Parbhani district. The irrigation facility has increased during study period but rain is decline therefore sugarcane has not increased, so it has decline 0.13 percent down in 2007-12.

3. Cotton area found decreasing trend while Sugarcane Crops have declined from 2001-06 to 2007-2012 study period in study region due to uneven rainfall distribution.

4. Soil types, irrigation, rainfall distribution, transport and proximity of market centres are major controlling factors for changing the spatio-temporal landuse in study region.

5. Therefore, farmers in this area should be guided and trained for the advanced method of irrigation such as drip, sprinkler etc. which saves water and decreases threat of salinities. Purna, Parbhani, Jintur and Sailu tahsils have scarcity during summer season. It is suggested that, farmers in these tahsils should use drip irrigation. Overdoses of chemical fertilizers are responsible for soil degradation in Pathri, Gangakhed tahsils. The use of organic agriculture and fertilizer management programme is one of prime requirement in study region.

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Interest-free Banking for Sustainable Economic Development

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Abstract

A major concept drawn from Islamic finance is "interest-free banking." It works on archaic professional and ethical standards that prohibit "Muslims" from paying or receiving any interest. This isn't to say that revenue-generating activities or money-making enterprises aren't encouraged. All of these business forms are greatly appreciated as long as they are free of any kind of interest. To meet these business or profit-making needs, Islamic financial agencies have devised a variety of financial tools. They deal with equity financing rather than debt financing for a better understanding. Furthermore, instead of offering set interest rates on savings accounts, these interest-free banks offer a tiny annual percentage return on deposits. Interest encourages savings and attracts idle money of the community into the banks without which banking system is inconceivable. This research paper summarizes the economic teachings of Islam with regard to income, earnings, and spending for sustainable economic development.

Keywords: Profit-making, Islamic economics, Mudharaba, Riba, Speculation, Revenue-generating, Musharakah, Gharar, Ijarah, Islamic finance

Introduction

Profitability of a business is important to the economy since it creates jobs and contributes to the country's revenue stream through taxes. A company's profit can be maximised by properly managing external and internal funds. According to Drake and Fabozzi, there are three sorts of capital sources: retained earnings, banking, and financial markets. Companies with a lot of debt prefer to finance with their own money, whereas companies with little debt prefer to borrow money from banks. The financial condition of the company is affected differently by each source of funding. Many companies' liquidity has been impacted as a result of recent news about the COVID-19 epidemic. Government actions aimed at preventing the spread of COVID-19, such as social isolation, lockdown, and curfew, have had a substantial impact on many businesses' earnings. Companies that borrow financing from banks will find it difficult to pay their debts due to a lack of liquidity in this situation. According to Banerjee et al., over half of enterprises will be unable to finance debt in the future year due to a lack of liquidity. The rising risk of default can lead to a decline in loan quality, which can wreak havoc on the financial system. In the following respects, this research adds to the existing body of knowledge: To begin, this study presents fresh empirical evidence comparing Islamic financial systems (equity vs. debt-based) and their impact on short and long-term economic growth. Second, the research contributes to the literature on the Islamic finance–growth nexus. The Islamic finance–growth nexus had hitherto solely chronicled the expansion of Islamic banking. This study, on the other hand, fills up the gaps by examining both Islamic financial sectors in relation to long-term economic growth. Above all, the study emphasises the defining roles of financial regulators, brokers, and investors, as well as their contributions to economic growth. Furthermore, this research will have ramifications for regulatory bodies and related ministries in terms of fostering sustainable economic growth and assisting them in determining which sectors require regulatory involvement.

Conventional Banking

Traditional banking ensures capital flow to borrowers by adding interest margins to deposits collected in exchange for a set interest rate. In this case, the deposit is there at the start of the process. On the traditional side, banking intermediation begins with the collection of deposits at a predetermined interest rate. The interest phenomenon is at the heart of traditional banking. Activities carried out outside of the interest rate cannot be carried out in this regard. People put their money in banks to earn a specific amount of interest under this interest-based system. When depositing money at the bank, however, one of the main considerations is security. Banks also use funds from depositors who, for security reasons, move their excess funds to banks. However, with the encouragement of the interest-based system, some depositors who apply to banks with the goal of receiving a specified return amount have a tendency to hoard. As a result, they choose interest-bearing investments. This situation supports the argument that claims banks stifle economic growth since cash from those who forego investments due to alternative charges are utilised to finance both consumption and investment.

Islamic Banking

There is no comprehensive statutory definition of a bank. It could be a sole-proprietorship financial institution, a partnership, a corporation, or another sort of organisation. According to Islamic law, there are numerous types of partnerships, but the one that is preferable for banking reasons is *shirkat al-inan*, or partnership, in which two or more people unite in business, each acting as an agent for the other. Under the principle of what is not forbidden is permissible, an Islamic bank may be a company, an association or a concern owned by an individual. Partnership, then, must be distinguished from a company. The main practical difference between a company and a partnership is this, that the formation and existence of a partnership depends upon the mutual trust in, and personal relationship of the members to each other, whereas the formation and existence of a company does not depend to any on this; further, whilst in partnership every member is entitled to take part in the management of the business unless he bargains away his right, in a company the management is left to specified officers. The functions of a modern bank are many; the chief functions of a modern commercial bank are performed by Islamic Banks. and to collect instruments representing money on behalf of his customers, on the understanding that he will refund all moneys received or collected either on demand or at some definite date agreed upon between him and his customers. Islamic banks have no difficulty in performing this function. But there are other important functions too. A banker is also (a) a lender of money, (b) a discounter of bills and promissory notes, (c) an issuer of drafts, letters of credit and traveller's cheques, an acceptor on behalf of his customers of bills drawn on the authority of letters of credit.

Principles of Islamic Finance

Islamic finance strictly complies with Sharia law. Contemporary Islamic finance is based on a number of prohibitions that are not always illegal in the countries where Islamic financial institutions are operating:

1. Paying or charging an interest

2. Islam considers lending with interest payments as an exploitative practice that favors the lender at the expense of the borrower. According to Sharia law, interest is usury (*riba*), which is strictly prohibited.

3. Investing in businesses involved in prohibited activities

4. Some activities, such as producing and selling alcohol or pork, are prohibited in Islam. The activities are considered *haram* or forbidden. Therefore, investing in such activities is likewise forbidden.

5. Speculation (*maisir*)

6. Sharia strictly prohibits any form of speculation or gambling, which is called *maisir*. Thus, Islamic financial institutions cannot be involved in contracts where the ownership of goods depends on an uncertain event in the future.

7. Uncertainty and risk (*gharar*)

8. The rules of Islamic finance ban participation in contracts with excessive risk and/or uncertainty. The term *gharar* measures the legitimacy of risk or uncertainty in investments. *Gharar* is observed with derivative contracts and short-selling, which are forbidden in Islamic finance.

In addition to the above prohibitions, Islamic finance is based on two other crucial principles:

1. **Material finality of the transaction:** Each transaction must be related to a real underlying economic transaction.
2. **Profit/loss sharing:** Parties entering into the contracts in Islamic finance share profit/loss and risks associated with the transaction. No one can benefit from the transaction more than the other party.

An Islamic economy is supposed to reflect the principles of the Islamic worldview and morality. Islamic jurists and scholars extract Shariah laws and the values of an Islamic economic system from the Quran and the performance of the Holy Prophet and Imams. The main Shariah rules with regard to banking and finance include the following:

1. Money does not have any intrinsic value and is used merely as a medium of exchange and a tool for preserving and assessing the value of goods, services, and properties.
2. Emphasis should be on activities in the real economy and on the sharing of risks and rewards.
3. Socially destructive activities, such as trading alcoholic drinks, betting, and gambling, are prohibited.
4. *Riba* (interest) is prohibited.
5. *Gharar* (ambiguous and risky transactions) is prohibited.

Types of Financing Arrangements

Since Islamic finance is based on several restrictions and principles that do not exist in conventional banking, special types of financing arrangements were developed to comply with the following principles:

Profit-and-loss sharing partnership (*mudarabah*)

Mudarabah is a profit-and-loss sharing partnership agreement where one partner (financier or *rab-ul mal*) provides the capital to another partner (labor provider or *mudarib*) who is responsible for the management and investment of the capital. The profits are shared between the parties according to a pre-agreed ratio.

Profit-and-loss sharing joint venture (*musharakah*)

Musharakah is a form of a joint venture where all partners contribute capital and share the profit and loss on a pro-rata basis. The major types of these joint ventures are:

1. **Diminishing partnership:** This type of venture is commonly used to acquire properties. The bank and investor jointly purchase a property. Subsequently, the bank gradually transfers its portion of equity in the property to the investor in exchange for payments.
2. **Permanent *musharakah*:** This type of joint venture does not have a specific end date and continues operating as long as the participating parties agree to continue operations. Generally, it is used to finance long-term projects.

Leasing (*Ijarah*)

In this type of financing arrangement, the lessor (who must own the property) leases the property to the lessee in exchange for a stream of rental and purchase payments, ending with the transfer of property ownership to the lessee. The role of financial intermediation and the dependency of an Islamic financial system on Islamic banks are clear. They are also in line with the empirical evidence that highlights the role of financial intermediaries in less-developed capital markets. In a nutshell, an Islamic financial system will be similar to a bank-based one for the following reasons:

1. Due to the prohibition of *Riba* and debt papers, the debt-based capital market will be non-existent. Therefore, financial intermediation will take the form of direct financing via *Mudarabah* and participation contracts.
2. In the absence of a debt market, there will be a demand for the development of asset-based security markets to increase the liquidity of bank assets. Financial intermediation can play a vital role in this development via the introduction and accumulation of financial instruments through the securitization and enhancement of credit during the life cycle of assets.
3. Since risk-shifting violates the basic principles of Sharia law, derivatives remain controversial in Islamic finance. In particular, Sharia scholars still do not readily accept derivative trading due to its often speculative and unfunded nature (Jobst and Solé 2009). The unavailability or restriction of the derivative market will increase the pressure on financial intermediaries to offer sharing and mitigation of risks.

Conclusion

Islamic finance is a centuries-old tradition that is gaining traction around the world, and its ethical nature is piquing the curiosity of non-Muslims as well. Expect this discipline to evolve even faster as it continues to face the issues of combining the worlds of theology and modern portfolio theory, especially given the rising wealth in Muslim countries. Islamic Banking, often known as interest-free banking, is not a strange concept; it is highly practical and coherent, and it is widely regarded as a viable alternative to the traditional interest-based banking system. To put it into practice, however, it will take significant consideration from all sides: consumer willingness, bank intensive efforts, and appropriate and favourable regulatory norms (and legality). There is no reason why this mechanism cannot be accepted as a sustainable mode of banking worldwide if such steps are taken across the board, and if truly Islamic banks succeed in demonstrating a practical example of socio-economic justice by gradually increasing their Interest-Free Financing and also achieve further satisfactory operational results.

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The Role of National Green Tribunal and Sustainable Development

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Abstract:

The Supreme Court holds a unique position and coined the word “Green Court” in contributing to the evolution of Environmental Jurisprudence in India.

1. Structure of NGT, Powers & functions with reference to Environmental Adjudication
2. Silent Features of Role of NGT with the limitations in implementation of various Environmental Legislations.
3. Significant decisions of NGT with reference to protection and improvement of environment
4. Challenges and concerns before National Green Tribunal
5. Conclusion

Key words: National Green Tribunal, Environment, Pollution, Biological Diversity.

Introduction

The Supreme Court of India is considered as the most important dispenser of Environmental Justice. Recently the landmark judgment in M. K. Ramesh altered the common mans perception of the court of law as just a forum for dispute resolution and nothing else. The Supreme Court holds a unique position and coined the word “Green Court” in contributing to the evolution of Environmental Jurisprudence in India. Section 14 of the National Green Tribunal Act, 2010 provides that the Tribunal has to settle disputes, having jurisdiction overall civil cases, where a substantial question relating to environment (including enforcement of Any legal right relating to environment) is involved and such question arises out of the implementation of enactments specified in Schedule-I. Schedule-I specified the following Acts, viz.

1. The Water (Prevention & Control of Pollution) Act, 1974;
 2. The Water (Prevention & Control of Pollution) Act, 1977;
 3. The Forest (Conservation) Act, 1980;
 4. The Air (Prevention & Control of Pollution) Act, 1981;
 5. The Environment (Protection) Act, 1986;
 6. The Public Liability Insurance Act, 1991 and
 7. The Biological Diversity act, 2002.
1. National Green Tribunal is akin to emerald-green to deal with the issues of Environmental Pollution.
 2. Establishment of National Green Tribunal has reduced burden on existing judicial system.
 3. Specialized body like Green Tribunal is an additional mechanism complementary and supplementary to achieve the goal of Environmental justice.
 4. Bring back emerald green and healthy environment by National Green Tribunal.
 5. Environment pollution is due to lack of awareness of among the people.

Structure of NGT, Powers & functions with reference to Environmental Adjudication

Judicial & Technical Members together have been entrusted to decide various Environmental issues. Hence the concerned experts in the subject matter not only consulted but involved in decision making process, thereby the complexity and uncertainty in the Environmental matter have been reduced to a considerable extent.

Powers and Functions of NGT

1. Overall civil jurisdiction in respect of not only substantial question relating to Environment, but also to enforce any legal right to Environment with reference to the implementation of Enactments specified in schedule – I, but excluded the jurisdiction in respect of the criminal matters.

2. Original and Appellate jurisdiction with relief, compensation and restitution have been given to NGT, but having ambiguity about inherent jurisdiction or sumoto jurisdiction of taking cognizance.
3. Through Appellate jurisdiction against NGT order is the Hon'ble Supreme Court, there is no clarity about the jurisdiction of High Court with reference to Constitutional issues under Article 226 of the constitution of India.

Silent Features of Role of NGT with the limitations in implementation of various Environmental Legislations.

1. As per the provisions contained in section 14, it restrict to the substation question relating to Environment including Enforcement of legal right relating to Environment, which will be entertained by the tribunal within a period of six months only from the date of cause of action.
2. Similarly relief, compensation and restitution under section 15 of the NGT Act will be entertained by the Tribunal within period of 5 years from the date of the cause for such relief.
3. The Appellate jurisdiction under the section 16 against various order passed by the Appellate authorities under various Environmental Laws, directions issued by the authorities is required to be filled within a period of not exceeding 30 days from the date of order plus further 30 days on account of sufficient cause shown which prevented aggrieved person from filing of appeal.
4. All these remedies imposed limitation and restriction for taking co-gnizance of Environmental damage after certain period of limitation prescribed in the above provisions.
5. NGT has been original and appellate jurisdiction, but does not have sumoto jurisdiction to take cognizance of violations of Environment rules.
6. The Researcher has tried to bring on record the NGT power to decide Environmental issues vis-à-vis judgments and orders passed by various High court benches on the constitutional issues for e.g. Madras High Court (Page no. 61 of Thesis) has observed in clear cut terms that NGT has no sumoto jurisdiction to take cognizance of violations. Similarly the Bombay High Court has taken cognizance of the Writ Petitions filed by the aggrieved parties against the judgments and orders passed by the NGT WZ bench. In one of the matter, the Bombay High Court observed that where High Court has already taken cognizance of the matter the NGT WZ should not deal with such matter separately once High Court has taken Cognizance.
7. The first appeal of the NGT is to the Supreme Court of India and therefore there is a need to have specific clarification in respect of constitutional jurisdiction of High Court under article 226 and the NGT jurisdiction under the NGT Act, in what manner to be reconcile.
8. NGT further has refused to take cognizance of the matters after the limitation period inspite of the fact that Environmental violations continued. In such cases of continued offences, the limitation period should not be made applicable; otherwise the very purpose of taking cognizance of substantial questions relating to Environment will be defeated.

Significant decisions of NGT with reference to protection and improvement of environment

1. In spite of adoption of uniform legislative approach throughout India by the Parliament & inspite of very proactive role played by the higher judiciary (SC & Hc) there has been considerable gap in the Environment legislation & its enforcement, there was a flurry of litigations and further limitations on deciding the matters of highly technical nature of the pollution.
2. Though SPCB's & PCCS have been empowered to file prosecutions and more stringent provisions have been incorporated under various Environmental legislations, the prosecutions filled by them remained pending years together ranging from 5 years to 15 years and hardly in any matter minimum punishment of imprisonment has been imposed and have been executed thereby the pollution during the pendency of their cases have been continued unabated. Hence the punishments remained on paper only.
3. After passing of the Environment (P) Act, 1986 & 1988 in the Air and water Acts, through powers to issue directions in the nature of quasi judiciary given to SPCB and PCCS as well as other regulatory Authorities, which in its initial period have been effective in securing the compliances by providing ETP's, Pollution Control devices and upgradation of Pollution control systems in subsequent periods. These power have been ineffective not taking it to its logical conclusion, issuance of round and round ineffective directions, not concentrating on the compliance of those directions, thereby appears to become toothless instrument on paper

4. Regulatory Authorities were also not serious in securing compliance of Environmental norms and only started taking the showcase actions, most of times under some political influence actions taken.
5. Under the background the analysis of NGT judgments and evaluation of various orders passed by the NGT benches will have to be assessed with regards to the jurisdiction of the NGT is concerned.

Challenges and concerns before National Green Tribunal

1. One of the growing concern has been that in recent years, the NGT decisions have been challenged in various High Courts under Article 226. Other High Courts like the Bombay High Court have also started entertainment appeals against the NGT orders and have asserted the superiority of a High Court over the NGT, saying 'High Court is a constitutional body while NGT is Court, but petitioners have been invoking Article 226 (Power of High Courts to issue certain writs) to challenge decisions before the High Courts. The Supreme Court is yet to decide on what decisions of the NGT can be challenged before the High Courts, and on what grounds.
2. Poor and disadvantaged communities living in remote parts of the country have to go to NGT Benches in their respective zones to get justice. For a tribal to stop pollution from an iron ore mine in Bastar, this means filing and fighting case in Bhopal. For a villager affected by oil pollution in Nagaland, this means coming to Kolkata and hoping to be heard quickly, which is "neither easy nor affordable". It would be a welcome moves if the number of benches could be increased and located in affected areas thus ensuring access to justice to everyone justice. (NGT International Journal on Environment Vol.II of 2017)

Conclusion:

To achieve the goals of environment protection man needs to developed all round sustainable development and adopt balance between life, materiality and spirituality for enabling a man to distinguish between right and wrong. It will not only provide solutions to environmental problems but also fruitful result of the environmental courts. It is hoped that national green tribunal would fulfill down the long felt need for an alternative forum to deliver speedy and inexpensive justice to victims of environmental pollution.

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**Impact of Patriarchy on Woman's Dream And Search of Self Identity in Shashi
Deshpande's *That Long Silence* (1989)**

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Abstract:

Woman's struggle to find and preserve her identity as wife, mother, daughter and the most important of all as the human being forms the major concern of Shashi Deshpande's novels. Deshpande doesn't want her writing to be called feminist writing because she feels her novels are not a man versus woman issue at all. She portrayed the new Indian woman and her dilemma in the tradition-bound, male-dominated Indian society. Being a woman herself, she sympathizes with women and her main apprehension is for human relationships. *That Long Silence* (1989) depicts the women world in an authentic, realistic and credible manner. This article highlights the fact that it is not the circumstances that contribute to the negation of women's rights; but the fact is that it is their women folk who polarize their dig at the emancipation of women.

Key words: Search of self-identity, marginalisation, struggle & feminism.

Introduction:

A woman from her childhood to till end her life she remains under man's control, as a daughter she remains under her father's control, in youth under her husband's and when her husband is dead, under her sons, she should not have independence. To bring change in the system, feminist movement makes women to have a deeply awareness of their own rights and claims and they feel that there is no excuse for being mute and bear. They reject's their *object* positions and tries to secure an equal status and role of being *subject*.

Marginalization usually talks about social inequality. Social inequality is in the form of hierarchy where one is at the top most level and the other is at lowest subordinate level. Marginalization revolves around the agency of discriminates, isolates, shames and subordinated groups on the basis of caste, religion and gender. The present paperwork deals with female marginalization, a plight of women. Factually, women constitute half of the world's population, even though, the journey of women is a bit challenging a patriarchal, hierarchical and male orientated society where marginalization of women is executed on gender basis. It is said that "women holds half of the sky" (p.2). Despite this truth, women do not secure a single space in the sky which they claim of their own. The process of marginalization has devalued social category and identity of women. Many women writers come forth to portrait the womanhood through their writing. One of them is Shashi Deshpande. She is an eminent novelist who is acutely conscious of and sensitive to the sorrows and sufferings of their fellow female human beings. She raises her voice against female oppression and conviction through her characters that reader ponders over it. Shashi Deshpande has secured a most prestigious position in the post-colonial English literature. She is a keen observer, as observed all struggling issues in the family and society. She has dealt with the women, her position, status, burning desires in the family and society. In her novel *That Long Silence*, the novel brought her a Sahitya academy award in 1990. After suffering in a seventeen year's marriage exile Jaya from *That Long Silence* (1989), the female protagonist decides to break her silence. The novel presents the realistic view of the educated Indian woman of the middle class family. The novel catches an attention of readers and makes reader more curious to know about the silence. In the present novel *That Long Silence* (1989) Deshpande has revealed her consensus on marriage, love bonding, mutual understanding, gender discrimination, marginalization etc. She demands the equality and equal treatment in her own marries home. Despite having potential and capacity women could not secure an equal opportunities and rights. They are being pushed back. That's why they are subordinated and marginalised. Women are expected to inculcate as a part of socialization. This happen with Jaya, who always thinks to break her silence but all sermon instruction of elders never allow her to do that.

Simon DE Beauvoir, rightly expounds, one is not born, but rather becomes a woman. It is civilization as a whole that produces this creature which is described as feminine (*The Second Sex*: 295). Deshpande describes the life of Jaya, replete with monotony, frustration, alienation, isolation, dreaming in her incomplete desire. As being recited by elder generation, she also thinks her husband, her God and keeps herself to be subordinate as she says,

“Wasn’t he my profession, my career, my means of livelihood? (p.75)

After marriage Jaya lives her life in the fragments. She all time thinks about family and husband Mohan. Mohan is not a picture of an ideal husband but for his expectations Jaya’s unspoken voice gets suppressed in their relationship. She says’

“I saw a struggle so bitter that silence was the only weapon, silence and surrender” (p 36)

“Whatever my feelings had been then, I had never spoken of them to him” (P 95)

Shashi Deshpande’s humanistic vision paves the way for women, who consider themselves inferior to men. They considered that women are safe only in the shelter of man. So man as a father, brother, husband, son dominate them without caring their emotions and desire which is inhuman. When under pressure and anger Mohan leaves home silently and stealthily with no word to his wife. She does not hear him for a certain time; she becomes uneasy due to her husband’s absence. She thinks that he has gone for good. Her reputation as a wife is at stake the thought of carrying children’s responsibility upon her shoulders stirs her. She is constantly hunted by the thought of her incompleteness without Mohan. She considers Mohan as a source of social protection. She shares with Mukta, A man and a woman married for seventeen years. A couple with two children. A family somewhat like the one caught and preserved for prosperity by advertising visuals I so loved. But the reality was only this. We were only two persons. A man, Woman (p. 08) There is little emotional attachment in the relationship. She never gets warmth in her relationship with him. Her emotions, dreams, happiness, gratification means nothing to Mohan. Though Jaya knows it, she never dares to leave her husband, her culture. No matter her marital status doesn’t give her satisfaction, peace of mind and love. She has perfectly expounds the aim of only individual happiness in marriage through the character of Jaya, presents the marginalized position of Indian women in Indian culture. The novel ends with an optimistic tone. Though Mohan goes by giving an isolation to Jaya, she thinks that, “Mohan had not left me... A husband and wife care for each other, live with each other until they are dead” (p. 127). It is not rejected that compromise and adjustment are two necessary things in the marriage life, but it should not go only through one way from women, both husband and wife need to respect each other to fulfil the relation. Shashi Deshpande’s female characters go through a progression of self - examination before they attain self actualization. “Woman must be a bridge and a synthesizer. She shouldn’t allow herself to be swept off her feet by superficial trends nor yet be chained to the familiar. She must ensure the continuity which strengthens roots and simultaneously engineer change and growth to keep society dynamic, abreast of knowledge, sensitive to fast-moving events. The solution lies neither in fighting for equal position nor denying it, neither in retreat into home nor escape from it” (p.i). Thus, Jaya is one among Shashi Deshpande’s victorious strong women protagonists who repudiates to get trampled under the influence of her personal tragedy, and faces life with great courage and strength.

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Karnataka sugarcane growers impact factor in production and planning

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Abstract

This Study Aims At Understanding The Relationship Between Climatic Factors And Its Impact On Sugarcane Productivity In Karnataka. To Understand The Above Objective We Estimated The Factors That Affect Sugarcane Productivity. After Appropriate Statistical Analysis, The Strength Of Empirical Results Was Checked Through Fixed Effects Panel Regression Model And Prais–Winsten Model With Panel Corrected Standard Errors Models. The Data Point Has 592 Observations Corresponding To 16 Districts Of Karnataka, Selected On The Basis Of The Agro-Climatic Region To Which They Belong, With Panel Data For A Period Of 1966–2002. Since Our Prime Interest Was Sugarcane Productivity It Was Entered As A Dependent Variable In The Models. Average Rainfall, Average Maximum And Average Minimum Temperature, Area Under Irrigation And Consumption Of Fertilizers Are Considered As Explanatory Variables. In Order To Capture The Variability In The Climatic Factors It Was Decomposed Into Four Seasons, Viz., Monsoon, Summer, Autumn And Winter. The Results Conclude That Though The Average Rainfall In Different Seasons Has A Direct Positive Impact, The Rainfall In Summer Is Significantly Affecting Sugarcane Yield. The Climatic Variables Of Average Minimum And Maximum Temperatures In Different Seasons Have Varied Impacts On The Yield Of Sugarcane. The Maximum Temperature In Summer And The Minimum Temperatures In Monsoon, Winter And Autumn Have A Significant Positive Impact On The Sugarcane Yield In Karnataka, Whereas Maximum Temperature In Autumn And Minimum Temperature In Summer Has Negative Relationship. The Study Suggests That Adaptation Strategies Need Special Attention On Technologies And Management Regimes That Will Enhance Sugarcane Tolerance To Fluctuating Temperatures.

Introduction

Karnataka Is The Third Largest Grower Of Sugarcane In India, But It Also Owes Its [Cane Farmers Rs 3,990 Core](#) As Of 2018-2019 (Almost Rs 900 Core More Than It Did Four Years Earlier). Karnataka Has 11 Of The 100 Leading Sugarcane Producing Districts Of The Country, Spread Across Both The Southern Regions Of Mandya, Mysore And Chamrajnagar, And Belgaum, Bijapur, Bidar, Raichur And Bagalkot In The North. In Arid Belgaum, Where 35 Percent Of The State's Sugarcane Is Grown, Farmers Are A Harried Lot. On Top Of Declining Production, Rising Costs Of Cultivation And Drop In Support Price For The Crop, They Have To Weather Long-Pending Arrears From Cane Crushing And Sugar Manufacturers. There Are 65 Sugar Factories The State, Of Which 58 Are Functional. There Are 22 Factories In The Cooperative Sector, With Only Two Factories Under Government Control, 34 Are Privately Owned, .Of The 60-Odd Sugar Factories, Only Two Are State-Owned; The Rest Are In The Private And Cooperative Sector. And Among The 34 Mills In Private Hands, 33 Factories Are Owned By Political Leaders. In North Karnataka, Sugar Factories Are Owned By Powerful Politicians Across The Spectrum That Hold Considerable Sway In Their Regions Irrespective Of Which Government Is Sitting In Bengaluru.

Sugarcane As A Commercial Crop:

Sugarcane Is A Major Cash Crop In Karnataka Responsible For The Overall Socio-Economic Development Of The Farming Community. Molasses, Sugar And Khandsari Etc, Are Produced From The Juice Of Sugarcane. Production Of The Crop Is Mainly Located In The States Of Uttar Pradesh, Maharashtra, Tamil Nadu, Karnataka And Gujarat. Sugarcane Cultivation Needs Temperature Of 15 Degree To 40 Degree And Rainfall Of 100 To 150 Centimetres And Fertile Loamy Soil Or Hard Soil. Sugarcane Is A Long Duration Crop

Which Produces Huge Amounts Of Biomass, Requiring Large Quantities Of Water, Which Typically Are Supplied Through 25-30 Irrigation Cycles Per Crop Season Sugarcane Is Cultivated From Kanyakumari (Southern Part) To Punjab (North –West) But It Is More Cultivated In Uttar Pradesh, Except These States, Sugarcane Is An Important Crop In Maharashtra, Tamil Nadu, Andhra Pradesh, Karnataka, Punjab, Haryana, And Bihar Etc. In India, The Sugar Industry Is The Second Largest Agriculture Based Industry After Textile Fibres. It Arises Over INR 225 Billion In Taxes For The Common Wealth And Stategovernments.3Chart 3 Explains The Five Year Plan Periods And Achievements Of Sugarcane Production In Graphical Representation.

State Wise Area Of Sugarcane In Country During 2015-16 To 2020-21.

S.No	States / UT	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21*	Average(2015-16 To 2019-20)	% To Total	Rank
1	Uttar Pradesh	21.69	21.60	22.34	22.24	22.08	21.80	21.99	46.27	1st
2	Maharashtra	9.87	6.33	9.02	11.63	8.22	11.43	9.01	18.96	2nd
3	Karnataka	4.50	3.97	3.70	4.71	4.29	4.43	4.23	8.91	3rd
4	Bihar	2.44	2.40	2.34	2.26	2.24	2.19	2.34	4.91	4th
5	Tamil Nadu	2.52	2.18	1.72	1.66	1.31	1.25	1.88	3.95	5th
6	Gujarat	1.57	1.69	1.82	1.55	1.61	2.15	1.65	3.47	6th
7	Madhya Pradesh	1.03	0.92	0.98	1.08	1.25	1.10	1.05	2.21	7th
8	Haryana	0.93	1.02	1.14	1.09	0.96	0.99	1.03	2.16	8th
9	Andhra Pradesh	1.22	1.03	0.99	1.02	0.86	0.55	1.02	2.15	9th
10	Uttarakhand	0.97	0.93	0.90	0.91	0.92	0.84	0.93	1.95	10th
11	Punjab	0.90	0.88	0.96	0.95	0.91	0.89	0.92	1.94	11th
12	Telangana	0.35	0.29	0.35	0.40	0.26	0.20	0.33	0.69	12th
13	West Bengal	0.17	0.21	0.19	0.16	0.19	0.19	0.18	0.39	13th
14	Others	1.11	0.91	0.92	0.95	0.93	0.56	0.96	2.03	
	All India	49.27	44.36	47.37	50.61	46.03	48.57	47.53	100.00	

Impact Factor On Sugarcane Production

In Fact, During The November Protests, The Karnataka State Sugarcane Growers Association Asked The State Government To Amend The Karnataka Sugarcane (Regulation Of Purchase And Supply) Act, 2013, To Include Provisions For Imposing Penalty And Putting Behind Bars Mill Owners Who Do Not Pay Dues To Farmers. Such A Provision Had Become A Necessity To Protect Farmers' Interests, Once Prosperous Thanks To Fertile Soil, Plenty Of Water And A Reasonable Price For Their Produce, Sugarcane Farmers Today Are Reeling Under Declining Yield Due To Drought Conditions For The Past Three Years And Deteriorating Soil Quality.

The Average Yield Of Sugarcane In Karnataka (And With It, The State's Contribution To National Production) Has Reduced From A High Of About 101 Tons Per Hectare In 2009-2010 To 73 Tons Per Hectare In 2016-2017, Largely Because Of Continuous Irrigation, Indiscriminate Use Of Fertilizers And The Practice Of Ratoon Or Stubble Cropping. There Is Also Criticism That The Farmers Have Also Been Slow To Adopt New Farming Technology Like Drip Irrigation. "Farmers Should Learn New Ways Of Agriculture And Concentrate On Other Crops," Farmers Use Too Much Water. What They Use For One Acre, I Use For Three Acres. Drip Irrigation Is Best. Maharashtra Made Drip Irrigation Mandatory For Sugarcane Growers. The Karnataka Government Gives Subsidy For Drip Irrigation But It Is Not Being Properly Utilized. Pointed Out That It Costs Rs 50,000 Per Acre To Install An ISI Certified Drip Irrigation System, With The State Giving A Subsidy Of Rs 35,000. Other Farmers Are Not Interested In Installing Drip Irrigation." Worse, The Yield Has Further Plummeted In The Past Two Years. "We Used To Grow 60 To 80 Tonnes Per

Acre But Now It Is Just 30 To 40 Tonnes “The Rate Too Came Down From Rs 3,010 Per Tone In 2016-2017 To Rs 2,150 Per Ton. Then There Is The Cost Of Harvesting And Transportation. We Get No Income From Growing Sugarcane As We Have To Clear The Loans Taken For Seeds And Fertilizer.” The Farmers’ Biggest Problem, However, Remains The Factories That Buy Their Cane, But Don’t Clear Payments On Time. “We Get The First Payment Three Months After Supplying Cane. Even Though The Sugarcane (Control) Order, 1966, Mandates Payment Within 14 Days Of Purchasing The Cane Failing Which The Sugar Factories Are Supposed To Pay An Interest Of 15 Percent Per Annum On The Remaining Amount Due. But Mills Are Allegedly Flouting The Order With Impunity. “A Few Factories Of Belgaum Have Not Cleared The Dues Of Ten Years Back.” Said Muttappa. “India Produces 35 Million Lakh Tons Of Sugar Per Annum But Consumes Only 26 Million Lakh Tons,” Said Dr RB Khandagavi, Director Of Nijalingappa Sugar Institute Belgaum. “The Excess Stock Remains In The Factories. The Market Price Of Sugar Has Also Not Been Attractive, So Factories Delay Payments To Farmers And Struggle To Pay Fixed Remunerative Price (FRP) Price. They Also Pollute Groundwater By Dumping Their Waste In Ponds And Canals, Vishwanathan Said. “The Sugar Mill Here Has Polluted The Environment Of Mudhol. Black Ash, Spent Wash (Wastewater Of Distilleries), Chemicals And Carbon Have Polluted The Environment, Soil And Water Sources Of The Area. Mudhol Has Around 4,000 Cancer Cases And Its Residents Have Gone To The Supreme Court And National Green Tribunal.” He Protested The Release Of Spent Wash From Mills Into The Water Channels And Accompanied The District Environment Officer For A Spot Visit. The Hearing Is On. Another Problem Is The Complicated Payment Formula, Which Farmers Are Unable To Comprehend. This Formula, Devised By The Rangarajan Committee In 2012, Proposed Decontrol Of Sugar And For Sugar Mills To Pay Farmers An FRP Plus A Share In Its Revenue, Based On The Publication Of Half-Yearly Ex-Mill Prices And Values Of Sugar And By-Products Like Ethanol, Molasses And Biogases, Which Make Up About 15 Percent Of Production. The Commission Recommended An FRP Of Rs 275 Per Quintal At 10 Percent Sugar Recovery Level For 2018-2019 (Meaning One Ton Of Sugar From 10 Tons Of Cane). As Per The Rules, The FRP Is To Be Paid To The Farmer Up Front With The Second Installment Being A Percentage Of The Mill’s Revenues. But Most Mills Are Yet To Pay Farmers The Second Installment After Paying The Upfront Purchase Price. This Revenue Sharing Formula, Adopted By Maharashtra And Karnataka Has Not Worked. Farmers Have Little Knowledge Of The Products, Prices And Revenue Earned By The Mills. Farmers Are Now Demanding That The State Switch To State Advised Price (SAP), Which Gives Farmers A Fixed Amount, Based On Input And Other Production Costs And Involves No Revenue Sharing. In Fact, In 2013-2014, Karnataka Had Decided To Adopt SAP. But Factory Owners Prevailed On The State Government To Retain The Revenue Sharing Formula. “The Revenue Sharing System Is Unscientific,” Added Kodihalli Chandrashekhar, President Of Karnataka Rajya Raita Sangh And Hasiru Sene (Green Army). “SAP Was Farmer Friendly Which The FRP Is Not. Fixing The Recovery Rate At 10 Percent Is Also Arbitrary. Also, The Centre Released Rs 5,000 Crore To Enable Factories To Clear Farmers’ Dues, But No Farmer Has Benefitted.” Perhaps Any Lack Of Punitive Action Against Mill Owners For Not Clearing Farmers’ Arrears Is Because Most Mills — Take For Instance The Ones In Bagalkot — Are Owned By Mlas: Murugesh Nirani’s Nirani Sugars Limited, Sai Priya Sugars And MRN Sugars, Nyamagouda’s Jamakhandi Sugars Limited, SR Patil’s Bilagi Sugar Mill Limited, And Shamnur’s Gudagunti’s Prabhulingeshwar Sugars. “Payments Of Rs 310 A Tonne In 2016-2017, Rs 500 Tonne In 2017-2018, And The Remaining Payment For 2018 (The First Payment Rs 2,150, Against The FRP Of Rs 2,750, Has Been Made) Are Pending, Before The Start Of The 2018-2019 Seasons, When We Went On Strikes And Hartals, The State

Government Allowed The Factories Some Time To Pay The Dues And Had Taken Bonds From Them For This, But Our Bills Are Not Yet Cleared.

Karnataka Plans To Bring Sugarcane

In An Effort To Improve Water Use Efficiency, The Government Of Karnataka Proposes To Undertake Massive Drip Irrigation And Sprinkler Irrigation Projects In The State. The Government Is Working On An Ambitious Programme To Bring Sugarcane Area Of 434,000 Hectares In The State Under Drip Irrigation In The Next Three Years. “We Are Actively Considering The Proposal To Make It Mandatory For The Sugarcane Farmers To Adopt Drip Irrigation System So That An Enormous Quantity Of Water Could Be Saved Across The State,” M B Patil, Minister For Irrigation, Said. In The Years To Come, Over 650,000 Hectares Covered By The Irrigation Projects Will Be Covered By Drip Irrigation Across The State, Thereby Bringing A Large Area Under Micro Irrigation. This Will Not Only Help Save Water But Also Prevent Soil Salinity And Water Logging Due To Floods And Reduce Consumption Of Fertilizer, Patil Said At The Inauguration Of Resources Centre On Water Use Efficiency In Delhi On Wednesday. He Said, Work On The Drip Irrigation Under The Ramthal Marol Stage-II Lift Irrigation Scheme Over 24,000 Hectares Was In Progress And It Is Targeted For Completion In April 2015. “An Agro Corridor Is Envisaged In The Areas Where Micro Irrigation Is Adopted And We Propose To Have A Special Global Investors Meet (GIM) To Attract Agro-Based Industries,” Patil Said. By Adopting Drip Irrigation Scheme Across The Sugarcane Areas, Farmers Will Be Able To Achieve Huge Water Savings And Thus The Saved Water Would Mitigate Water Scarcity Of The Irrigation Projects, He Added. “It Is Estimated That Cumulative Incremental Value Creation Over A Span Of Three Years Will Be A Whopping Rs 18,369 Crore For All The Stakeholders (Farmers, Sugar Mills And Government) In Addition To The Huge Savings Of Water To The Tune Of 186 TMC Every Year,” The Minister Said. The Cost Of Implementing Drip Irrigation Is Estimated At Rs 40,000 Per Acre For Sugarcane Farmers. The Government Is Planning To Extend A 25 Per Cent Subsidy For The Scheme. The State Government Is Also Implementing The ‘Karnataka Integrated And Sustainable Water Resources Management Investment Programme’ With Assistance From The Asian Development Bank (ADB) In The Tungabhadra Sub-Basin. It Is A Seven Year Programme Involving An Investment Of \$225 Million. The Activities Planned Include Modernization, Institutional Strengthening, River Basin Planning, MIS Implementation And Capacity Building By IWRM Certification Programme For WRD Engineers. Capacity Building For Farmers Has Also Been Proposed Through The Water And Land Management Institute (WALMI) And Command Area Development Authority (CADA) In Water Resource Management. Krishna Bhagya Jala Nigam Limited (KBJNL) Has Also Implemented A Canal Top 1 Mw Solar Photo Voltaic Power Project On A Pilot-Basis On The Almatti Right Bank Canal Of Upper Krishna Project (UKP), A First Of Its Kind In South India. This Project Will Facilitate Improving Water Use Efficiency And Addressing Water-Energy-Food Nexus, The Minister Added.

Conclusion

The Analysis Of The Secondary Data On Production Of Sugarcane In Karnataka Has Revealed That There Were Variations In Production. It Was Evident From The Trend Equations That There Were Fluctuations In The Production Of Sugarcane In Karnataka, No Uniform Pattern Of Growth Was Observed. It Is Hereby To Conclude That The Major Reason For Low Production And Low Productivity Is The Unpredictable Monsoon Conditions. Thus Initiatives On Proper Irrigation Management Would Enable The Scope And Increase The Production Of Sugarcane In Karnataka.

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Rural–Urban Migrations–Trends and Patterns

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Abstract :-

Migration is the movement of population from one area to another. Some migrations are forced, voluntary, permanent and temporary, International and regional. The type of migration that we are principally interested in in this unit is Rural to urban migration, which is the movement of people from countryside to city areas. This type of migration happened in MEDCs from the 18th Century onwards on a large scale, and has gradually slowed down. In fact in many MEDCs the movement of people has reversed, and people are moving from Urban areas back into the countryside as they search for the quiet life (this is known as counter-urbanization). However, in many LEDCs cities are experience massive rural to urban migration, mainly of young males, into the major cities. The major reasons for this movement can be classified into push and pull factors.

Key words :- Rural, Urban, Migration, Population, Push- Pull Factors

Introduction :-

Rural-urban migration is the movement of people from the countryside to the city. This causes two things to happen: 1. Urban growth - towns and cities are expanding, covering a greater area of land. ... Urbanization - an increasing proportion of people living in towns and cities. The type of **migration** that we are principally interested in in this unit is **Rural to urban migration**, which is the movement of people from countryside to city areas. This type of **migration** happened in MEDCs from the 18th Century onwards on a large scale, and has gradually slowed down

Trends of Migrations :- The number of internal **migrants in India** was 450 million as per the most recent 2011 census. This is an increase of 45% over the 309 million recorded in 2001.

Internal **migrants** as a percentage of population increased from 30% in 2001 to 37% in 2011.

The impacts of rural to urban migration in India :- India is an example of an emerging and developing country (EDC). Each year thousands of people move to the city of **Mumbai** from rural areas. People move to Mumbai because the rural areas they leave have many push factors and the city has lots of pull factors. People think that the city will provide lots of **opportunities** such as:

1. **social** - better housing and services, eg healthcare and education
2. **economic** - more jobs and higher wages
3. **environmental** - better living conditions with a safer environment (less chance of natural disasters)

People who move think that they will have a better quality of life. However, cities such as Mumbai face lots of challenges and the people who move there do not always have a better quality of life. Some of the **challenges** people may face include:

1. **social** - poor housing conditions and much higher crime rates
2. **economic** - low wages or unemployment
3. **environmental** - polluted drinking water and a lack of sanitation

Rural to urban migration impacts both on the rural area which loses people and the urban area which gains people.

Rural area

Positives

1. fewer people to feed
2. more land per person
3. more resources per person
4. money may be sent home by migrants

Negatives

1. population structure upset by loss of young people
2. fewer economically-active men left in the rural community

3. families are split up
4. the elderly remain and the death rate in the community may increase

Urban area

Positives

1. increased economically-active elements of the community
2. increase in the cultural wealth
3. more knowledge and skills in the city community

Negatives

1. pressure on places to live
2. tensions between older and newer residents
3. pressure on services such as education and healthcare provision

Causes of rural urban migrations :-

In **rural** areas, less employment opportunities, low wages, drought, lack of basic amenities, landlessness, social factors act as push factors and more employment opportunities, higher income, better wages, better facilities activities as pull factors towards the **rural** to **urban** migrat

Effects of rural-urban migrations:-

These findings show that **rural-urban migration in India** is associated with rapid increases in obesity and in diabetes. They also show that the **migrants** have adopted modes of life (for example, reduced physical activity) that put them at a similar risk for obesity and diabetes as the **urban** population.

Importance of Rural Urban Migratyion :-

Migration is the demographic process that links rural to urban areas, generating or spurring the growth of cities. The resultant **urbanization** is linked to a variety of policy issues, spanning demographic, economic, and environmental concerns. Growing cities are often seen as the agents of environmental degradation.

Reasons for rural to urban migrations :-

The “**rural push**” **factors** such as decline in income from agriculture, lack of alternative job, declining local economy, and denied access to basic facilities, further encourage people to move to cities. This often crystallizes into violence and conflicts and often protests against government.

Problems of rural to urban migrations :-

A dispersed pattern of urbanization leads to sprawl with higher motorization and **pollution**. A new urban vision is needed. India's demographic dividend cannot be realized if young entrants to the labour force as well as potential migrants from agriculture do not gain new livelihoods.

Suggestions of reduce migration in rural population :-

The **rural** areas must be **given** special attention while development so as to retain the **population** which migrates to the urban areas. All the basic amenities must be provided in the **rural** areas. 4. Better job prospects in **rural** areas **will** surely **reduce** the rate of **migration**.

Pattrans of migrations:-

There are four major forms of migration: **invasion, conquest, colonization and emigration/immigration**. Persons moving from their home due to forced displacement (such as a natural disaster or civil disturbance) may be described as displaced persons or, if remaining in the home country, internally-displaced persons. Rural-urban and urban-urban movement accounted for around 8 crore **migrants** each. There were around 3 crore urban-rural **migrants** (7% of classifiable internal **migration**).

Push and pull factors :-

There are many economic, social and physical reasons why people emigrate and they can usually be classified into push and pull factors.

1. Push factors are those associated with the area of origin
2. Pull factors are those that are associated with the area of destination

Economic reasons

Economic motives loom large in all human movements, but are particularly important with regards to migration.

Pull Factors

1. More jobs

2. Better jobs
3. Higher wages
4. The promise of a “better life”

Push Factors

Economic push factors tend to be the exact reversal of the pull factors:

1. Overpopulation
2. Few jobs
3. Low wages

This lack of economic opportunity tends to push people to look for their futures outside the area of their origin. It's difficult to classify this case purely with push factors though, because often the factors associated with the country of origin are just as important as the factors associated with the country of destination. Forced migration has also been used for economic gain, such as the 20 million men, women and children who were forcibly carried as slaves to the Americas between the 16th and 18th centuries.

Social reasons

Social reasons tend to involve forced migration

Pull factors

1. Principles of religious tolerance

For example the US attracted religious refugees, such as the Mennonites, who settled in Pennsylvania.

Push factors

1. Intolerance towards a certain cultural group
2. Active religious persecution

Examples being the Huguenots in 16th century France, the Puritans in 17th century England and the Jewish refugees from Nazi Germany.

Physical reasons

Pull factors

1. Attractive environments, such as mountains, seashores and warm climates

Push factors

1. Natural disasters

Solutions of urbanization :-

Solutions.

1. Combat poverty by promoting economic development and job creation.
2. Involve local community in local government.
3. Reduce air pollution by upgrading energy use and alternative transport systems.
4. Create private public partnerships to provide services such as waste disposal and housing.

We can minimize migration to big cities by providing basic facilities like medical, educational, resources for livelihood in Rural areas and in small towns. **Rural-urban migration** may be reduced by interventions which increase cultivatable land, equalize land or income distribution, or decrease fertility.

Conclusion :-

Migration from Rural to Urban in intrastate is been increasing slowly with industrialization and modernization in India. The main reason for Migration is Employment or business related migration. Especially the poor population shows highest mobility in search of jobs or livelihood in the Urban cities

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Environment and sustainable Development

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Abstract

The severity of environmental Problems and their socio-economic effects are important research issues as pollution and damages are local or global externalities implying market failures when in most of the cases the sources of pollution do not consider the full cost (including the related social costs) caused to others by their actions. Managing the various environmental problems and their associated implications is of interest to decision makers. Estimates of damage costs and a variety of other issues connected to changes in environmental quality and having to do with the importance of uncertainty and risk aversion are essential issues open to discussion. Furthermore, setting up competent policies requires cautious consideration of each source of pollution. For this reason, various features in the use of sufficient policies to cope with the various environmental problems, like people's awareness of environmental use and non-use values, institutional frameworks and similar concerns have to be considered.

Introduction

The production of various goods and services requires resources- both man-made and natural. As more goods are produced, more resources are used up. The process of production not only uses up resources, but also causes other problems. For example, when goods are produced in factories, the factories emit smoke which pollutes the air we breathe. Similarly, sewage discharged into rivers pollutes our drinking water. As the demand for goods and services keeps increasing, so does the demand for resources. As a result, resources are getting depleted and also being damaged irreparably. As we cut down forests, pollute the air and rivers, and mine minerals from the earth, we destroy nature. Such a destruction of nature is adversely affecting human life.

Significance of the Environment

The environment provides various resources to man-both renewable and nonrenewable. Renewable resources are those resources which are replenished easily over time, and hence can be used without the possibility of the resource becoming depleted or exhausted. Examples of renewable resources include trees in the forests, fishes in the ocean, etc. Non-renewable resources, on the other hand, are those resources which can get exhausted or depleted over time as they are used up. The environment also sustains life by providing bio diversity. The genetic variations created by the pressures exerted by the environment on various life forms allows those life forms to adapt, evolve and produce genetic variations which can survive in harsh environments.

Environmental Problems

With the advance of human civilization, human wants have expanded and diversified. This has led to a rapid depletion of natural resources. Many resources are being used up at a rapid rate, which has caused over-utilization and depletion of many resources. With the rapid use of resources, a lot of accompanying environmental problems has cropped up. These include pollution of air and water, degradation of natural resources like soil and forests, and the depletion of non-renewable resources like fossil fuels and minerals. In the sections below you will read about these environmental problems and understand the significance of their impact on the economy and the planet earth. Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or cause damage to the natural environment or built

environment, into the atmosphere. Major air pollutants include sulphur oxides, nitrogen oxides, carbon monoxide, carbon dioxide (which is also a major greenhouse gas), toxic metals, and particulate matter.

Effects of air pollution

The health effects caused by air pollution may include difficulty in breathing, wheezing, coughing and aggravation of existing respiratory and cardiac conditions. These effects can result in increased medication, increased doctor or emergency room visits, more hospital admissions and premature death.

Effects of Water pollution

A number of waterborne diseases such as cholera, typhoid, diarrhea etc. are produced by the pathogens present in polluted water, affecting human beings and animals alike. Water Pollution affects the chemistry of water. The pollutants, including toxic chemicals can alter the acidity, conductivity and temperature of water. It also kills life that inhabits water-based ecosystems like fish, birds, plants, etc. and hence disturbs the natural food-cycle, which causes instability in ecosystems.

Effects of noise Pollution :

Noise pollution in the form of unwanted sound can damage physiological and psychological health. Noise pollution can cause annoyance and aggression, hypertension, high stress levels, hearing loss, sleep disturbances, and other harmful effects. Chronic exposure to noise may cause noise-induced hearing loss. People exposed to significant occupational noise demonstrate significantly reduced hearing sensitivity compared to non-exposed people. High and moderately-high noise levels can contribute to cardiovascular effects, a rise in blood pressure, and an increase in stress thus affecting the physical and mental health of people.

Effects of global warming

- a) Melting of polar ice with a resulting rise in sea level and coastal flooding;
- b) Disruption of drinking water supplies dependent on snow melts;
- c) Extinction of species as ecological niches disappear;
- d) More frequent tropical storms; and
- e) An increased incidence of tropical diseases.

Effects of ozone depletion

As a result of depletion of the ozone layer, more ultraviolet (UV) radiation comes to Earth and causes damage to living organisms.

UV radiation seems responsible for skin cancer in humans;

It also lowers production of phytoplankton and thus affects other aquatic organisms.

It can also influence the growth of terrestrial plants.

A reduction of approximately 5 per cent in the ozone layer was detected from 1979 to 1990.

Causes of land degradation :

Some of the factors responsible for land degradation are:

- 1 Loss of vegetation occurring due to deforestation
- 2 Unsustainable fuel wood and fodder extraction
- 3 Shifting cultivation
- 4 Encroachment into forest lands
- 5 Forest fires and over grazing
- 6 Non-adoption of adequate soil conservation measures
- 7 Improper crop rotation

- 8 Indiscriminate use of agro-chemicals such as fertilisers and pesticides
- 9 Improper planning and management of irrigation systems
- 10 Extraction of ground water in excess of the recharge capacity
- 11 Open access resource and
- 12 Poverty of the agriculture-dependent people.

Deforestation

Deforestation refers to cutting, clearing and removal of rainforest, where land is thereafter converted to a non-forest use. Deforestation is rising at such a rapid scale that it has totally disturbed the ecological balance of the country. The per capita forest land in the country is only 0.06 hectare against the requirement of 0.47 hectare to meet basic needs, resulting in an excess felling of about 15 million cubic metre forests over the permissible limit. It leads to soil erosion, occurrence of more floods, changes in climate etc.

Soil erosion

Soil erosion takes place when the surface soil washed away through excessive rains and floods.

Deforestation is one of the major reasons for soil erosion. As per the estimates, soil is being eroded at a rate of 5.3 billion tonnes a year, which is in excess of recharge capacity. As a result of which the country loses 0.8 million tonnes of nitrogen, 1.8 million tonnes of phosphorus and 26.3 million tonnes of potassium every year. According to the Government of India, the quantity of nutrients lost due to erosion each year ranges from 5.8 to 8.4 million tonnes.

Sustainable Development

According to this definition, “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” The concept of sustainable development therefore emphasizes that we have no right to deny the right to life to future generations. The world’s stock of resources is not only meant for present generation but also for future generations. That is why it is our responsibility to use the environment judiciously to meet our needs of today, then bequeath them to our children and grandchildren (the future generations) so that they are able to meet their own needs as well. Sustainable development, is, therefore, a kind of development that takes into account the needs of the economy, and the environment without compromising either of the aspects. If the economic development is **sustainable** then the present use of natural resources will not limit us from their use in the future. Thus sustainable development tells us that development must be of a kind which can take care of our needs as well as the needs of future generations.

Some examples of ways in which we can contribute to sustainable development are given below.

Resources- finding substitutes for nonrenewable resources and using renewable resources judiciously. Solar energy, wind energy, hydropower, tidal energy and biofuels (like gobar gas) are being widely and increasingly used as substitutes for energy sources like coal, oil and natural gas that are being depleted rapidly. In many villages of India, solar energy appliances like solar cookers, solar lanterns and solar heaters are being encouraged and promoted by the government. In coastal areas the wind energy harnessed by windmills is being used to generate electricity.

Recycling - to use again, to re-process. To make paper we need wood pulp which comes from trees. Therefore by recycling used paper we can contribute to saving trees from being cut down. Water is a scarce resource yet we do not use water judiciously. We can reuse rainwater by rainwater harvesting.

Reduce - to use less or economize. Our consumption should be restrained to meeting our basic needs. We can walk instead of driving to the local market or climb using stairs instead of taking a lift, switch off fans and lights that we don’t need.

How to achieve sustainable development

According to Herman Daly, a leading environmental economist, to achieve sustainable development, the following needs to be done:

1. Limiting the human population to a level within the carrying capacity of the environment.
2. Technological progress should be input efficient and not input consuming.
3. Renewable resources should be extracted on a sustainable basis, that is, rate of extraction should not exceed rate of regeneration.
4. For non-renewable resources rate of depletion should not exceed the rate of creation of renewable Substitutes.
5. Inefficiencies arising from pollution should be corrected.

Strategies for sustainable development**1) Use of non-conventional sources of energy**

Wind power
Solar Power through Photovoltaic Cells

2) Use of cleaner fuels

LPG, Gobar Gas in Rural Areas
CNG in Urban Areas

3) Mini-hydel Plants**4) Traditional Knowledge and Practices****5) Use of Bio composting****6) Bio-pest Control****Conclusion**

Economic development, which aimed at increasing the production of goods and services to meet the needs of a rising population, puts greater pressure on the environment. In the initial stages of development, the demand for environmental resources was less than that of supply. Now the world is faced with increased demand for environmental resources but their supply is limited due to overuse and misuse. Sustainable development aims at promoting the kind of development that minimises environmental problems and meets the needs of the present generation without compromising the ability of the future generation to meet their own needs.

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**Connectedly disconnected parental relationship in Jhumpa Lahiri's Interpreter of
Maladies**

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Abstract:

Interpreter of Maladies is an anthology of short stories comprised of characters of Indian descent living within the U.S., chiefly geographic region. There's a diversity of plots within the set that depicts a varied society of immigrants. The characters starting from children who attempt to make a way of their home lives versus their school lives, to young adults unsure of being American and their connection to their heritage, and at last older adults who continually struggle to simply accept their new lives and forget their old. Children are crucial to the action of variety of Lahiri's stories. They serve to illuminate adult characters while, at the identical time, they need a definitive role as individuals. These characters respond quite differently to their family, associates, and enemies, comprising an unbiased illustration of how varied Indian immigrants' personalities are despite their common ethnic background.

Keywords: displacement, guilt, heritage, immigrants, culture.

Introduction

Lahiri's Indian legacy forms the origin for her short stories; stories within which she deals with questions of individuality, alienation and also the plight of these who are culturally displaced. She vibrantly shows the estrangement and separation that always afflict first and even second generation immigrants. Jhumpa Lahiri's characters tend to be immigrants from India, and their American reared children, exiles who straddle two countries, two cultures, not belonging to either; they're too accustomed freedom to simply accept the rituals and cultures of home, and yet too steeped in custom to embrace American mores fully. Lahiri delves into the souls of those indelible characters fighting displacement, guilt, and fear as they fight to seek out a balance between the solace and suffocation of tradition, and also the terror and excitement of the longer term into which they're being thrust. This compilation is about Indians settled overseas, and Lahiri addresses their struggles with multicultural upbringing and environment. Jhumpa Lahiri is of Indian plunge; both her parents were instinctive in India. She was born in London, but grew up in Rhode Island, a state on the geographic region of the U.S.. From childhood, she often accompanied her parents back to India – particularly in Calcutta, the third-largest city in India, located within the state of province, near India's eastern border with Bangladesh. After being published in prestigious magazines like The New Yorker, Lahiri was awarded the very best literary honour within the U.S., the Pulitzer Prize for Literature, in 2000. Since then, she has been awarded many other accommodations, including the O. Henry Award for brief stories. In 2003, she wrote the work of fiction The Namesake, which was made into a movie in 2006. In 2008, a second compilation of short stories, Unaccustomed Earth, was available. Lahiri lives in the big Apple City together with her husband and two children. Interpreter of Maladies could be a collection of short stories comprised of characters of Indian descent living within the U.S., particularly geographic region. There's a range of plots within the gathering that depicts a various society of immigrants. The characters starting from children who attempt to make a way of their home lives versus their school lives, to young adults' unsure of being American and their connection to their heritage, and at last older adults who continually struggle to simply accept their new lives and forget their old. These characters respond quite in a different way to their family, friends, and enemies, comprising an unbiased illustration of how varied Indian immigrants' personalities are in the face of their common ethnic background.

Children are crucial to the action of variety of Lahiri's stories. They serve to illuminate adult characters while, at the identical time, they need a definitive role as individuals. In "Mrs Sen's" story the boy, Eliot, plays as a foil to demonstrate Mrs Sen's inability to absorb into American culture. Although Mrs Sen dominates the story, Eliot becomes a stature who not only illustrates the steadiness between the cultures, but also develops as an individuality who grows through experiencing other customs. Eliot is an eleven-year-old white American boy; while Mrs. Sen, the ensuing in a very line

of Eliot's after school a "babysitter", is hired because she could be a "Professor's wife, accountable and kind" (Lahiri, IOM 111). She is, of course, rather more than this – as Eliot is soon to seek out out. She could be a traditional Indian wife who feels isolated and lost within the foreignness of yankee culture. It's perceived that Mrs Sen through the eyes of Eliot, who notices the striking differences between the domestic lifetime of these Indian immigrants and his own. Through his opinion, an in depth picture is given of the Sens' apartment, suggesting that he perceives the relations as strange. Indeed, his ability to soak up and luxuriate in this alternative way of life becomes a chic learning experience for him. Eliot, in fact, compares the verdure of Mrs Sen and her striking attire – "she wore a shimmering white sari patterned with orange paisleys" – favourably against his mother's "cropped hair ... her shaved knees and thighs too exposed" (Lahiri, IOM 112–13). Unlike Eliot's house, Mrs Sen's is welcoming and her apartment is warm. He soon involves foresee to watching her "as she chopped things, seated on newspapers on the lounge floor" (Lahiri, 94 IOM 114). He's fascinated with the knife she uses, "curved just like the prow of a Viking ship" (114). But Mrs Sen is so separated from her new life, so ravenous for company, that she allows Eliot to become her confidante. During this process, he learns not only to simply accept another person's culture, but also to shield Mrs Sen from her fear of living in a very world that's alien to her. Through her, Eliot involves understand the anxiety that ensues from being interrupt from one's family and friends, and therefore the frustrations of being unable to organize the food that ties one to a specific culture.

After Mrs Sen's car accident, Eliot is left reception as a 'latch-key' child and feels, for the primary time, the sterility of his own culture in contrast with the richness of Mrs Sen's. Both have benefited from their mutual association. In contrast, the seven-year-old boy in "Sexy" acts as a catalyst for Miranda to grasp that her relationship with the married Dev is neither appropriate nor beneficial to her. She is swept into her connection with Dev, attracted by his dissimilarity and lured by his Indian heritage. Their story runs parallel therewith of Laxmi's cousin, whose husband has absconded with another woman whom "he sat next to... on a flight from Delhi to Montreal" (Lahiri, IOM 83). His son, we learn from Miranda's friend Laxmi, is extremely bright, but badly suffering from his father's dereliction of his family. When Miranda's friend asks her to seem after him, she is startled by his perceptions. When the boy asks Miranda to wear the particular dress she has bought to wear with Dev, he unpredictably describes her as 'sexy'. The depth of his pain is discovered when he explains that being sexy "means loving someone you don't know" (Lahiri, IOM 107). With this comment, he reveals how poorly affected he has been by his mother's steady emotional outbursts and his father's desertion. After puzzling over the boy's words, Miranda understands the importance of the betrayal represented by her affair with Dev. The boy's pain has made her realise that "it wasn't fair to her, or to his wife, that they both deserved better" (Lahiri, IOM 110). The child's experiences have pointed her towards the fact of the emotional suffering inevitably involved in such a deceitful relationship.

The first-person speaker of "When MrPirzada Came to Dine" may be a ten-year-old girl, Lilia, who finally involves understand the pain caused by separation from one's family. MrPirzada could be a Moslem Bangladeshi who is trapped in America when the war of separation breaks get in western India. Each evening he's asked to dine with Lilia's family, who are Indian immigrants. Lilia is caught between the civilization of her parents and American approaching culture. She doesn't appreciate her parents' complaints about the unavailability of ingredients for Indian foodstuff, or their lament that neighbours "never dropped by without an invitation" (Lahiri, IOM 24). MrPirzada is invited to their house just because he's Indian; or, as her father explains, "MrPirzada is not any longer considered Indian" (Lahiri, IOM 25), something that made no sense to Lilia. Her mother perceives that Lilia is American – "we live here now, she was born here" (Lahiri, IOM 26) – and has little understanding of the politics of India and Pakistan. Yet, something still fascinates Lilia about her parents' homeland. Lilia perceives MrPirzada as somewhat foreign in his "ensembles of plums, olives, and chocolate browns" (Lahiri, IOM 27). His presence even makes her feel rather "like a stranger in [her] own home" (Lahiri, IOM 29). Every evening he brings her sweets, which she feels are "inappropriate... to consume" (29), placing them during a sandalwood box she inherited from a grandmother, she had never known; a sign of the empty space in her life created by her lack of familial connections. it's through MrPirzada's watch set to the standard time in Dacca that Lilia involves realise that, while MrPirzada is physically present in America, his experiences there are not

any quite “a lagging ghost of where [he] really belonged” (Lahiri, IOM 31) – together with his family in Dacca. Gradually Lilia, through her contact with Mr Pirzada, is delivered to understand the importance of other cultures and other people’s fight for independence.

Her colourless American history lessons seem unremarkable when set against the history being created within the here and now, and therefore the expectation of the “birth of a nation on the opposite side of the world” (Lahiri, IOM 34). Lahiri faintly uses the persona of Lilia to filter the edifying differences between India/Pakistan and also the reality of the American culture that Lilia is born into. She loyally learns the history of her birth kingdom but is drawn inevitably towards that of her parents. For Lilia, as war looms in East Pakistan, the small publish remain “a remote mystery with haphazard clues” (Lahiri, IOM 40) that she is somehow barred from; she knows only that Mr Pirzada and her parents operated as “a single body” with “a single fear” (Lahiri, IOM 41). After the war, Mr Pirzada proceeds home to his family, which has survived. He will never return to America, but Lilia has learned through this foreigner what it means “to miss someone who was such a big amount of miles and hours away” (Lahiri, IOM 42). In “A Temporary Matter” a young couple Shoba and Shukumar exchange confessions after a protracted silence to address the failure in their marriage. They become exiles, not of nations and culture, but of their still-born dreams. Shoba isn't ready to forget the absence of her husband at the time of her still-born child. The sorrow of the lost child causes a communication breakdown within the relationship of Shukumar and Shoba. They avoid one another and their friends; Shoba fills her time with work and Shukumar procrastinating over finishing his dissertation. The dearth of communication compounded by the loss of identity one feels in an alien culture makes the couple avoid one another and find refuge during a place where the opposite doesn't frequent. Shukumar, unable up-to-date the pangs of being alienated reveals on his part the mystery concerned with the features of their still-born baby. Somehow their mutual confession brings them together in a flood of tears underlining the very fact that cultural roots can't be severed so easily. It's true as A. K. Mukherjee remarks, “The marriage bond, which remains careful sacrosanct in India, is steadily slithering down under the weight of recent needs under a special background” (280-81). Jhumpa's other story “Sexy” revolves around a woman named Miranda who gets entangled in an affair with an Indian only to understand the worthlessness of a relation that's not socially approved and accepted. The concept of affection is only physical for her; that's why she doesn't hesitate to glide into a relationship that has no future. Physical satisfaction starts giving thanks to the belief that acceptance of the body is altogether different from the acceptance of relationship. Initially she feels elated when her paramour Dev calls her sexy, “It was the primary time a person had called her sexy, and when she closed her eyes, she could still feel his whisper drifting through her body, under her skin” (Lahiri, IOM 93). Her mirage gets blurred when she must take care of the kid of her roommate's cousin. The kid becomes the vehicle that creates her realize the hollowness of her affair that might eventually lead to nothing but pain and isolation. The child, like her lover, calls her sexy after forcing her to place on a glamorous silver sheath. Her confusion requires a proof and therefore the explanation shatters her flimsy cobweb of illusions. The boy tells her that to him sexy “means loving someone you don't know” (Lahiri, IOM 107). The dawn of realization makes her decide the course of her drifted life and he or she preferred to prefer of an already dead relationship.

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**Poverty Line Analyses of ShrigondaTahsil, Ahmednagar District,
Maharashtra**

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Abstract

ShrigondaTahsil forms to the southern part of Ahmednagar District ($18^{\circ} 27' N$ to $18^{\circ} 51'$ North latitudes and $74^{\circ} 23' E$ to $74^{\circ} 52'$ East longitudes). Total geographical area of the Tahsil is 1519.89 Sq. Km. and stand fourth largest Tahsil in Ahmednagar district. ShrigondaTahsil is situated between Pune District to the southwest and Beed District to the northwest. Parner and Nagar Tahsil to north and Karjat to southwest. Agro climatologically, ShrigondaTahsil is affected by drought prone area, and average annual rainfall is 522 mm. and the rainfall is 77% in June to September, which is reflected on cropping pattern of the Tahsil. The average maximum temperature is $38.9^{\circ}C$. The area is characterized by plateau of Ahmednagar district and dose not shows high aptitude of relative relief and absolute relief. The offshoots of Balaghat range extended to northeast portion of Tahsil and locally known as KolgaonMandavgan hill range. The rest of the area shows topography throughout the area. The geographical structure of this study area is consisting of very hard basaltic rocks. The horizontal layers of sill and sheet formed in this area. The soils in the hill slope area are characterized by thin layer cover with Murum and slightly faint grey tones. Alluvial soils are found in major river basins Bhima and Sina which is highly reflected on natural vegetation acacia (Babhul) and Neem; are some of the characteristic species of semiarid climate.

Sample Village Selection:

The next stage is to select villages for the intensive study of the farm household to assess the impact of irrigation, from out of the 114 villages, of the Shrigondatahsil. The study area is beyond imagination to the side villages. The numbers of villages are more; therefore the Tahsil will divide in to 11 divisions. In each division to villages are selected by random sampling method. 20 farmers will be selected in each division respectively. They will be divided in four categories such as Marginal, small, medium and big farmers (According to land holding capacity). Five sample of each category will be considered in terms of interview for study.

Table- 1
Selected Villages Population and Households

Sr. No.	Village	Population	Households
1.	Cikhali	2256	378
2.	Mungusgaon	923	172
3.	Pargaon	3478	630
4.	Kharatwadi	1554	265
5.	Walghud	769	124
6.	Thitesangavi	1051	205
7.	Takali – Lonar	2004	372
8.	Deulgaon	2059	346
9.	Boree	846	157
10.	Wangdari	1935	336
11.	Rajaur	1864	311
12.	Wadgaon – Shindodi	543	92
13.	Yewati	1324	240
14.	Nimbavi	1638	339
15.	Arvi	737	64
16.	Mundhekarwadi	2657	460
17.	SangaviDumala	1637	307

18.	Gar	966	148
19.	Ghodegaon	1271	215
20.	Wadali	1338	234
21.	Kansewadi	890	146
22.	Velu	779	132

Source: Ahmednagar District Census Handbook-2001

Relative Position of Sample Cultivators with reference to Poverty line in the Study Villages:

The discussions so far the sources of income and pattern of expenditure for each household (per capita and per consumption unit wise) in irrigated and un-irrigated villages. It is observed that income per household is different between these villages within the comparable land holding size. Irrespective of the income, each household must have a bare minimum (subsistence) expenditure satisfying the minimum nutritional requirements of food items, divides the population into two classes i.e., below and above poverty line. Of all the estimates, discussed so far, the figures given by Rane seems to be latest and more realistic to the present day situation, as inflation has made earlier estimates projections poor and less meaningful, more to because the data, of the present study is related to 2010. Thus a more realistic comparison would bring out, the actual situation as to how many households are placed w.r. to poverty line, in both the villages. Thus the impact of irrigation can also be assessed indirectly through the “wellbeing” of farmers. Information on food consumption expenditure, is analyzed for both the villages separately, while identity of major control (land holding size) is maintained throughout. Data related to consumption of cereals (jowar, bajra, wheat) oil, pulses, vegetables, beverages (tea), pan, tobacco, and sugar and gur. The prices are retail prices, as existing in the villages, at the time of data collection. Excepting some portion of cereals, vegetables, eggs and milk, all other items are purchased. Even the homegrown or produced items are imputed to estimate the real expenditure on food.

Poverty Line Analysis:

For each individual household, expenditure on food items is retail calculated, at prevailing local market prices. Data is collected, for a week as the purchases are made mostly during shandy which is conducted once a week. To arrive at the monthly value, the weekly values are multiplied by four i.e., the observed expenditure per month is arrived by multiplying the number of members in each household with (Rs. 1259), which gives theoretically how much each household would have spent, to maintain reach the minimum nutritious reach the minimum nutritious standards. Thus the straight comparison between (observed) O and E (Expected) gives, the number of families above the poverty line (wherever $O > E$). In addition, one more exercise is also attempted. There are some border line cases, in each LHS of both the villages, where observed value is neither exactly equal not more than the expected value, but somewhere near. To cover such cases, an allowance of + 20% is considered for the expected values, so that the border line case of observed value can also be considered for the analysis. At the outside in irrigated villages. 18.70% of the HH and in un-irrigated villages only 17.42% of the HH are observed to be above poverty line. When the + 20% is considered 25.65% more HH are found to be above poverty line in irrigated villages, overall LHS Barring i, ii land holding sizes, in all other LHS the newly added households villages in irrigated are more than 20% (Table-4.30). There is peak of 31.30 % in the 3rd LHS: and 21 % in the last LHS. From among the remaining LHS which were earlier below the poverty line 20% allowance has helped to trace some more houses. Thus the two classifications put together, have pushed the HHS to above poverty line to the extent of 44.355 in irrigated villages. viz., almost two in every 3 HHS of irrigated villages have the expenditure that matches with the minimum nutritional standards. Represented as a curve it is progressively on increase. The curve started with 37.5% in the last LHS and ended up with as high as 31.60 % in the higher LHS the average being 44.35% un-irrigated villages: There are altogether 120 HHS that are above the poverty line: constituting (17.4%) of the total. There are 110 HHS in the lower three land holding size and 10 HHS in the 4th LHS. In this situation, the allowance of “20% of E” is helpful to pull some more HHS to above poverty line. Some more (92) hhs are added to the list, thus bringing the combined list to 212 (30.4%) as against 176 hhs (44%) of irrigated villages ; which means that every two houses out of 3 hhs are above poverty line in irrigated villages but in un-

irrigated villages every fifty hhs is above the poverty line in spite of 20% allowance. The two values are statistically different (at 5 % L.S.).

Table- 2
Poverty Line Analysis- Irrigated villages.

LHS	PL n1	Z1 %	80% Ex n2	Z2 %	Total hhs N	Total % z3 Z1+Z2
< 1.5 hect.	42	27.03	32	37.50	394	64.53
1.6 to 3 hect.	37	25.00	24	12.50	387	37.50
3.1 to 7 hect.	15	12.50	09	31.30	230	43.80
< 7 hect.	10	10.30	07	21.30	94	31.60
Total	104	18.70	72	25.65	1105	44.35

Un- irrigated villages.

LHS	PL n1	Z1 %	80% Ex n2	Z2 %	Total hhs N	Total % z3 Z1+Z2
< 1.5 hect.	51	25.0	40	20.00	64	45.00
1.6 to 3 hect.	38	16.7	28	16.70	61	33.40
3.1 to 7 hect.	21	15.5	16	08.50	35	24.00
< 7 hect.	10	12.5	08	05.30	15	17.80
Total	120	17.42	92	12.62	175	30.04

Note: Z1 = n1 / n

Z2 = n2 / n

Thus a comparison, among different LHS of irrigated villages shows that up to 07 hectares, there are a few (10%) and (27%) HHS that is above poverty line (column Z 1) but their percentage has swelled (40-60%) when some more HHS is identified with allowance (80% expenditure). From 07 hectares onwards, (column Z 1), the HHS above poverty line has gone up (40-70%), while (column Z 2) in above 07 hectares, the HHS above poverty line are (75% - 90%). Thus in irrigated villages 07 hectares can be treated as the dividing line, where from the percentage HHS, above and below poverty line vary perceptibly. In un- irrigated villages also, 3 hectares seem to be dividing line (column Z3). The first land holding size has 45% of HHS above poverty line. This figure has come down to 18% in the 4th LHS. From the 07 hectares and lower LHS, the percentage HHS above poverty line have shown higher values (24, 33.40, 45) Thus in magnitude, the values may differ from irrigated and un-irrigated villages, but 07 hectares seem to be dividing line, in both the cases to demarcate the poverty line. The difference in the number of households below poverty line, in the two types of a village, which are similar in many respects, but for irrigation, speak volumes about the impact of irrigation on the wet cultivator's households. Thus the irrigated farmers could have better and assured income, thanks to irrigation.

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Quiet anguish of women inside matrimony: Sexual cruelty as well as brutality

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Abstract:

The purpose of this study to examine the consequences of sexual abuse and domestic violence on women health and well-being. Mostly women were reportedly violated and traumatized. The main theme of study is that time does not heal all wounds. Women undergoes great repressed and silent suffering in all aspects of life and an abuse is still seriously affecting them as their loved ones family members, parents specially children's suffers a lot. As female, they have been always experienced bullying and unexplained physical and mental torture, suffering multiple physical and psychological issues dealing with depression, having trouble trusting others. Such a research should aim to deepen understanding and sensitivity of both the risk and protective factors related to domestic violence and sexual abuse forcing particularly on identifying intervention to prevent and manage swam.

Keywords: Woman's Suffering, Mental Health, Domestic Violence, Sexual Abuse, Victim .

Introduction:

Sexual Abuse is sexual behavior or sexual act forced upon a woman, man or a child without their consent. Sexual abuse is an act of violence which the attacker uses against someone they receive as weaker than them, crime committed deliberately with the goal of controlling and humiliating the victim. Most victims of sexual violence are women even today a in 21st century, women as inferior to men. Sexual violence is another means of oppressing women in patriarchal society. Sexual violence is a social phenomenon that exists in every society that accept exclusive behavior and gender inequality. The term 'domestic violence' is used when there is close relationship between offender and victim. There is usually a power gap between them. Domestic violence can take the form of physical, sexual or psychological abuse. However, men, children and elderly people can also be victim of domestic violence occurs at all levels in society and in all population groups.

Hidden Dark Truth within marriage and women's health & well-being:

A large number of women sexually abused by their husbands have no social or legal remedy at hand because marital rape is not recognized as a criminal offence is a Dark truth. Majority of women who undergo marital rape feel shy. They don't gather courage to speak out against their husbands. A number of minor girls who get married to adults often complain of sexual abuse. Despite being a common occurrence, surprisingly marital rape is not recognized as an offence in India. The definition of rape under the Indian penal Code(IPC) clearly says, "Sexual intercourse or sexual acts by a man with his own wife, the wife not being under fifteen years of age, is not rape. The worst thing is that marital rape is not recognized as a crime in India. There is a civil law which says, marital that rape is a sexual violence under the Domestic Violence Act. Only protection and compensation are allowed to the victim in such cases and nothing else is done. The Kerala high court, in a judgment, said that treating a wife's body as something owing to the husband and committing a sexual act against her can be termed as "marital rape". The observation came while the court dismissed two appeals filed by a man challenging the decision of a family court granting a divorce. Merely for the reason that the law does not recognize marital rape under the penal law, it does not inhibit the court from recognizing the same as a form of cruelty to grant a divorce. The condition of women all over the world ' The United Nations' Declaration of Violence Against Women 1993, defines violence against women as "any act of gender-based violence that results in, or is likely to result in, physical, sexual, or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life. (1) In psychological trauma, the body reacts with a fight, flight or freeze response. Levine and Frederick (2) point out that when

individuals 'freeze', they often experience shame and guilt afterwards, because they could not do anything to protect themselves. They further state that freezing is an emergency response of a person experiencing trauma to survive the trauma; individuals enter a state of mind where they do not feel any pain and approach a feeling of dying. Long-term trauma can develop into post-traumatic stress disorder (PTSD), with myriads of psychological and physical symptoms (3). PTSD is a severe anxiety disorder that can develop after exposure to any which result in psychological trauma. Psychological trauma. It may involve the threat of death to oneself or to someone else, or to one's own or another person's physical, sexual or psychological integrity, overwhelming the individual's ability to cope. Symptoms include re-experiencing the original trauma(s) through flashbacks or nightmares, avoidance of stimuli associated with the trauma and increased arousal – such as difficulty falling or staying asleep, anger and hyper vigilance (4). All the women have been living under enormous stress, and it is known that stress is highly immune suppressive (5), and long-term stress can increase the risk for many diseases (6). Negative emotions, such as those experienced by all the women, can be very damaging to health and can lead to long-term infections, delayed healing of wounds and long-term inflammation (7). It is also known that if a person feels that she/he does not have control over the situation that causes the stress – as is true of all the women in this study – that can have even greater negative impact than the causes of the stress itself (8). Furthermore, the physical symptoms can be connected to the defense response of 'freezing', as Levine and Frederick (2) and Rothschild (3) have stated. It is also known that depression, experienced by all the women, has multiple negative effects on the immune system (6). The women's experience may be likened to a tsunami for their soul, mind and their whole consciousness

Cruelty as well as brutality within marriage:

Not All men's are cruel and treat their wives brutality but those male persons who are use to of physical violence to force their wives to have sex often when they were drunk and physical violence such as being beaten with iron rod, push down the stairs, giving burn mark of cigarettes and during pregnancy harassing their wife as well as using abusive language to own children in front of family. Family members or neighbors did not intervene as they consider it a family matter and ignore noises and screaming of women. Sometime women pretended to be ill or feigned menstruation to avoid sexual Violence from their husbands. Women mostly feel socially isolated and mostly do not say a word to any institutions, families or to friends for advice and support. Women do not talk about their problems to others because they think that they are the only one who are facing these kind of situations and will not receive support from family or friends. Ladies neither told their mother's, mother-in-law, close friend or a neighbor nor asks any from organizations and health providers. All Health care services should promote the prevention of SVWM and provide care to victims because women's suffering can bring consequences of SVWM and thoughts of suicide, depression.

Conclusion:

The topic of violence against women has always been in discussion but unfortunately the situation is still not in control. In my opinion certain measures could be taken like spreading awareness programs regarding gender equality, renouncing the practice of old customs that downgrade Women and gradually sensitizing them of heinous act. The young minds must be educated so that they can step out and raise their voice against the wrong done against girls and women. Females should be given self defense training in school and colleges. We have a comprehensive legislature exclusively for women, it must be enforced properly. India is progressing country in every dimension but this development is not able to copy the act of violence and women sufferings. Marital rape is not an offence in India and the criminal justice system also has failed to render justice to married women who are victims of sexual violence and domestic violence.

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New Education Policy Make Tremendous Changes in Higher Education

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Abstract :

The Government of India has declared the adaption of NEP-2020 policy after a gap of 34 years. The year 2020 has been an pandemic year for countries across the globe . Apart from COVID - 19 , there is one big or important changes that took place was the development of the New Education policy NEP 2020 .The announcement of NEP was a fresh news for the students because all the negativities surrounding the world posed by COVID -19 Pandemic. All higher education institution excluding the medical and law colleges will be governed by a single regulator.The M.phil courses will now be terminated . In the NEP all entrance exams for higher education institutes and universities will be held commonly.The main aim of introducing the NEP is to enhance the quality of education equally among all . The NEP was drafted by a panel led by the former head of indian space reseach organization(ISRO) kasturirangan and presented to union minister for human resourses development . Ramesh pokhiriyal when he took office in 2019 the paper identifies tremendous changes of the policy in higher education sector.This paper also discusses the gross enrolment ratio increase in the higher education system .

Key Words : New education policy,Higher education,COVID 19,Students, Government.

Introduction :

The Gov ernment of india has formulated the (NEP) national policy on education. To promote education in india. The policy covers elementary education to higher education in both rural area to urban area .The first NEP was promulgated in 1986 by pri me minister Indira Gandhi. This NEP is recommendation of kothari Commission (1964-1966) The main proposed of this policy is equal educational opportunities for all children up to the age of 14.The NEP of 1968 increase to six percent of the national income.Rajiv Ghandhi introduced a New National Policy on Education in 1986,this education policy specially for indian women,schedual trieses and the schedual caste.The 1986 policy called for a “Child - Centerd Approach” open university system with the Indira Gandhi national open university which had been created in 1985. The Government P.V.Narshima Rao modified the 1986 National policy.Former prime minister Manmohan singh adopted a new policy based on the “Common Minimum Programme” of his united progress ive alliance (UPA) . In this policy also solves problems of overlaps and reduces physical, mental and financial burden on students and their parents due to multiplicity of entrance examinatio ns.In 2019 the newly named education policy has released a new education policy with a vision of reshaping the education system in India .The main of NEP vision is reshaping the education system in India by the end of 2030.The new education policy transform the education standards in India .Ministry of human resources development to “Ministry of education” This changes have already been implemented .Some fundamental changes to the current system, and the key highlights are multidisciplinary universities and colleges, for the supporting or enhance student experience, establishing a national research foundation to support excellent and effectively study at universities and colleges. For students over all development like Mental, Cultural, Social, Physical, Emotional and Moral. Holistic and multidisciplinary education are important so that holistic and multidisciplinary education are integrated in the favor of student the NEP offer a holistic approach including adequate curriculum, interactive Pedagogy ,consistent formative assessment and adequate support for students.

Major changes in Higher Education:-

1. **In GER (Gross Enrolment ratio) 50% increase :-** The NEP want to increasing the current GER from 26.3% to 50 by 2035 .According to the NEP it is being speculated that 3.5 crore new seats will be added for higher education.

2. **Multidisciplinary Education :-** The NEP Provide holistic, multidisciplinary and broad-based undergraduate education with flexible study plan. Now students able to choose there subjects according to their choice Vocational course are more focusing and there are more flexibility to enter and exit the course with authorized certificate. Those students are in undergraduate will now have the option to choose the number of years as per their requirement ranging from 1-4 years with appropriate certification. For example Certificate after 1 year, advanced diploma after 2 years, license after 3 years and research license after 4 years.
3. **HECI Establish single and comprehensive coordinating body :-** The higher education commission of India will be established as a single and comprehensive coordinating body for all higher education, except for medical and legal education.
HECI will have four independent verticals:-
 4. The national council for regulation of higher education (NHERC) for regulation.
 5. The General council of education (GEC) for standardization.
 6. The council for higher education grants (HEGC) for funding.
 7. The National accreditation council (NAC) for accreditation.
8. **NCTE will formulate comprehensive national education framework :-** NCTE will formulate a framework for teacher training. NCFTE 2021 in consultation with NCERT. As per the policy of the new education system, by 2030 a teacher will require a minimum of Bed degree of 4 years for teaching in any institution
9. **Open and distance learning:-** Open and distance learning will play vital role in increasing the GER. To ensure that online courses and digital repositories, research funding, improvement of students services, recognition of MOOCs on the basis of credits, etc. It also manage the standards of imparting the highest quality of classroom programs
10. **Vocational education:-** In higher education all types of occupational education and training will be a fundamental part training strengthen the base of the students for different professions according to the area or region an internship of 10 days in a year will also be provide to the students
11. **Increase 6%) Financial Education(GDP:-** The NEP aims at increasing the current GDP To 6% higher at the earliest for this both state and center government will work together and promote education sector.

Important features in higher education :-

1. **Single regulatory body for higher Education :-** The New Education Policy (NEP) aims to establish single regulatory body for higher education commission of India. Except for legal and medical education.
2. **Multiple entry and exit Programme :-** Though students are not able to continue there degree they have also option to leave the course in the middle. Their credits will be transferred through Academic bank of credits.
3. **E-Courses to be available in regional languages: -** In this pandemic situation all education system has been changed. Technology will be part of education planning, teaching, learning and student training. The E-Content will be available in regional languages, starting from 8 major languages :- Kannada, Odia, Bengali, Hindi and English etc.
4. **Foreign universities to set up campuses in India :-** In India world's top 100 foreign universities will be facilitated to operate a new law. According to the HRD ministry document, "Foreign universities will be given special dispensation regarding regulatory, governance and content norms as compare with other autonomous institution of India."
5. **Common entrance exam for all Colleges :-** For all higher education the common entrance exam will be held by National Test Agency(NTA).

Objectives of the study :-

1. To see the impact of NEP 2020 on Higher Education.
2. To see the salient features of NEP and analysis the affect of Education system.
3. To study the need of NEP.
4. To study the major changes in Higher Education.

Methodology :-

In this research paper we collect the data from primary and secondary data. The secondary data collected from journals, Google and other websites of government of India. This research paper is based on descriptive study.

Conclusion :-

The new education policy introduces big changes in higher education. NEP helps for a new generation of learners has to engage with the practical courses. The digitalization of education system are helpful to the students. The new education policy has a landed vision. The NEP 2020 offers an elaborative framework with the help of this we can develop our education system and when education system are developed then our society automatically develops. Under the NEP 2020 the top universities across the world will be able to start their campus in the country. Under the NEP 2020, they are trying to reshape the curriculum. For higher education they conduct common exam. According to NEP the top universities across the world will be able to start their campus in our country. NEP is so focused in reshaping the curriculum. NEP wants to develop thinking power in students. They are offering experiential learning to them. The essence of this policy is the introduction of the multi-disciplinary approaches humanise the education with an emphasis on humanities related subjects. NEP also focuses on teacher training. The main aim of this policy is to make India a super power in the future.

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Human Rights Movements : A Historical Perspective

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Abstract -

Rights that should be made equally available to all irrespective of race, caste, community, region or country that an individual may belong to they are therefore said to be universal apart from also being regarded as inalienable apart from also being regarded as features of Human Rights have been challenged by various thinkers and the category of 'Human Rights' remains a much debated one. Further, while many human rights have gained legal recognition many more remain within the domain of 'Moral rights'. Both at international and domestic levels through out the world there have emerged and developed movements for promotion and protection of human rights.

Key words- Rights and challenges.

Introduction –

Human rights are described as all these rights which are indispensable for the defense and maintenance of self esteem of individuals and create conditions in which every human being can develop his personality to the fullest extent. Human rights become operative with the birth of an individual. Human rights are intrinsic in all the individuals regardless of their caste, religion, sex and nationality. Because of their vast significance to human beings; human rights are also called fundamental rights, basic rights, inherent rights, natural rights and birth rights. Human rights are the unchallengeable rights of a person by virtue of being a human. All or some of these may or may not be written in the constitution and laws of a country. These rights are considered to be widespread and have been concretized in various categories. These may be political, economic, social, or cultural. Theoretically, human rights belong to each individual, they are indivisible and valid for all times. In India, the protection of Human Rights Act, 1993 stated that "human rights" means the rights relating to life, liberty, equality and dignity of the individual guaranteed by the constitution or embodied in the international Covenants and enforceable by courts in India. Fundamental rights include freedom of expression, association, religious freedom, equality before law and direction principles are related to socio-economic rights, such as, rights to education, equal wages, and dignity of an individual indiscriminate before laws. The former are justifiable while the latter remain guidelines for legislation. The rights of an individual and movements around these philosophies were heated from ancient time and rooted in western society. The movements that developed in the west during the French and American revolutions during the eighteenth century influenced a small section of Indian intellectuals. Social transformation and political movements of different groups and the congress provided base for debate and declaration of the rights. The advocates of the rights were social reformers, liberal political leaders championing for equality of Indians as 'citizens' with the British before law and there were also the defenders primarily concerned with shielding the economic interests of the landed class. Social reformers attempted to involve for reform social customs and traditions so as to protect women and the lower layers a society. In the year of 1918 the congress made a declaration of rights submitted to the british parliament. It encompassed the freedoms of speech expression and assembly, the right to be according to law and above all freedom from racial discrimination. The motilal Nehru Committee of 1928 claimed all fundamental rights to Indians 'Which had been denied to them' Through the demands were overruled by the British government the congress passed a resolution of fundamental rights in the Karachi session in 1931. The 1st human rights group in the country the civil liberties Union was formed by Jawaharlal Nehru and same of his associates in the early 1930s with the aim providing legal support to nationalists accused of sedition against the colonial authorities. In 1936, Jawarhalal Nehru came forward to form the first civil liberties organization . The Indian Civil Liberties Union (ICLU) was established in Bombay in 1936 with Rabindranath Tagore as its president. Nehru said in his address to the founding conference of the ICLU, that the notion of civil liberties is to have the rights to oppose the government. The human rights movement in the post independence period is normally divided into two phases: pre and post

emergency. The Civil Liberties Committee was formed in west Bengal in 1948 to dissent against the state repression on the communists. There is no account of this phase movement began in the late 1960's with the cruel attack by the state on the nexalites. The movement elevated the issue of democratic rights of the oppressed sections of society for justice and equality. While detailing the struggle, kakasala contended that democratic rights are needed by those who have to struggle for justice while the needed by those who have to struggle for justice while the fundamental rights are adequate for the privileged. In the regime of Smt. Indira Gandhi the Emergency imposed on 25 June 1975 brought new prevalent impetus to the civil rights movement. She suspended the fundamental rights suing that they were used by the privileged section to prevent her from carrying out programmes in the interest of the 'Majority' (Rubin1987) The liberal intellectuals was surprised by the realization of the built in authoritarian tendencies within the political system, and the drawbacks endemic in any assumption of the durability of the democratic process, as heretofore. This formed the intellectual and political setting that led to the origin of the civil and democratic rights movement (Ray1986). Numerous recent civil liberties organizations emerged during the period to right for civil and democratic rights.

The Human Rights Movement In Pre independent India :

India's struggle for independence epitomized a demand for self – rule and democratic I liberties. Nationalism provided the broad context within which civil and democratic rights were demanded. Nilanjan Dutta ('From Subject to Citizen : Towards a History of The Indian Civil Rights Movement') argues that demands for civil rights in Indiaj date back to the nineteenth century when educated sections of the subject population demanded 'equality of opportunity in employment, freedom of press and the abolition of racial discrimination in legal proceddings'. The early twentieth century saw greater, impetus in demanding civil rights. Further adding to these demands for rights was the declaration diversified the nature 01 rights demanded. These now included not just political and civil rights such as the freedom of speech, expression and assembly but also social and cultural rights such as free primary education, freedom of conscience and religion, gender equality and others. The 1928-29 Nehru report on the Indian Constitution witnessed a strong debate on the right to property, the incorporation of which was strongly opposed by the left learning political leaders. However as a compromise solution the right to property was included along with a concession to the working class in the form of granting 'trade-union' rights. These theoretical exercises in deciding the scope of what constituted fundamental rights and democratic liberties finally culminated in the establishment of the Indian Civil Liberties Union (ICLU) in Bombay in 1936. The Union was presided over by Rabindranath Tagore while Sarojini Naidu was the first working president. As outlined by Jawaharlal Nehru the ICLU was asserting the 'right to oppose' the colonial government. The activities of the ICLU included exposing and investigating various instances of police atrocities and custodial violence, suspension of citizens' rights and incarceration of political prisoners. Investigations were followed up by publication of reports. Further, notwithstanding the fact that the ICLU had adopted a strong anti-colonial ideology, they did not restrict their activities to provinces under direct colonial rule but also included within their ambit the princely States and those provinces which had Congress governments. It is instructive that even in the latter case there were many instances of human rights violations. However subsequently with the national movement gaining greater momentum as witnessed in the 1940s, the activities of the ICLU became secondary. Moreover as leadership of both was drawn from the common pool of the Congress party there were no alternative activists who could have kept the human rights movement alive. Another observation that needs to be made is that as the nationalist and human rights discourse came to be entwined with both rallying against the colonial State, once India became independent the need for a human rights movement was no longer felt. In fact the national government came to appropriate the role of the defender of human rights in such a way that any opposition to the government was now branded as 'anti-national'. The activists who had earlier condemned the violence of the colonial State now came to use the same against its citizens, justifying their actions for the protection of 'national interest'. The human rights movement also stood discredited and it continues to grapple with this dilemma of being branded antinational on the one hand or becoming defunct on the other. However most importantly one must acknowledge that rights consciousness in India developed as a part of nationalist consciousness.Challenges Faced by the Human Rights Movement – The human rights movement in india faces challenges at various levels. The power of the state is witnessed as all levels of the

political and economic structure. In the economic sphere where the state has withdrawn it remains a willing ally of the domestics and multinational corporate sector and thus the human rights groups must also face the challenge of global capital which is not shackled by the concern of social responsibility. Ideologically the interface with the state is itself fraught with many dilemmas. Human Rights Movement rights groups are expected to oppose various kinds, of violations of human rights by the State whether in the form of rights depriving legislation or non-action in securing legally guaranteed rights. On the other hand they must also work within the State's legal framework to demand justice in following the latter, often groups tend to confine the elves making demands on the State without ever challenging the very ideological structures or processes within which the state and political regime operate. Rajni Kothari has argued that with the rise of a technocratic State committed to global capitalism there has been large scale depoliticization and curbing of dissent. The distinction between State and civil society has blurred with the latter lacking any agency or alternative perspectives to the ones championed by the State. Given the liberal individualist market based ideology that guides the State there are increasing attempts to take society as a singular and homogenous category devoid of regional, religious, ethnic, linguistic and cultural differences and therefore amenable to universally determined solutions. Kothari says that as the State does not recognize particularistic claims, groups are often forced to resort to, 'sectarian and communal forms' to register their protest. Human rights groups need to constantly negotiate the twin categories of the universal and individual on the one hand and particular and communitarian on the other. The dominant discourse of rights is geared towards the individual; therefore it is essential that the group perspective be incorporated : D. L. Sheth has argued that the liberal and legalistic concept of rights does not include the concerns of the marginalized i.e. those who do not belong to the organized sector and are devoid of any entitlement. The language of rights needs to be further expanded and reinvented sans the state determined context.

Conclusion –

Several social and political activist groups use the term human rights' in The context of the rights of an individual which are 'natural' inherent in our nature and without which we can not live as human beings. These rights should not be violated by the state in other words, they require to be protected against the authority of the state. Simultaneously, ironically, it is anticipated that they need to be protected & enhanced by the state. These rights are generally included in 'Civil' and 'democratic' rights. As the time passed from time to time and in different contexts. For traditionalist, human rights include the rights personified in religion which validate ownership of private property including the system of slavery and bonded labor. Liberals and leftists believe that equality and dignity of all individuals to sustain life are the main human rights. There is intense debate among political philosophy and jurists to explain human rights.

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Role of Sustainable Development on Indian Agriculture

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Abstract

Sustainable development is a process of changes in the field of agriculture resources, the orientation of technological development, the direction of interests,, and the institution changes are in harmony and improve the quality of both current and future possibilities to meet human needs and aspirations. Sustainable agriculture is the system of raising crops for greater human utility through utilization of innovative resources with better efficiency without disturbing or polluting the environment. India has been successful in a green revolution due to the increased use of a high variety of seeds. But repeated use of land without taking enough care to maintain its productive capacity leads to loss of top solid into erosion ,loss of porous soil structure, loss of organic matter and water logging and build up of toxic salts and chemicals. Excessive use of pesticides created localized health problems. Indiscriminate use of modern innovative technology may endanger ecological security and imbalance the overall environment. The paper highlights the sustainability in Indian agriculture through the prevention of diversification of land suitable for integrated forest management, farming to non-farm uses, through preserving genetic resources and management of marine resources. To achieve sustainable agricultural development in India some policy measures are suggested.

Keywords:

Sustainable development, technological development, Indian agriculture, agricultural development, investment on irrigation, green revolution.

Introduction

Sustainable development means the development at present meets the needs of the present generation without compromising the ability of future generations to meet their own demand. Sustainability in agriculture means the land and resources that are used for agriculture today should be handed over to the future generations in a sustainable form so that they could continue in future to practice in agriculture and have food security. This means that we have to use all the natural resources such as lands and water resources etc. in such a manner that the future generations will also be able to have sustainable development. Sustainable agriculture is the system of raising crops for greater utilization of humans through all the resources with better efficiency without disturbing or polluting the environment. Sustainable agriculture is ecologically sound, economically viable, socially just and human.

Sustainable Development And Agriculture

The world comes close through the modern technology which helps to the development of the industrial sector but still agriculture plays a dominant role in the process and progress of economic development of India. Agriculture provides food and employment to peoples, promotes rural savings and investment, input for agro-based industries, and plays a major role in earning the foreign exchange through the export sector. With the increasing population of India, more efforts and innovations are required to meet the rising demand for food and this has enhanced the need for increasing agricultural production, reducing food wastage and loss, and also ensuring the availability of food for the entire nation. Thus, the role of agriculture is inevitable for the development of an economy and nature is a significant

factor for its growth. Sustainable agriculture is farming without compromising on nature, depleting or developing natural resources and also understanding the interdependence of living organisms and environment. The Food and Agriculture Organization has defined Sustainable Agriculture as “The management and conservation of resources based on the orientation of technological and institutional changes in such a manner that ensures attainment and continued satisfaction of human needs of present and future generations. It follows that sustainable agriculture is that path of agricultural development, which is environmentally non-degrading, technologically appropriate, economically viable and socially acceptable” . Excessive use of chemical fertilizers, pesticides, tilling of soil, salinization causes damage to soil and leads to depletion of soil fertility which makes soil/land unusable and reduced productivity.

Status of Agricultural Development in India

India will be the most populous country of the world by 2050 if the present growth rate perpetuates. In order to meet the growing needs of the expanding population, it is compelled to produce more than 210 million tonnes of food grains per year. India has not only met its domestic requirement but is also exporting to other countries. It also has a respectable buffer stock of about 40 million tonnes of food grains. The achievement of the green revolution was increased through the high yielding variety seeds. But intensive use of land without taking enough care to maintain its productive capacity leads to loss of topsoil due to erosion, loss of Organic matter, loss of porous soil structure and water logging and build up of toxic salts and chemicals. Deficiencies in micronutrients such as zinc, iron, and manganese have also increased in Indian soil. Overuse of pesticides have caused localized health hazards. Indiscriminate use of modern agriculture technology may endanger ecological security and imbalance the environment. Both farmers and the government have made huge investments in irrigation.

1. These investments have not only brought inadequate results but also the use of its improper management system has led to enormous water losses and problems such as soil erosion and compaction, water salinity, acidity and alkalinity.
2. Forest Scheme of integrated forest management which can take care of the triple needs of conservation, community needs and commercial needs will have to be developed.
3. Protecting Environment Measures: such as development of pest resistant varieties, removal of pesticides and implementation of pest management which is strictly adopted by the Government.
4. Preserving Genetic Resources: A special programme is necessary for the collection, conservation, evaluation and improvement of crop genetic resources directly related to crop productivity.
5. Other Needs: a) Removing excessive use of fossil fuels, irrigation water pesticides and excessive logging. b) Gain the provision for sanitation and clean water, agricultural extension credit and research.
6. Aquaculture Use of eco-system approach to the management of marine resources. Available to study the short run progress towards sustainable agricultural development, because it involves value judgments’ such as the level of genetic diversity necessary to ensure crop security and the level of soil microbiological activity necessary for the health of the soil, However indicators like soil organic matter can be used for long-term measurements.

To achieve sustainable agriculture development in India the following policy measures are suggested. Policy Measures

1. Declare a national policy for farmers about grants and property rights.
2. Strategy for sustainable technology and pest management.

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3. Direct subsidies and grants towards sustainable technologies.
4. Encourage the NGOs for overall helping to farmers.
5. Establish appropriate standards and regulations for pesticides.
6. Rethink: the project culture.
7. Scientific method of cultivation with best inputs including credit must be provided.

Conclusion

For achieving success in promoting sustainable development in agriculture attention must be focused on land, water energy, nutrient supply, genetic diversity, pest management, systems approach and location of specific research and development. References

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An Analytic Study of Hardy's Love Poems.

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Abstract:

Thomas Hardy's Poems especially his love poems which especially appeared to be a journey from Personal to the Universal. In fact, in his early years, Thomas Hardy was fascinated towards writing of novels, but the poet in him still dominated while writing novels. Hardy's turning, from prose to poetry, as some critics have to say, is concerned with marriage. The three volumes of poetry published before Emma's (Hardy's wife) death in 1912 consist of philosophical poems revealing unhappy man, narrative obsessively concerned with unhappy marriage and lyrics addressed to lovers, relatives or friends, but seldom the poet's wife. After suffering for many years from disease, she died quite suddenly in November 1912, Hardy was shocked, surprised and plunged with deep remorse. He expressed his complex and developing reactions to her death in a magnificent series of poems of 1912-13. Robert Gittings, in his biography of Hardy, claims, Hardy wrote these poems out of a sense of guilt over his part in their relationship particularly, in his lack of care for her in last years of pain. But the remorse in these poems and their range of response is of a much broader nature than this being directed towards a sense of sorrow that their love which has burned so brightly as first, had perished many years ago and perhaps never been swindled.

Keywords: Universe, Love, Personal, Dominated and Universal.

Introduction: By her death Emma seemed to have prevented reconciliation, as the first poem in the series, 'The Going' expresses. 'All's past amend,

Unchangeable, it must go,
I but a dead man held on end,
To sink down soon....'

Paradoxically, as the later poems in the series reveal, it was by dying that Emma rekindled Hardy's love. Whatever, guilt Hardy might have been expiating in these poems. What is impressive about them is the poignant and consoling rediscovery of his lost love. While studying Hardy's love poems it would be essential to mention Hardy's relationship with Florence who had been working as Hardy's secretary for some time and in 1914 became his wife. She was a great support to Hardy in his old age, but the relationship was not always an easy one for her, with a type of irony typical in Hardy's writing, Florence discovered that her roles have been reversed. Instead of writing poems to her, Hardy wrote dozens of poems about Emma, whom he had ignored for years while she was alive. Therefore, a sense of remorse is always there in Hardy's love poems, and a note of grief can be seen in almost all his poems. Hardy tried to make his personal Voice, the Voice of the Universe and this is a subject of study of the present research work. In order to give a systematic shape to the present study it has been divided under the following chapters heads just like a short survey of Hardy's poems. In this chapter a short survey of Hardy's poems have been given to suit the purpose of study. Hardy's first book Wessex Poems and other Verses was published by Harpers in 1898 with 30 illustrations by the author. The volume contained important poems like 'The Imprecipient' 'Thoughts of Phena' 'Neutral Tones', 'Hap' and 'Amabel.' The book received a mixed response, Lionel Johnson stated that in the 50 poems there were "Passion, humor, wistfulness, grimness, tenderness, but never joy, the radiant and invincible. In this chapter we have seen an attempt has been made to analyze related poems of Thomas Hardy to show his personal agonies which became the agonies of the universe.

Rational of the Study:

Through Hardy's notes, we can trace his reading in Schopenhauer from 1883 to 1912 and date particular transitions in his thought which indicate that he was progressively more inclined to accept certain areas of Schopenhauer's and to a lesser extent Hartman's philosophy. The years following 1883 are the years in which Hardy wrote and revised Tess, conceived the epic poem The Dynasts, and recorded his reactions to both Schopenhauer and Hartman. Because Hardy was assimilating Schopenhauer's godless and fatalistic philosophy during this period, Tess demonstrates

Hardy's darkest philosophical inclinations. During the composition of 'Tess' Hardy seemed to be considering seriously Schopenhauer's conviction that consciousness was an evolutionary mistake that should be remedied. In the light of Schopenhauer's 'The World as Will and Idea,' Tess not only becomes a dramatization of the working of Schopenhauer's blind, irrational and immutable Universal Will to love, but it also creates a clear impression of his dictum that, in this world, "Determinism stands firm." This chapter discusses the influences on Thomas Hardy. It is an important in the sense that here an attempt has been made to discuss the influences of Arthur Schopenhauer, a German philosopher, on Thomas Hardy. A comparative discussion of Schopenhauer's 'The World as an Idea' and Thomas Hardy's 'Tess of D'Urbervilles' has been attempted to show how far here were influences of Schopenhauer on Thomas Hardy. Also these influences on his other novels as well as on the poems of Hardy have also been attempted to be traced out. Hardy stresses the idea that his characters behave according to blind impulses in order that we see them as helpless victims of a force beyond their comprehension i.e. a force like Schopenhauer's Will. In the chapter a consideration of the influences of contemporary religion, science and philosophy on Hardy's writings have also been attempted to discuss. A discussion on Hardy's representations of religion were most profoundly influenced by his loss of faith in Christian dogma. A pros and cons of this aspect has been discussed in this chapter. Also Science, Astronomy and Physics and many more such things have been examined with a view point to trace out the influences of these things on Thomas Hardy and his poems.

Objective of the Study:

We have continually noticed that in the third chapter, entitled Soul, Love and Nature, discusses Thomas Hardy not only as a pessimist writer, but as a poet of hope for the moral advancement of humanity. Although many critics have discussed the nature of Hardy's hope for humanity's progress, but none perhaps has discussed Soul, Love and Nature as parts of the great Universe. In fact, Hardy's notion of progress is a very important factor in the development of his poetry. Through the analysis of Hardy's poem, "Tenebris II, one finds a little scope for hope and it appears the accusations of pessimism which Hardy fought against for much of his life are apparently justified, but line 14 of the poem offers a crucial statement for understanding Hardy's means of discovering hope.

"If way to the Better there be,
It exacts a full look at the worst"

Hardy sets himself apart from those in the poem who believe that "Our times are blessed times," and that "nothing is much the matter" suggesting that these are meaningless sentiments with no truth in them and therefore, they can't truly lead to progress. In this chapter, an attempt also has been made to understand Hardy's concept of Nature in his poems. To Hardy, Nature is neither a nurturing force nor a malevolent force, but simply a blind and indifferent force. There is no moral sense in Nature, and, therefore, both good and bad are simply as part of the natural order. This sentiment appears in "The sleep worker" and many more such poems. Thomas Hardy is not an escapist, rather he wrote poems in contrast to the dream like poems which speculate on the moral awaking of torches of the world. Hardy offers a glimpse of hope in "often when warring." It is through great actions those of "world awakening scope" that humans can attain a permanent place in the memories of the living, and thus, achieve immortality. In spite of wide spread accusations of pessimism throughout his long literary career. Hardy insisted that a hope for the moral advancement of humanity lay at heart of his poetry. He states in his 1909 Preface to *Time Laughingstocks and Other Verses* that his collection of poetry "will I hope, take the reader forward, even if not far, rather than backward" and in his important "Apology" which prefaces his 1922 collection of late 3 years and Earlier, Hardy writes concerning his works that "what is today...termed as to be 'pessimism is , in truth, only....'questions' the exploration of reality and is the first step towards the soul's betterment, and the body's also. A basic understanding of Hardy's hope for betterment is difficult to come by as a result of his emphasis on recording impressions in his poetry. He also writes in his preface to poems of the Past and Present. It will probably be found, therefore, to possess little cohesion of thought or harmony of coloring. I do not greatly regret this. So, unadjusted impressions have their value, and the road to a true philosophy of life seems to lie in humbly recording diverse readings of its phenomena as they are forced upon us by chance and change.

Analysis:

The fourth chapter is devoted to the study of creativity of the old age and Hardy's poetry. In this chapter an attempt has been made to trace out the impact of old age in Hardy's poetry. In fact, Hardy started writing poetry in old age, and references to old and times torn man are frequently referred in his poetry. Hardy's love poems, in majority of cases, do not reflect the passions of young age, rather they are the expressions of 'times torn man' who appears to be in the world of melancholy. Hardy argues that 'Old authors are fascinating for their particularity and their way in which the dynamics of the author's thought is visible'. Poetry is the mode of old age because it reveals more of the subjectivity. He, at some place, points out on his faculty for burying an emotion in my heart or brain for forty years and exhuming it at that time as fresh as when interred an exact metaphor for his late creativity. In 1918 these considerations of his fecundity continue. He criticizes the idea that curtailed tragic careers of Shelley or Marlowe and be as accepted norms. He contrasts these poets with the writers of antiquity, Homer's song as a blind old man, Aeschylus wrote his best up to his death at early seventy. The best of Sophocles appeared between his fifty-fifth and 90 years. Hardy continued to comment on the value of old age. It was the period after 1916 that Hardy began to think about his old age, which was period of theoretical self justification associated with the life climaxed with the Apology to late lyrics and earlier 1922. In short it may be said that this chapter is totally devoted to the impact of old age in Hardy's creation of poetry. These are important points to keep in mind when studying Hardy, as any attempt to attach a specific philosophy or world view to Hardy's body of work or to any particular era of his life can otherwise become hopelessly frustrating. Although it is possible to find a hope for moral progress throughout Hardy's works, it is important to avoid the temptation to either connect Hardy completely with any certain way of thought or to deny completely the influence of a particular philosophy on Hardy's own set of beliefs. In any study of a particular aspect of Hardy's poetry, there will almost inevitably be exceptions and contradictions. However, it is possible to uncover some essential ideas which lie at the heart of much of Hardy's thought about the possibility of hope for humanity's moral progress by looking closely at the interactions of his poems with one another and with other texts that influenced Hardy.

Conclusion:

In the last chapter we have confirmed that Time as a major factor in Hardy's poetry, is discussion of Hardy's larger concept of Time and its use in different connotations in his poetry. Hardy is conscious about his literary inheritance. Generally, speaking, in Hardy's poetry there is an inimical relationship, a struggle between the poet or mankind as a whole and the forces of Time, and in this he reflects traditional attitudes. In the world, as Hardy saw it, Time is one dimension and on reversible process, implying mutability and morality, and thus, inevitably defeating man in his struggle for permanence and order. Hardy's Time is a destructive, never a curative force, and it can't be transcended. The obsession with time is one important aspect of Hardy's Philosophy, has a structural, a dimension. Hardy, most commonly by organizing his poems in temporal terms rather than in spatial or logical forms that is to say, he ordered his actions by relating them in time, and not in space or in the terms of syllogism. Hardy's Love Poems' it may be said that a proper and genuine attempt has been made to study the love poems of Thomas Hardy and in order to achieve this target proper chapterization also has been made. To suit this purpose, the first chapter has been named for the purpose of study, 'A short survey of Hardy's poetry.' Here not only a survey has been done but a critical and analytical appreciation of some poems also have been presented. The third chapter has been named as 'Soul, Love and Nature' where these things as 'Soul' 'Love' and 'Nature' in fact are parts of the Great Universe. Here, Hardy's notion of progress is related to the development of his poetry. Thomas Hardy, in fact, has also been charged as a pessimist writer. This chapter comes forward with the argument that Hardy was not a pessimist rather he was a poet who trusted in genuine progress. To Hardy, Nature is neither a nurturing force, but simply a blind and indifferent force. In him, both good and bad are simply as part of natural order.

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Climate change.

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Abstract –

Various activities are found in the world around us. When climate change issue comes around us we say that temperature increases in lot of proportion. When temperature penetrates, various transformations can come on Earth. For example, it results in more, heavy rain, floods, droughts, earthquake as well as more daily and so heat waves. Oceans, seas, rivers, and glaciers have also experienced some differences. Seas are become warm and becoming more acidic, glaciers are melting, and sea levels are rising at upper most and it affects the life on sea shore people. As these changes always will be seen in future years, they will likely present dilemma to our community and environment. During the past century, human being action has seen large proportion of carbon dioxide and other dangerous chemicals gases into the atmosphere. Most of the gases can be created from burning fossil fuels, wastage garbage to produce energy. Greenhouse gases are like a shield around the Earth, energy in the atmosphere and causing it to warm. This is called the greenhouse effect and it is natural and important to support life on the earth. still, while greenhouse gases buildup, the climate changes and result in dangerous effects to human health and ecosystems. People have accepted to the stable climate we have enjoyed since the last ice age which finished several thousand years ago. A hot climate can create changes that can affect our water ,soil, natural sources, food, daily activities, agricultural products, power and transportation systems, the natural environment, and even our own health and safety. There are some examples of climate changes that cannot unavoidable and we cannot change them about it. For example, carbon dioxide can stay in the atmosphere for many years but we can overcome it by planting lot of, so Earth will not continue to warm in the future. In conclusion, we need to take part and try to minimize global warming and other causes on climate change. If the earth's temperatures continue to rise in the future, living things on earth would become dangerous due to the rise of temperature. If humans try to control global warming, this world would be cooler and the high temperatures will be control. If everybody take part to overcome this problem our would be citizen can live safely and happily as one take stand and try to end most of the climate changes that are occurring daily and people facing lot of problem regarding to climate change.

Keywords-Droughts, dilemma, fossil, ecosystems, extinct.

Introduction-

When environmental conditions changes on the earth we say that climate change. This condition happens due to many internal and external factors on the earth. The climatic change has become a worldwide problem over the last few decades for human being. Besides, these climatic changes affect life on the earth in various ways. These climatic changes are having various effect on the ecosystem and ecology. Due to these changes, a number of species of plants, bird's humans and animals have gone vague. The climate started changing a long time ago due to human activities traditional view lust and many more but we came to know about it in the last century. During the last century, we started noticing that the climatic change and its effect on human life. We started researching on climate change and came to know that the earth temperature is rising due to a component called the greenhouse effect, cutting tree in lot of proportion, using pesticide, fertilizers etc. The rising of temperature warming up of earth's surface causes much ozone depletion, affect our agriculture, water supply, transportation, and create several other problems. If we do not try doing anything to control it and things continue to go on like right now then a day in future will come when humans will become vanish from the surface of the earth. But instead of avoiding these problems we start acting on then that how we can save the earth and our future generation that our beautiful world will be live forever.

Causes of Climate Change-**Natural causes**

These include earthquake, volcanic eruption, flood, droughts, acidic rain, solar radiation, tectonic plate movement, orbital variations etc. Due to these activities, the geographical condition of an area become quite dangerous for life to alive. Also, these activities raises the temperature of the earth to a great extent causing an imbalance in nature for that purpose we have try to control all these natural disasters and maintain climate in proper ratio that all living can live happily.

Human causes

Man due to his need and greed has done many harmful activities that not only harm the environment but him too. Many plants, vegetations and animal species go decrease due to human activity. Human activities that harm the climate include deforestation, using fossil fuel, industrial waste, a different type of pollution and many more. All these things damage the climate and ecosystem very badly. And many species of animals and birds got extinct or on a verge of extinction due to hunting. Human now using lot of new activity for farming for increasing production of crop it is good for economical condition of farmer but while doing this they are neglecting at climate.

Effects of Climatic Change

Due to change in climate there are many harmful changes occurring in the life of human being as we are living in the twenty first century man has gone on moon and trying to sun but while progressing he forgets that nature creates human being not human create nature. For temporarily profit he destroys nature and face the problem of climate change not for himself but for upcoming generation also. These climatic changes have a negative impact on the environment. The ocean level is rising, glaciers are melting, CO₂ in the air is increasing, forest and wildlife are declining, and water life is also getting disturbed due to climatic changes. Apart from that, it is measured that if these changes keep on going then many species of plants and animals will vanish. And there will be a major loss to the environment. So as human being as well wisher for his upcoming generation as well as for nature we have to think the bad effects that will trouble humans as well as nature. if we behave same for few ears our generation never sorry us so we have to think over this issue and try to overcome these problem regarding climate change and make this earth heaven.

The main ways to stop climate change –

If we want to stop climate change we have to stop or reduce using fuels in more proportion Keep fossil fuels in the ground. Fossil fuels include coal, oil and gas – and the more that are extracted and burned, the worse climate change will get. All countries need to move their economies away from fuels as soon as possible. try to Invest in renewable energy. Changing our main energy sources to clean and renewable energy is the best way to stop using fuels. These include technologies like traditional use of solar, wind, wave, tidal and geothermal power. Switch to sustainable transport. Petrol and diesel vehicles, planes and ships use fossil fuels. Reducing car use, switching to electric vehicles and minimizing plane travel will not only help stop climate change, it will reduce air pollution too. Help us keep our homes without pollution. It's a waste of money, and miserable in the winter. The government can help households heat our homes in a green way – such as by insulating walls and roofs and switching away from oil or gas boilers to heat pumps. Improve our farming and encourage healthy diets. One of the best ways for individuals to help stop climate change is by reducing plastic waste which we use packing foods and after that throw garbage on the earth so it will stop rain level of the earth. Businesses and food retailers can improve farming practices and provide more plant-based products to help people make the healthy atmosphaerae. Restore nature to absorb more carbon. The natural world is very good at cleaning up our surrounding, but we need to look after it. Planting trees in the right places or giving land back to nature through 'rewilding' schemes is a good place to start. This is because photosynthesizing plants draw down carbon dioxide as they grow, locking it away in soils. Protect forests like the Amazon. Forests are crucial in the fight against climate change, and protecting them is an important climate solution. Cutting down forests on an industrial profit destroys big trees which could be sucking up huge amounts of carbon. Still companies vanish forests to make way for animal farming, soya or palm oil plantations. Governments can stop them by making better laws. Protect the oceans. Oceans also adopt large amounts of carbon dioxide from the atmosphere, which helps to keep our climate safe. But many are overfished, used for oil and gas drilling or threatened by deep sea mining. Caring oceans and the life clean in them is

ultimately a way to protect ourselves from climate change. Reduce how much people consume. Our transport, food and other lifestyle choices all have different effects on the climate. This is often by design – fashion and technology companies, for example, will release far more products than are realistically needed. But while reducing consumption of these products might be hard, it's most certainly worth it. Minimizing overall consumption in more wealthy countries can help put less danger on the planet. Reduce plastic. Plastic is prepared from oil, and the process of extracting, refining and turning oil into plastic is amazingly carbon-intense. It doesn't vanish down quickly in nature so a lot of plastic is burned, which contributes to emissions.

Conclusion-

In conclusion, we need to take part and try to stop global warming by acting various deeds and other effects on climate change. If the earth's temperature continues to rise in the future, living things on earth would become decrease more and more due to the high temperatures. So protect natural wealth that will help to protect all of us so we have to understand that if nature safe then we live safe otherwise no one will save us from the curse of climate change so think over it and take oath that we will care the nature to control and keep stable climate.

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The Role of Education and Literature

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Abstract:

Education works as a self-contained system that strives to provide skills and knowledge to youth, while HRD is viewed as a corporate function. Intervening early in the HRD process through joint efforts with educators will address the short- and long-term needs of both educators and the world of work. Some books mirror society and allow us to better understand the world we live in. Literature is a reflection of humanity and a way for us to understand each other. Literature unfolds our eyes and makes us realize what the big bright world is. It makes the reader expand his mind to its every strength and helps us to think out of the box. It makes us look beyond the river and realize what the shore holds for us. From reading classics to fantasies there has always been an aspect in the literature that makes us differentiate between the present and the past in one way or another. History isn't just about wars, dates, struggles, power but it is also about the people who are the products of their time with their own lives. Literature is indeed a reflection of humanity and a way for us to understand each other. Literature stays with us forever in our minds and our hearts owning a part of ourselves. As mentioned in the beginning, literature is superior and also important in everyday life because it connects individuals with larger truths and ideas in society and unites everyone together.

Key Words: Literature, humanity, human nature, traditions, reflections

Introduction-

Education is a major aspect of development of any modern society. Education brings awareness in people and keeps them away from superstitious beliefs. It provides best possible settlement not only in India but also in many western countries. Education will direct the person to move in right path at all times in life. Thus the main functions of literature are to entertain and give pleasure to the reader, and to heighten his awareness of certain aspects of life. Besides these two primary functions, literature also performs three subsidiary functions propaganda, release and escape. Literature is a topic that can be interesting and has an overwhelming approach in this 21st century era. It is the only means to connect the world literature with each other. Studying literature allows us to understand the philosophical movements and ideas that permeated a particular culture at particular time. Literature has had a major impact on the development of society. It has shaped civilizations, changed political systems and exposed injustice.

Education in every sense is one of the fundamental factors of development. Education raises people's productivity and creativity and promotes entrepreneurship and technological advances. In addition it plays a very crucial role in securing economic and social progress and improving income distribution. Literature allows a person to step back in time and learn about life on Earth from the ones who walked before us. We can gather a better understanding of culture and have a greater appreciation of them. We learn through the ways history is recorded, in the forms of manuscripts and through speech itself. Literature is the foundation of life. It places an emphasis on many topics from human tragedies to tales of the ever-popular search for love. Literature enables people to see through the lenses of others, and sometimes even inanimate objects; therefore, it becomes a looking glass into the world as others view it. Literature is as literature does. In exploring ideas about what literature is, it is useful to look at some of the things that literature does. Literature is something that reflects society, makes us think about ourselves and our society, allows us to enjoy language and beauty, it can be didactic, and it reflects on "the human condition". It both reflects ideology and changes ideology, just like it follows generic conventions as well as changing them. It has social and political effects. Literature is the creation of another world, a world that we can only see through reading literature.

Philosophical thoughts are considered as the most ancient pensive creativity. Literature has different types, oral literature, written literature, scientific literature, technical literature. It performs different functions at different levels. Literature and life of a society reflect upon each other. Life moulds literature of a society and literature reflects the real pattern of any society. So after the sequential elapse of time, it is proved that, literature definitely has profound sway upon life to a large extent. Literature influences us and makes us understand the every walk of life.

Education opens up new ways and ideas to ponder. It cultivates a young mind to think out-of-the-box and explore different things in life. Education also helps to know about things and stay healthy, fit and follow a productive lifestyle. Literature has had a major impact on the development of society. It has shaped civilizations, changed political systems and exposed injustice. Literature gives us a detailed preview of human experiences, allowing us to connect on basic levels of desire and emotion. However, just as it has constructed societies, the writings and works of certain authors have degraded societies of their most primitive form. Literature enhances ELT through elements such as authentic material, language in use and aesthetic representation of the spoken language, as well as language and cultural enrichment. It is with this last element that literature opens the door that leads to a wider and closer look on the culture where the target language is spoken. Literature grows out of life, reacts upon life and fed by life. Generally we can say that everything in print is literature. But this would be a very vague description of literature. Broadly speaking, “literature” is used to describe anything from creative writing to more technical or scientific works, but the term is most commonly used to refer to works of the creative imagination, including works of drama, essays, fiction and nonfiction. Despite the definitions given above, I feel that literature is beyond these definitions, it is more than what we see and perceive.

Education gives the ability to think with reason, pursue dreams and aspirations in life and live a respectable life in the society. Education gives us a definite path to follow, to lead our lives by principles and gives us the freedom of expression. It frees our minds from the prejudices and motivates it to think with logic and reason. It is essential for the overall development of the human mind and brain. The literacy rate of a country determines its prosperity and economic health. Its boundaries cross our lives, our traditions, culture, social relations, national unity and a lot more. It serves as a reflection of reality, a product of art, and window to an ideology, everything that happens within a society can be written, recorded in, and learned from the piece of literature. The world today is ever-changing. Literature is of great importance and is studied upon as it provides the ability to connect human relationships, and define what is right and what is wrong. Literature is the foundation of life. It places an emphasis on many topics from human tragedies to tales of ever popular search for love. While it is physically written in words, these words come alive in the imagination of the mind, and its ability to comprehend the complexity or simplicity of the text.

Every human has dreams and aspirations. So, education is a medium to pursue and fulfill them. It increases the knowledge of a person in different fields of studies. It helps to determine a path to follow and express your talent to the world. In more recent centuries, literature has taken on a more comprehensive role of mirroring society in order for human to study themselves and understand the underlying truths common to all people. For students, studying literature is a critical component in education, as it teaches students to see themselves reflected in art. This allows people to learn about life from the perspectives of another. Identity-based literature teaches the readers what life is like for others, helping them to be more understanding and respectful of those around them. Literature is an instrument of revolution. Political turmoil, societal injustice, and genocidal conquest can all be ended and resolved in the form of literature.

Education is a way of academic excellence and paves the path for economic growth of the country. Research and development in sectors like technology, medicine, and others, breakthrough innovation and progressive mindset – all of this are fruits of education, which takes a nation and its people forward. Educated people contribute towards advancement in every sector. The term also implies literary quality and distinction. This is a fairly basic view of literature because, as mentioned in the introduction, the meaning of the term has undergone changes, and will no doubt continue to do so. Most contemporary literary histories show a shift from the belles-lettres tradition, which was concerned with finding beauty, an elevated use of language, emotional effects and moral sentiments before something could be called literature. The intrinsic values are the reward of a lifetime of wide reading recognizable in truly literate person while the intrinsic values facilitate the development of language skills and knowledge. Education opens up every channel of knowledge and wisdom. It exposes us to a whole new world of information, invent new things and know how we can make our surroundings a better place to live and out our lives to a greater, and better use.

If it assumes that literature and education at any given time mirrors the current social situation “correctly,” it is false; it is commonplace, trite, and vague if it means only that literature depicts some aspects of social reality. Long before language was invented, stories were told and engraved upon stone tablets and walls carvings. Long before human began to know how to read and write with the words that our ancestors created, literature already existed. Literature is the foundation of humanity’s cultures, beliefs and

traditions. It serves as a reflection of reality, a product of art, and a window to an ideology. Education is considered as one of the most powerful instruments of social change and control. Education can remove darkness of ignorance and narrow-mindedness of human mind and infuse new ideas, new light and new direction for change and development. Education thus plays a predominant role in bringing about social changes. We may say it is a passport to social change. Without education the knowledge of social changes can't be gathered and will thus hamper the process of social change. That means changes are always initiated through education by one way or the other.

Conclusion:

Education can truly make or break an individual, because it builds and develops a person's belief, ideologies and values. Education gives the ability to think with reason, pursue dreams and aspirations in life and live a respectable life in the society. It does, however, have a unique function in shaping and teaching society at large. For such a seemingly petty question, it involves the contemplation of the essence of society and how individuals work within the confines of society's structure. Understanding how literature motivates the individual and how it is reflexive of the individual's society is something that ought to be given more attention and consideration. With education, you can enhance your productivity and complete a task better in comparison to an uneducated person. However, one must always ensure that education solely does not ensure success. It is a doorway to success which requires hard work, dedication and more after which can you open it successfully. All of these things together will make you successful in life. In conclusion, education makes you a better person and teaches you various skills. It enhances your intellect and the ability to make rational decisions. It enhances the individual growth of a person. Education and literature play a vital role in regulating individual behavior through transmitting a way of life and communicating ideas and values to the new generations. Process of education in society regulates the behavior of its members and enforces conformity to its norms. Education also improves the economic growth of a country. Above all, it aids in building a better society for the citizens of a country. It helps to destroy the darkness of ignorance and bring light to the world.

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A Geo-environmental study of P. H. C's and their Change (VI) of the Southern Piedmont Plain in Western Vidharbha Area

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Abstract:-

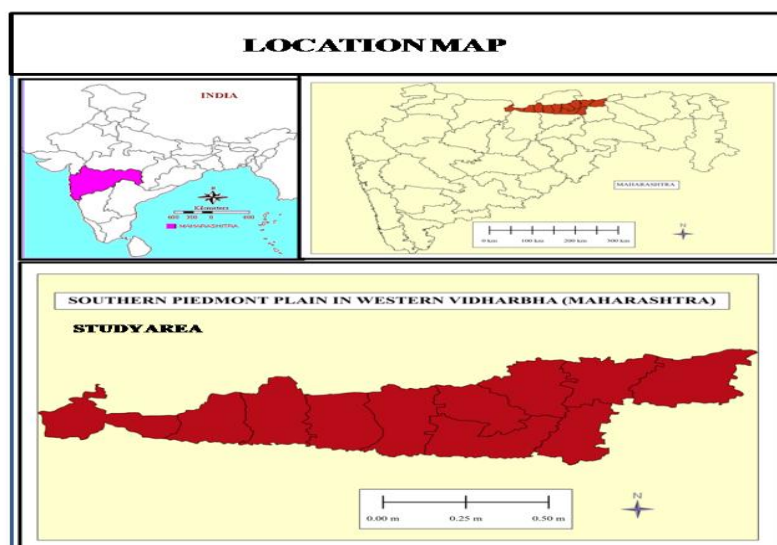
India is the second mainly vital nation with maximum population. every persons has a number of health evils. It is deep-seated to go to the nearby health center. In rural India, the community has to go to a primary health center. The study area is a concern with the piedmont plain of Satpura mountains and the northern part of Purna river with eleven taluk's i.e., Muktainagar include Jalgaon district, Jalgaon Jamod, Sangrampur include Buldhana district, Akot, Telhara include Akola district and Daryapur, Anjangaon Surji, Achalpur, Chandur Bazar, Bhatakuli, and Morshi Include in Amravati district etc. The present study Indicate that Primary Healthcare Centers (PHCs) is a Comparative study of 20 years (1991-2011) and their change (VI) with distribution in the rural areas of the southern piedmont plain in the western Vidharbha region.

Keywords: Primary Healthcare Centers, Piedmont Plain, Variation Index etc.

Introduction: In fine health is a basic thing for a cheerful life. The health geography is studied primarily by human health and correlated diseases. In on the rise countries like India, people living in urban and rural areas have to face health issues. The Health Ministry of India has determined to set up one primary health center in rural areas and one primary health center for the population of 30000 and one primary health center for tribal areas in 20000 populations. The distribution of primary health centers in disciplines in the field of study is unnatural, as well as human factors in several parts too. In the field of study, the population is expected to increase the number of primary health centers as per population and people will be able to advance the health of the people.

Study Region: The Southern Piedmont plain of Satpura Mountain in Western Vidarbha lies between 20°49' North Latitude to 21°27' North and 76°29' east to 78°09' East Longitude. The area of Jalgaon (Khandesh Region), Buldhana, Akola, and Amravati (Vidharbha Region) districts are occupied by this natural region with 11 tehsils. The eastern boundary is occupied by the eastern Vidarbha.

Fig. No. 1 Southern Piedmont Plain Satpura Mountain Region Western Vidarbha



Objectives

To study the number of primary healthcare centers and change (VI) in the study region.

Database And Research Methodology

Present research work is based on the census data. The broader study region has limitation to survey at the primary stage. So the whole study depends on the secondary data of following sources. District census handbooks of Jalgaon, Buldhana, Akola, Amravati (1991, 2001 & 2011).

Important Government Publications-

Socio-economical review of Jalgaon, Buldhana, Akola, Amravati Districts.

Records of Zilla Parishad Health Department of concern study region. District statistical abstract of Jalgaon, Buldhana, Akola, Amravati Districts. The geographical study of over 20 years from 1991-2011 has been analyzed for decadal changes in the distribution of Primary Health Centers. He collected data has been processed and analyzed by using different quantitative, statistical technique. The tabulated data has have been presented by the graph. Preparation and analyzing of the data collection, the paper presents statistically explanation.

Results And Discussion

Table No -1

SR. NO.	TEHSIL	PHC 2011 (%)	PHC 1991 (%)	CHANGE (VI)
1	Muktainagar (Edlabad)	5.00	15.19	-10.19
2	Jalgaon Jamod	1.82	2.08	-0.27
3	Sangrampur	4.21	5.15	-0.94
4	Akot	2.03	3.25	-1.22
5	Telhara	3.19	6.32	-3.12
6	Daryapur	3.01	4.00	-0.99
7	Anjangaon Surji	2.86	7.27	-4.42
8	Achalpur	2.14	4.83	-2.68
9	Chandur Bazar	2.94	3.47	-0.53
10	Bhatkuli	2.75	10.71	-7.96
11	Morshi	4.81	4.13	0.68

Source: District Census Handbook & District Statistical Abstract of Jalgaon, Buldhana, Akola & Amravati Districts (1991-2011)

Muktainagar (Khandesh Region), Bhatkuli these tehsils indicate the very low ratio of PHC's with a population of to 1991 while it rapidly increased during 2011 in both tehsils. Sangrampur, Telhara, Daryapur, and Anjangaon Surji & Achalpur these tehsils are observed in medium ratio during 1991 while it not increased significantly in 2011. The high-level ratio is found in Akot, Chandur Bazar & Morshi Tehsils is also noted in 2011. The very high ratio is noted in Jalgaon Jamod in 1991 which is highest in both census years.

Fig. No.1. Southern Piedmont Plain Satpura Mountain Region: Percentage Of Phc 1991

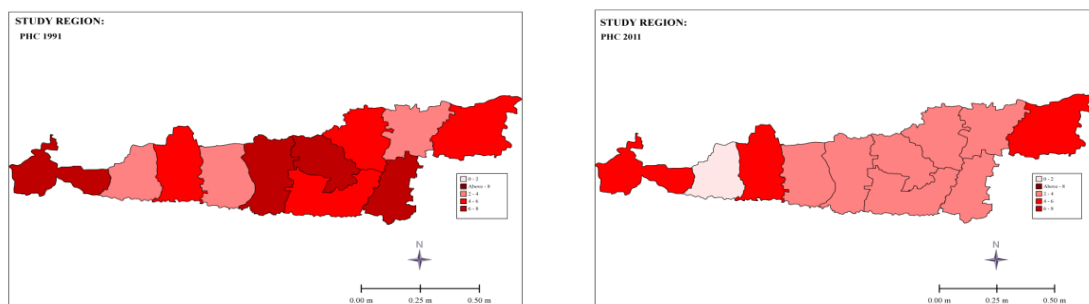
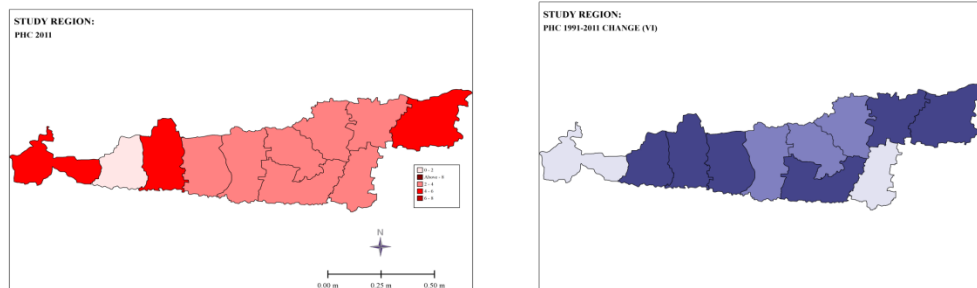
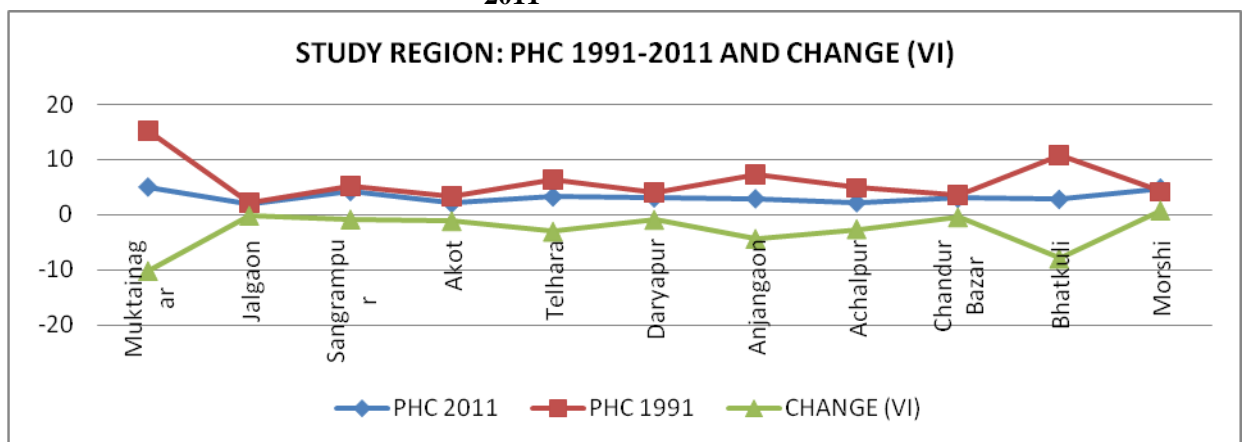


Fig. No.2. Southern Piedmont Plain Satpura Mountain Region: Percentage Of Phc 2011**Fig. No.3. Southern Piedmont Plain Satpura Mountain Region: Percentage Of Phc 1991-2011****Conclusions**

- 1) The Highest Vi On Phcs Is observed in Achalpur Tahsil.
- 2) The lowest VI on PHCs is observed in Morshi Tahsil.
- 3) The very high-level load on PHCs is investigated in Achalpur, Muktainagar (Khandesh Region), and Telhara Tehsils.
- 4) The high-level burden on PHCs is recorded in Jalgaon Jamod, Akot, Anjangaon Surji and Bhatkuli Tehsils.
- 5) The medium level burden on PHCs is found in Sangrampur, Daryapur and Chandur Bazar Tehsils.
- 6) The low-level burden on PHC is found in Morshi Tehsil.

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Growth of Population Change in Sangli District (Maharashtra)

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Abstract:

In the paper the present study reveals the Tahsilwise growth of population in Sangli District during 1981-2011. The growth of population in Sangli District from 1831212 in 1981 to 2832143 in 2011. It has studied on the basis of Socio-economic Statistical Abstract and related web sites, Census Handbook related web sites, Census of India. It occupies area of 8572 sq. km. The secondary data have been collected and computed by recent research techniques and the results have been brought through table and maps. The highest population growth is found in Atpadi Tahsil. The moderate population growth is recorded in the moderate population growth is recorded in Jat, Miraj and K. Mahankal, Walva tahsil i.e. 70 to 55 %. While it is low in Khanapur, Tasgaon and Shirala tahsil i.e. below 45 percent due to lower infrastructural development. The results have been discussed with the help of population growth rate refers to the change in population growth rate over a unit time period. Often expressed as a percentage of the number of individuals in the population, at the beginning of that period.

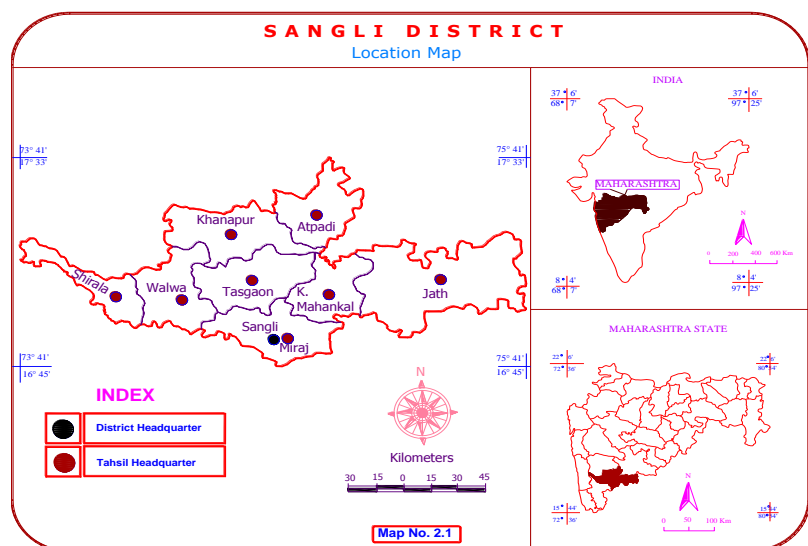
Key Words: - Population, Population growth, Population change, Percentage.

Introduction:-

India is most populous countries in the world. Our country covers only 2.46 % of the land area world, where as it is the home of more than 16.87% of the world's population. Population of Maharashtra is constantly changing. To determine changes in population, the Government of Maharashtra State of the Census gathers data on counts of people, that distribution and their characteristics. Population size and its distribution of geographical units are among the most important elements in the study of population. These elements are closely associated with the potential for population growth and decline. The economic situation, the age profile and other population characteristics, Information on population size and distribution is vital if programs relating to agriculture, health, education, transportation, housing, urban renewal, law enforcement and waste disposal are to be administered equitably. The growth of population in the Sangli District continues, to increase of growth rate during the last three decade. The population of Sangli District as per 2011 Census stood at 2832143. The district as a whole has 54.65 % growth of population during the period of investigation that of state is 79.24%. But spatial distribution varies from tahsil to tahsil. The existing district inequalities of population are because disparities of natural resources, industries geographical factors and economic activities.

Study Region:-

The Sangli district is one of the district of Maharashtra states. It is located in the western part of Maharashtra. Sangli district. It is situated between 16° 45' north to 17° 33' north latitudes and 73° 42' east to 75° 40' east longitude. It is bounded by Satara and Solapur district in the north, Bijapur district in the east, Kolhapur and Belgaum district in the south and the Ratnagiri district to the west.



The east-west length of Sangli district is about 205 km and south- north width of the district is about 96 km. The area of the district is 8572.00 square kilometers and it is 21st highest geographical area in Maharashtra state. It is at a height of 553 meter from normal Sea level. According to 2011 census there are 724 villages in Sangli District .There are 705 Grampanchayat and 10 Panchayat Samiti in the District.

Objectives:-

The main objectives of this research paper are to analyze the tahsilwise changes in growth rate of population in Sangli District during 1981-2011.

Data Base & Methodology:-

Present paper is based on the tahsilwise census data of 1981-2011 censuses of district reports. The data have been analyzed for total growth of population change in percentage. Calculate the most common way to express population growth is as a ratio. The change in population over a unit time period is expressed as a percentage of the population at the beginning of the time period. The positive growth rate indicates that population is increasing. The secondary data have been collected and computed by recent research techniques and the results have been brought through tables and maps. Population growth rate has been calculated during a period of time. PGR ordinarily refers to the change in population over a unit time period, Often expressed as a percentage of the number of individuals in the population at the beginning of that period.

The changes in population growth rate are measured with the following formula.

$$r = \frac{P_n - P_o}{P_o} \times 100$$

Where, r = Growth rate of population

P_n = Current year population

P_o = Denotes base year population

Population Growth Rate during 1981-2011

The population of Sangli District is constantly changing. These population changes represent population adjustment and outmigration sources, agricultural development, development of education facilities, immigration, outmigration sources and agricultural development.

Table No. 1 Tahsilwise Population Growth Rate during 1981-2011.

Name of the Tahsil	Population				Growth rate in % (1981-2011)
	1981	1991	2001	2011	
Shirala	130649	147713	158298	162911	24.69
Walwa	301302	29330	427377	456002	51.34
Khanapur	217958	221997	258231	313233	43.71
Atpadi	84016	111517	125263	148455	76.70
Tasgaon	300597	310318	429761	416310	38.49
Miraj	506320	634639	756048	854581	68.78
K.Mahankal	97274	117901	144596	152327	56.59
Jat	193096	240647	283950	328324	70.03
Sangli District	1831212	2078174	2583524	2832143	54.65
Maharashtra	62693898	78937187	96878627	112372972	79.24

Source: - Compiled by the researcher from:

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2. Census of India 2011 Final Population Totals, Maharashtra, Series 28.

Table No.1 indicates that the region as a whole has 54.65 % growth of population during the period of investigation that of state is 93.24 %. But spatial distribution varies from tahsil to tahsil.

Table No.1 The highest population growth is found in Atpadi tahsil The highest population growth is found in Atpadi tahsil i.e.76.70%. The moderate population growth is recorded in Jat, Miraj and K.Mahankal , Walva tahsil i.e.70 to 55 %. While it is low in Khanapur,Tasgaon and Shirala tahsil i.e.below 45 percent.

Conclusion:- The District as a whole has 54.65% growth of population during the period of investigation that of state is 79.24%. But spatial distribution varies from tahsil to tahsil. The highest population growth

is found in Atpadi tahsil i.e.76.70%. The moderate population growth is recorded in Jat, Miraj and K.Mahankal , Walva tahsil i.e.70 to 55 %. While it is low in Khanapur,Tasgaon and Shirala tahsil i.e. below 45 percent.

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Re-Thinking the Rural Tourism Opportunity and Rural Marketing-A case study of Solapur District

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Abstract

Rural tourism might seem easily defined as travel to rural areas but research has shown that it is much more complex (Lane, 1993b). India lies in her villages, nearly 98 per cent of the total geographical area of India constitutes rural areas, in which 68 per cent of the total population live (GOI, 2011 census). Since independence most of the national policies have been focusing upon rural development. But issues like poverty, unemployment, illiteracy, regional imbalances etc. remain unsolved. At the same time these rural areas possess natural and socio-cultural resources, which are fantastic sources for tourism and recreation. The present paper focuses upon the objectives related

to rural tourism, its benefits and future research for development of rural tourism. The present study is based on secondary data. It was analyzed with the help of statistical techniques and geographical information system. The study reveals that Solapur district has number of rural tourist destinations such as religious (Gaudgaon Hydra and Bhuranpur in Akkalkot, Machnur in Mangalwedha, Kudal Sangam in South Solapur, Akhuj in Malshiras, Aran in Mohol, Vatambhare in Sanagole,) etc and historical and agro tourist centers. The data reveals that more than 55 per cent of tourists were visited these destinations. It is directly benefited to rural community. Therefore, it is necessary to rethink about rural tourism in view of rural marketing, which has wide potential to generate employment, number of driving forces and it also helps to stop rural urban migration phenomena. The study suggests that to collect the in depth data about rural tourism and accordingly to frame and implement policies with allocation of budget to strengthen the rural tourism.

Key Words: Rural Tourism, Poverty Alleviation, Geographical Information System Introduction:

Introduction:

Rural tourism might seem easily defined as travel to rural areas but research has shown that it is much more complex (Lane, 1993b). There are a variety of examples of the ways tourism is undertaken in rural areas, including: religious, historical nature-based activities, agro-tourism festivals, heritage events. As Lane points out, rural tourism is a multi-faceted and complex activity which includes everything from farm-based tourism to educational travel, health tourism, 'ethnic' tourism and ecotourism (1993a).

Rural Tourism events have been found to increase business, income and employment and are seen to assist with social and economic development. Tourism can be an important source of jobs for rural communities. Tourism not only offers business opportunities to local residents, but it can also enhance local quality of life. Tourism can also support local culture in rural areas by encouraging restoration of local and regional historic sites.

Objectives:

The present paper is based on status, types and its driving forces of rural tourism. It also focuses on future research and development for rural tourism

Methodology Applied:

Present paper is based on secondary data which has been collected from various government and non-government agencies and it was analyzed with the help of Geographical Information system

Discussion:

Rural tourism can be defined as the country experience which encompasses a wide range of attractions and activities that take place in agricultural or non-urban areas. Its essential characteristics include wide-open spaces, low levels of tourism development, and opportunities for visitors to directly experience agricultural, cultural and/or natural environments. Consequently, rural tourism in its purest form should be Located in rural areas. Its traditional in character, growing slowly and organically, and connected with local families. It will often be very largely controlled locally and developed for the long term good of the area.

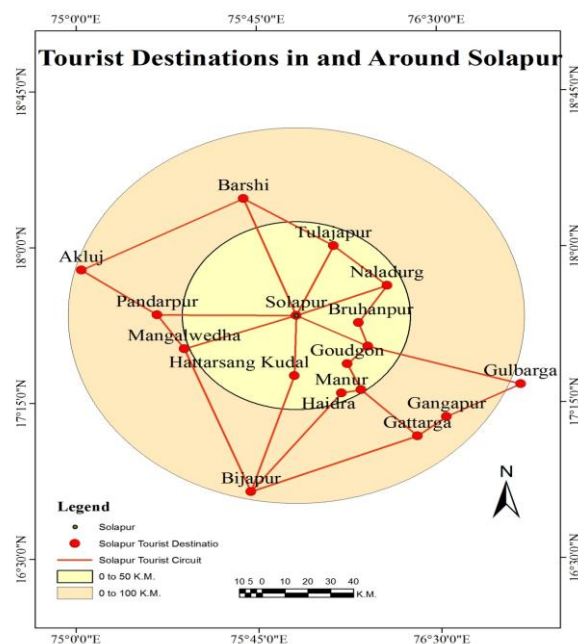
Dr. S.C.ADAVIT

Types Of Rural Tourism :

Tourism is synthesized from mass and alternative tourism. Mass tourism is characterized by large numbers of people seeking cultural holidays in popular resort destinations. The diversity of attractions included within rural tourism includes religious tourism, heritage tourism (sometimes referred to as cultural heritage tourism), nature-based tourism/ecotourism, agro-tourism, as well as partnership-based approaches, such as scenic byways and heritage areas. To agree the aims of rural tourism development aims may include a wide range job retention, creation and diversification; the conservation of traditional buildings and habitats, community support the development of a better quality of life for rural peoples.

Solapur District: Unexplored Potential Of Rural Tourism

Tourism has been identified as tool for the development and leading employment generator for the host destinations. Geographically our country had divided number of climatic divisions. Drought prone region always hampering for the economic development of the state and entire country. But most of the tourist destinations are located in such regions. Therefore tourism can be utilize for the removal of economic backwardness of regions. Solapur district is also one the drought prone district of the Maharashtra state, in the entire district Solapur Pandharpur, Akkalkot and Akhuj are the existing tourist destinations are located along with this number of emerging and potential tourist destination are located. Tuljapur is one of the SHAKTIPEETH (Goddess Ambhabhavani) lakhs of pilgrims not only from Maharashtra but also from Karnataka, Goa, Andhra Pradesh and Madhya Pradesh regularly visit to seek darshan of Devi. Naldurg is another historical and eco tourist destination in this district. Karnataka state boundary is geographically very close to Solapur district. Bijapur and Gulbarga district of Karnataka is having number of tourist destination such as Golghumbaz, a world famous historical tourist destination, KudalSangam a religious and eco tourist destinations are located in Bijapur district, Ganagapur a second incarnation of Lord Dattatraya, Bandenavaz a muslim religious place are located in Gulbarga district. The pilgrim tourist visiting these destinations are Multi-Cultured, multi-caste and multi-lingual community. (Smith,M.2009). A Map is showing the different tourist destinations in and around Solapur. With the help of Buffering a destination is marked showing 50 and 100 km distance from Solapur city. These destinations cover Solapur, Osmanabad (Maharashtra) and Gulbarga, Bijapur (Karnataka) districts. It reveals through buffering that a maximum tourist destinations such as Akkalkot, Tuljapur, Mangalvede and Naldurg are located within the range of 50 kms. From Solapur city. Tourist can easily access all these destinations along with some of potential tourist destination such as Burhanpur, H.Kudal Goudgaon, and Hydra. In second circle of buffer i. e. 100 kms. From Solapur city the existing tourist destinations are Pandharpur, Akhuj (MS) Vijapur, Ganagapur and Gulbarga (KS).



Benefits of Rural Tourism:

Rural tourism, while still only a minority tourism market, is making a valuable contribution to rural economies. Its contribution can be expressed not only in financial terms, but also in terms of jobs, contributions towards funding conservation, encouragement to the adoption of new working practices, and the injection of a new vitality into sometimes weakened economies. Potentially rural tourism promises some of the following benefits to rural development.

Job retention: Rural tourism cash flows can assist job retention in services such as retailing, transport, hospitality and medical care. It can also provide additional income for farmers.

Job creation : Job creation typically occurs in the hotel and catering trades, but can also take place in transport, retailing, and in information/heritage interpretation.

New Business Opportunities: Tourism generates new opportunities for industry Even those rural businesses not directly involved in tourism can benefit from tourist activity through developing close relationships with tourist facilities where local foods can be used as part of the tourism offering in a locality. **Opportunities for Youth :**

The tourism industry is often promoted as an exciting and growing industry suited to the energies and enthusiasm of young people. Career options are enhanced with the opportunities for training and direct involvement in running tourism businesses, especially those within small community.

How Best to Relate to Markets

Directly linked with the market information question comes the issue of how best to relate to markets. Major resorts and tour operators use sophisticated, expensive and sometimes wasteful methods to reach their customers. Rural tourism areas often -- but not always -- have weak and amateur links to their markets. There would be value in the publication of an evaluated good-practice guide looking at a range of successful areas and the techniques they have employed to relate to their markets.

Conclusion: . Rural tourism is very diverse and fragmented in terms of operational structures, activities, markets and operating environments. Generally, rural tourism is an opportunity for rural development., the development of rural tourism offers potential solutions to many of the problems facing rural areas. .Solapur district is having various types of tourist destinations only thing is that all respective authority should take an bold decision for the overall development of rural community. No doubt there is evidence to support the claim that, as a vehicle of economic growth and diversification, tourism can make an important contribution to rural incomes both at the level of the tourism operators and more widely in the local economy.

Recommendations

- 1.Solapur district has existing and potential tourist destinations ,therefore it is recommended that a Multi Level Tourism Institute should be established in which various types of courses should be framed in which market oriented and quality human resource should be established.
- 2.To create awareness campaigns, advertisements may be designed and telecasted /broadcasted in different print/electronic media.
3. A strong Tie-Up with Travel Agencies and Tour Operators should be established, so that they can act as marketing agents for the tourist sites of the district.

Future research and development programmes

Rural tourism is still a relatively new area of business, and, therefore, much basic research is needed. That basic research is especially critical because of the highly competitive nature of the free enterprise tourism market. The countryside may have intrinsic advantages because of the growth of special interest, independent holiday-making, but existing rural destinations and mass tourism enterprises are already researching how best to improve their marketing and their products to regain market share.

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Optimum Nutrition for sports and Exercise.

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Abstract

An ergogenic aid is any training technique, mechanical device, nutritional practice, pharmacological method, or psychological technique that can improve exercise performance capacity or enhance training adaptations. This includes aids that improve the preparation to performance the efficiency of physiological and psychological responses to exercise, and recovery from exercise. Research has demonstrated that various ergogenic aids can help an athlete optimise performance capacity. This article reviews the role that nutrition has on enhancing exercise and sport performance, describes nutritional guidelines that athletes should employ to optimise training adaptations, and evaluate the ergogenic value of various nutrients that have been proposed to enhance exercise capability.

Introduction

The primary factors that affect exercise performance capacity include an individual's genetic endowment, the quality of training, and the effectiveness of coaching. Beyond these factors, nutrition plays a critical role in optimising performance capability. In order for an athlete to perform well, training and diet must be optimum. If an athlete does not train enough or has an inadequate diet, their performance may decrease. On the other hand, if an athlete trains too much without sufficient diet, they may be susceptible to become overtrained. Because optimising training and dietary practice are critical to peak performance, athletes have searched for various ways to improve exercise performance capability through the use of ergogenic aids.

Objectives

1. Introduce the balance diet.
2. Introduce the optimum nutrition for sports and exercise.

General macronutrients

Carbohydrate :-

Carbohydrate serves as the primary fuel for high intensity intermittent or prolonged exercise. Carbohydrate is stored in the muscle (about 15 g/kg) and liver (about 80 -100 g). Intense exercise depletes muscle and liver glycogen stores. The stores are replenished from dietary carbohydrate. Unfortunately, when a significant amount of carbohydrate is depleted it may be difficult to fully replenish carbohydrate level within one day. Consequently, when athletes train one or twice per day over a period of days, carbohydrate levels may gradually decline leading to fatigue, poor performance or over training. Researcher has indicated that athletes should ingest just between 8-10 g/ kg/d of carbohydrate during intense period of training in order to help maintain carbohydrate stores. It is recommended that athletes ingest frequently (e.g. 4- 6 meals/d) and ingest high calorie carbohydrate food or concentrated carbohydrate drinks.

Protein

There has been considerable debate regarding protein needs of athletes. Initially, it was recommended that athletes do not need to ingest more than the RDA for protein (i.e., 0.8-1.0g/kg/d for children, adolescents and adults) however, research over the last decade has indicated that athletes engaged in intense training need to ingest about one and a half to two times the RDA of protein (1.3 -1.7 g/kg/d) in order to maintain protein balance. If an insufficient amount of protein is obtained from the diet, it will maintain negative nitrogen balance which can increase protein catabolism and slow recovery. Overtime, this may lead to muscle wasting and training intolerance (1, 3, 7) although most athletes ingest this amount of protein in their normal diet, there are some athletes who are susceptible to protein malnutrition due to greater protein degradation, weight restriction or an inability to ingest calories to offset energy expenditure (runners, cyclist, swimming etc.) Researcher has also indicated that ingesting more protein than necessary to maintain nitrogen balance does not promote greater gains in strength or muscle mass.

Fat :-

The dietary fat intake recommendations for athletes are similar to those for non- athletes in order to promote health. Generally, it is recommended that athletes consume less than 30% of their daily

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calories intake as fat. For athlete attempting to decrease body fat, it is also recommended that the consume 0.5- 1 g/kg/ d of fat. This is because weight loss studies indicate that people who are most successful in losing weight and maintaining the weight loss are those who ingest less than 40 g/d of fat in their diet. Strategic to help athlete manage dietary fat intake include teaching them which foods contain fat so that they can make better food choices and learn to how to count fat grams.

Vitamins :-

Vitamins are essential for organic compounds that serves to regulate metabolic processes, energy synthesis neurological processes and prevent destruction of cells. There are two types of vitamin fat soluble and water soluble. the fat soluble vitamins include vitamin A, D, E, and K the body store fat soluble vitamins and therefore excessive intake may result in toxicity. B vitamins and vitamin C are water soluble. Excessive intake of these is eliminated in the urine. Describes recommended and daily allowances (DRA), proposed ergogenic benefit, and summary of research finding for fat and water soluble vitamins. Haridwar research has demonstrated that specific vitamin supplements may pose some health benefit. (e.g., vitamin E, niacin, folate, vitamin C etc.) If you have been reported to directly provide ergogenic value of athletes. Some vitamins may help athletes tolerate training to a better degree by reducing oxidative damage or help to maintain healthy immune system during heavy training. (Vitamin C)

Minerals:-

Minerals are essential inorganic elements necessary for host of metabolic processes. Minerals serve as structure for tissue, important components of enzymes and hormones and regulators of metabolic and natural control. Some minerals have been found to be deficient in athletes or become deficient in response to training or prolonged exercise. When minerals status is inadequate, exercise capacity may be reduced. Dietary supplementation of minerals in deficient athletes has generally been found to improve exercise capability. Additional, supplementation of specific minerals in nondeficient athletes have also been reported to affect exercise capability. Mineral that have been purported to affect exercise capability in athletes. In contrast to vitamin, there appear to be several minerals that may enhance exercise capability and training adaptations for patient athletes under certain conditions. Although ergogenic value has been purported for the meaning minerals, there is little evidence that boron, chromium, magnesium or vanadium effective exercise capability

Water :-

One of the most important nutritional ergogenic aid for athlete is water. Exercise performance can be significantly impaired when 2% for more of body weight is lost through sweat. e.g. when a 70 kg athlete loss more than 1.4 kg body weight during exercise (2%) performance capability is often significantly decreased. Weight loss of more than 4% of body weight during exercise will lead to heat illness, heat exhaustion, heat stroke and possibly death. For this reason it is critical that athletes was sufficient amount of water or GES sports drinks during exercise. The normal sweater rate of athletes ranges from 0.5 to 2.0 L/ h depending on temperature, humidity, exercise intensity and their sweat response to exercise. So maintain fluid balance and prevent dehydration, athletes need to consume 0.5 to 2 L/H of fluid in order to offset weight loss.

Conclusion remarks:-

Nutrition of athletes can significantly affect exercise performance capability.

- 1) Optimise performance athletes should eat enough calories to offset energy expenditure. (60-80 g/kg/d),
- 2) The proper amount of carbohydrate (8-10 g/kg/d), protein (1.5 g/kg/d), fat (0.5- 1g/kg/d),
- 3) ingest meals and snacks at appropriate time intervals prior to, during or following exercise in order to provide energy as well as to promote recovery following exercise.
- 4) only consider using nutritional supplements that have been found to be an effective and safe means for improving performance capability. For strength and power athletes, research has indicated that creatine and sodium bicarbonate supplementation possess the greatest ergogenic value. For athletes endurance, research suggest that carbohydrate loading GES sports drinks, sodium phosphate loading, and caffeine are the most advantages ergogenic aids. Many other nutrients have been reported to affect exercise metabolism, embro exercise performance, cancer recovery, and help maintain health status under specific condition.

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Spatial Analysis of Gender Disparity in Literacy of Tribal Villages in Nandurbar District of Maharashtra

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Abstract:

The present study focuses on the backward district of Maharashtra and its tribal population to understand its educational backwardness. The study is based on secondary sources of data collected from the District Census Hand Book and Census reports. Literacy rate has been computed for the population above 6 year and Sopher's Disparity index (1974) modified by Kundu and Rao (1983) has been attempted for measurement of disparity in literacy. The study shows that, the literacy level in the study region is improving in the recent years. It is also interesting and satisfying that the proportion of female literate population is increasing. But, there is a significant difference in literacy rates between males and females in all the tehsils of Nandurbar district. Females are lagging behind males in literacy in all the tribal villages of the district; however the gap varies from tahsil to tahsil.

Key Words: Male-Female Literacy, Tribal Villages, Disparity, Spatial analysis.

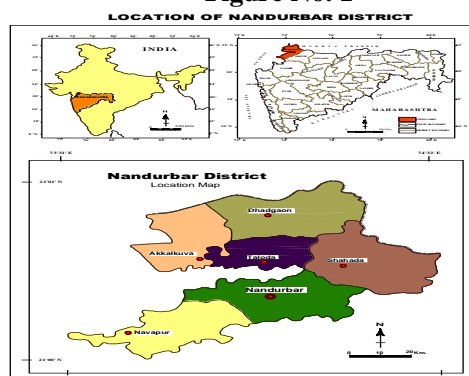
Introduction:

Disparity means lack of equality or difference but not all differences are considered as disparities. The term, disparity, is used to connote unjust or unfair differences. From historical past, Indian society suffers from substantial disparity in education, employment, and income based on caste and ethnicity (Desai and Kulkarni, 2008) ^[1]. The most pronounced differentiation in educational opportunity in Indian society is probably 'sex' (Gore, 2004) ^[2]. This is because the Indian society is mainly characterized by male chauvinism; where the females are not only degraded but also deprived of the right of study (Ramotra, 1988) ^[3]. In fact, both the scheduled as well as the non-scheduled population in India have witnessed wide gender disparity in terms of literacy rate. The existence of literacy gap among the scheduled tribe population in Nandurbar district as envisaged in data triggers the need to study the extent of male-female disparity in literacy level. In spite of that, still now tribes especially tribal women are the most neglected section of the society. In India, they are considered to be the weakest and backward sections of the population in terms of common socio-economic and demographic factors such as poverty, illiteracy, lack of educational and developmental facilities and adequate primary health facilities (Basu, 1994) ^[4].

Study Area:

Nandurbar district was separated from Dhule district on 1st July 1998. It is situated between 21° 00' 00" N to 22° 00' 30" N Latitude and 73° 31' 00" E to 74° 45' 30" East Longitudes. The district covers 5034 sq.km. geographical area.

Figure No. 1



It is bounded by Dhule district in the south and east, Gujarat State in the west and Madhya Pradesh State in the north. Physiographically, it is a peculiar region. The district forms part of Tapi and Narmada basins. The Narmada River flows in the north and forms boundary between the study region and Gujarat State. The northern part of the district is covered with Satpura mountain ranges. The district headquarters is at Nandurbar. For administrative convenience, the district is divided in 6 tahsils viz, Nandurbar, Navapur, Shahade, Talode, Akkalkuwa and Akrani. According to 2011 Census, the population of Nandurbar district is 1648295 and the population density is 276 persons per sq. km. Majority of the population belong to tribal communities. The northern tahsils Akkalkuwa and Akrani have higher proportion of population belonging to the tribal communities. Agriculture is the main occupation of the people. The low literacy rates among tribal is common phenomenon. Therefore, the region is selected to find out spatial analysis of male-female disparity in literacy in tribal villages of Nandurbar District.

Objectives:

The main objectives of the present study are as below:

1. To study the Male-Female composition of literates.
2. To study the Male-Female disparity in literates.
3. To find out variation between male and female literacy levels in tribal villages.

Database and Research Methodology:

For the purpose of comprehensive analysis of tribal villages to the total villages in respect to each census year, villages have been selected on the basis of more than 50 per cent tribal population to the total population of that village. Such types of villages have been separated and selected for the study. Keeping in view the more than 50 per cent tribal population of that village, such villages have been considered as a tribal village. There were 824 villages out of 934 villages selected as tribal villages. For the present study secondary data is used. The data about male and female literates are obtained from the District census handbook of Nandurbar District. Suitable statistical and cartographic techniques have been used for processing, analyzing, tabulating and interpreting the data. A literacy rate has been shown on maps by using Arc GIS 9.5. Literacy rate has been calculated by using the following formula:

$$\text{Literacy in per cent} = \frac{\text{Number of literates}}{\text{Total Population (above 6 yrs)}} \times 100$$

The indices thus obtained with help of above formula are displayed in maps and results are explained thoroughly. For the measurement of male-female disparity in literacy, (David Sopher's Disparity Index, 1974)^[5], modified by Kundu and Rao, (1983)^[6] has been employed:

$$Ds = \log (X2 / X1) + \log [(100 - X1) / (100 - X2)] \dots (I)$$

Kundu and Rao's modified disparity index formula, as follows:

$$Ds = \log (X2 / X1) + \log [(200 - X1) / (200 - X2)] \dots (II)$$

X2 is considered for male and X1 for female literacy rates.

Here, the values of Disparity Index (range between 0.00 and 1.00) exhibit a positive correlation with gender gap in literacy, greater the value of Disparity Index higher the rate of disparity between male and female literacy rate. If there is no disparity then the value of Disparity Index would be zero (0).

Discussion:

Male-Female Literacy, 2001:

The proportion of males and females literates to their respective total population gives idea about social status of females in the society. In general literacy rate among males is higher than that of females. The study region is not exception for this. As the study region is inhabited by tribal population and is socio-economically less developed, the gap between male and female literates is substantially wider. In 2001 census, Nandurbar district had recorded 45.22 percent literacy rate for 786 tribal villages out of 935 villages of district. In the Nandurbar district, the proportion of literate tribal males to total tribal males was 55.62 percent. This proportion was higher along the southern tahsil. It was very high i.e. more than 60 percent in Nandurbar tahsil (64.01%). In Akkalkuwa (47.19%), Akrani (48.16%) tahsils had low (less than 50 percent) proportion of male literates, while it was between 50 and 60 percent in Talode (59.52%), Shahade (58.64%) and Nawapur (57.95%) tahsils along central, eastern and southern part of the region. The proportion of literate tribal females to total tribal females in the study region was as low as 34.93 percent. This proportion was less than 30 percent in Akkalkuwa tahsil (28.81%). In the tahsil like Shahade (32.97%), the proportion of female literates was found between 30 and 35 percent. The Northern tahsils like Akrani (35.62%) and southern tahsils like Nandurbar (38.45%) and Nawapur (37.42%) as well as central tahsil Talode (36.84%) had higher proportion i.e. more than 35 percent female literates to total females. In these all tahsils the proportion of females' literates to total females was higher. (Table No.1 & Figure No. 2)

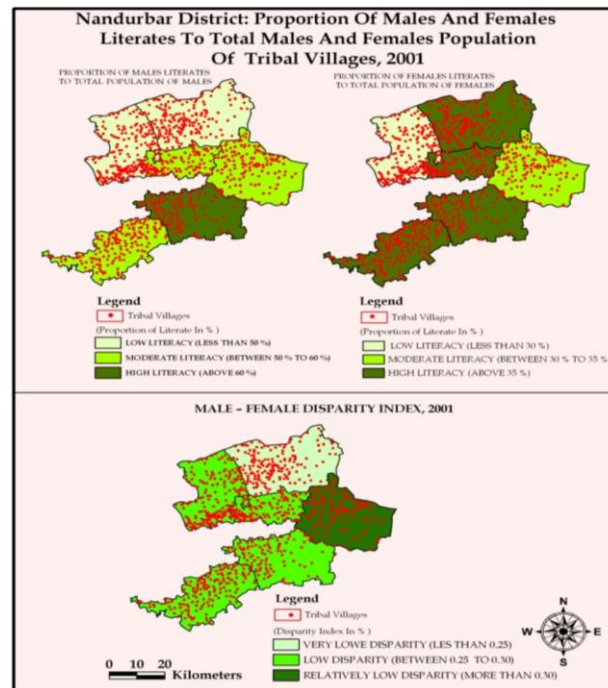


Figure No. 2

Table No. 1

Nandurbar District : Proportion of Tribal Male – Female Literates to Total Population, 2001-2011

Sr. No.	Name of Tahsils	Proportion of Tribal Male - Female Literates			
		2001		2011	
		Male	Female	Male	Female
1	Akkalkuwa	47.19	28.81	65.17	51.54
2	Akrani	48.16	35.62	59.05	45.77
3	Talode	59.52	36.84	70.16	53.61
4	Shahade	58.46	32.97	66.33	46.84
5	Nandurbar	64.01	38.45	70.99	52.28
6	Nawapur	57.95	37.42	63.73	47.56
District		55.62	34.93	63.14	46.08

Source: Compiled By Researcher.

Male-Female Literacy, 2011:

As the study region is inhabited by tribal population and is socio-economically less developed, the gap between male and female literates among the tribal is substantial wider. In general literacy rate among tribal males is remained higher than that of females. The proportion of males and females literates to their respective total population gives idea of social status of female in the society. The study region is not exception for this.

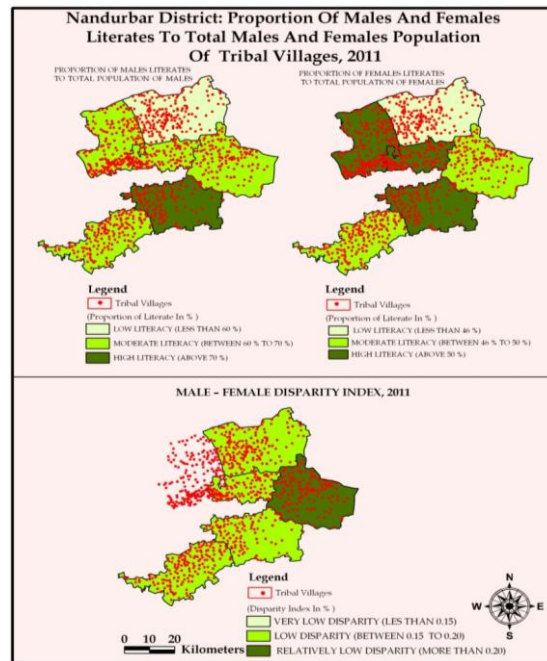


Figure No. 3

As per 2011 census, Nandurbar district had recorded 54.54 percent literacy rate for 823 tribal villages out of 930 inhabited villages of the district. The proportion of literate tribal males to total males was 63.14 percent. This proportion was higher i.e. more than 70 percent found in southern and central tahsils like Nandurbar (70.99%) and Talode (70.16%). Akrani (59.05%) had low (less than 60 percent) proportion of male literates, while it was between 60 and 70 percent in Akkalkuwa (65.17%), Shahade (66.33%) and Nawapur (63.73%) tahsils along western, eastern and southern parts of the region. (Table No. 1 & Figure No. 3) The proportion of literate females to total females in the study region was as low as 46.08 percent. This proportion was less than 46 percent observed in Akrani (45.77%), while moderate level literacy ranged between 46 and 50 percent observed in Shahade (46.84%) and Nawapur (47.56%) tahsils. The eastern tahsil Akkalkuwa (51.54%) and southern tahsil Nandurbar (52.28%), and central tahsil Talode (53.61%) had recorded the highest literacy rates in tribal females. It was more than 50 percent.

Gender Disparity in Literacy of Tribal Villages:

Gender Disparity In Literacy, 2001

Table No. 02

Nandurbar District : Gender Disparity in Literacy of Tribal, 2001-2011

Sr. No.	Name of Tahsil	Gender Disparity in Literacy of Tribal	
		Disparity Index	Disparity Index
		2001	2011
1	Akkalkuwa	0.26	0.14
2	Akrani	0.17	0.15
3	Talode	0.27	0.17
4	Shahade	0.32	0.21
5	Nandurbar	0.30	0.19
6	Nawapur	0.25	0.18
		0.26	0.19

It is evidently true that in the ground of gender disparity in literacy the Nandurbar district i.e. all tahsils always exhibit a significantly poor performance. Performance of Akkalkuwa and Akrani tahsils also remained poor chronically. After the formation of Nandurbar district, the aerial coverage of district was reduced considerably but the older tahsils along with the newer remained in the poorer side. Although the rate of gender disparity in literacy of these tahsils declined gradually in 2001, still it remained considerably lower than the 1991. In 2001, male-female disparity in the study area was 0.26. Here, the values of disparity index recorded ranged between 0.17 in Akrani tahsil and 0.32 in Shahade tahsil exhibits a positive correlation with narrower gender gap in literacy. As compared to earlier decades, there has been much more improvement in male-female literacy.

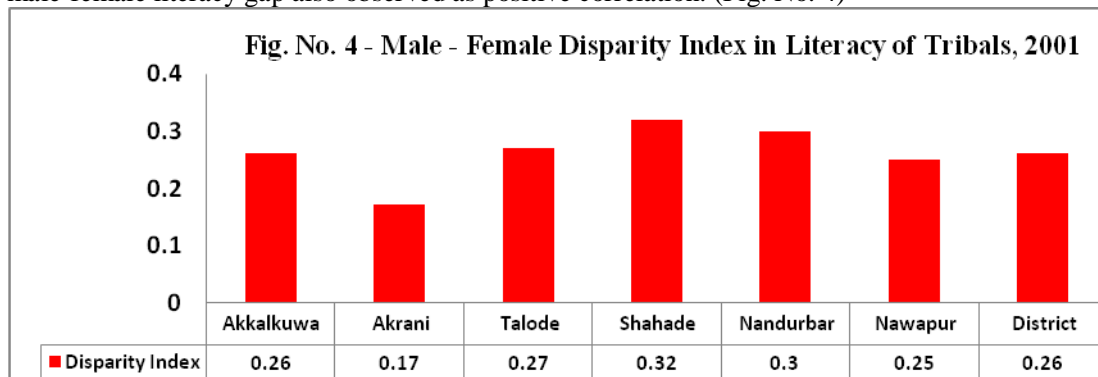
Source: Compiled by Researcher.

(i) Relatively Low in Male-Female Literacy (More than 0.30 Disparity Index)

In 2001, the Shahade tahsil (0.32) has shown relatively higher gender disparity in literacy rate among the scheduled tribe population. This tahsil indicates a positive correlation with gender gap in literacy.

(ii) Low Disparity in Male-Female Literacy (0.25 to 0.30 Disparity Index)

In 2001, the tahsils namely Nandurbar (0.30), Talode (0.27), Akkalkuwa (0.26) and Nawapur (0.25) have reported low level of gender disparity in literacy rate for the tribal population. In these four tahsils, male-female literacy gap also observed as positive correlation. (Fig. No. 4)



(iii) Very Low Disparity in Male-Female Literacy (Less than 0.25 Disparity Index)

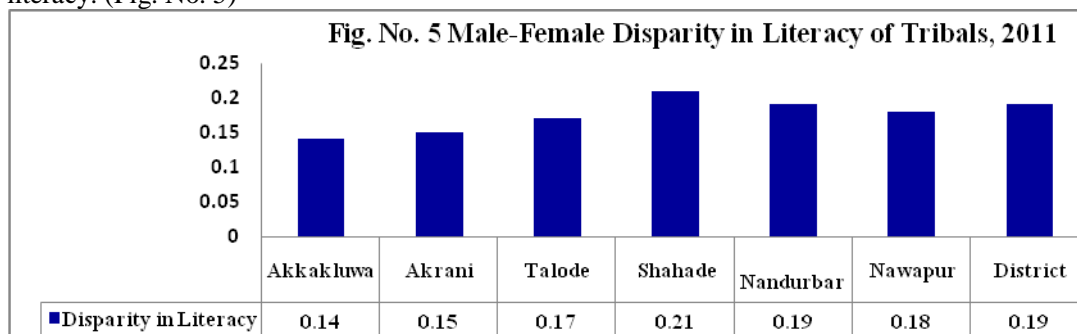
In 2001, Akrani tahsil (0.17) has shown very low sex-disparity in literacy rate among the scheduled tribe population in the district. (Fig. No. 4)

Gender Disparity in Literacy, 2011

The male-female disparity index was 0.26 in 2001; while 2011 it further declined up to 0.19. In the study area, the male literacy was 63.14% and for female was 46.08 % in 2011. It shows a wide gap of 17.06% in literacy rates of male and female. The overall disparity index of male-female literacy rate was between 0.14 in Akkalkuwa tahsil and 0.21 in Shahade tehsil. It indicates that in Nandurbar district literacy disparity between male and female has reduced significantly.

(i) Relatively Low Disparity in Male-Female Literacy (More than 0.20 Disparity Index)

In 2011, the Shahade tahsil (0.21) has shown relatively low gender disparity in literacy rate among the male-female scheduled tribe population. This tahsil indicates a positive correlation with gender gap in literacy. (Fig. No. 5)



(ii) Low Disparity in Male-Female Literacy (0.15 to 0.20 Disparity Index)

In 2011, the tahsils namely Nandurbar (0.19), Nawapur (0.18), Talode (0.17) and Akrani (0.15) have reported low level of gender disparity in literacy rate for the male-female literacy. In these four tahsils, male-female literacy gap also observed with positive correlation.

(iii) Very Low Disparity in Male-Female Literacy (Less than 0.15 Disparity Index)

In 2011, Akkalkuwa tehsil (0.14) has shown very low sex-disparity in literacy rate among the male-female literacy in the district. Nandurbar district having mostly hilly region and mostly tribal in character, low accessibility, low rate of urbanization, education facilities and people's educational awareness is also lower than the other districts of Maharashtra state. That's why regional and male-female disparities in literacy are more in the district. Akkalkuwa and Akrani tahsils are comparatively more underdeveloped, mountainous and they are partially connecting to central and eastern parts of district. Therefore, the gender disparities in literacy are low, because the proportion of tribal population in these tahsils is very high than other tehsils of the district. In the eastern and southern parts of the district having tahsils like Shahade and Nandurbar are having more urban facilities and accessibility; well developed educational amenities are available, but proportion of tribal population is comparatively low.

Conclusion:

It is concluded that, the availability of educational facilities in the tribal areas, the literacy rate in the 2011 census year, is higher than 2001. The ratio of literate population of the study region suggests that the proportions of literate males are higher than females. The gap between male-female literacy has decreasing rapidly in 2011. It shows that, the literacy level in the study region is improving in the recent years. It is also interesting and satisfying that the proportion of female literate population is increasing. But, there is a significant difference in literacy rates between males and females in all the tehsils of Nandurbar district. Females are lagging behind males in literacy in all the tribal villages of the district; however the gap varies from tahsil to tahsil. Here, the values of Disparity Index range between 0.00 and 1.00 in all tahsils which clearly indicate that a positive correlation with gender gap in literacy.

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A Geographical Analysis of P. H. C's In Akola District

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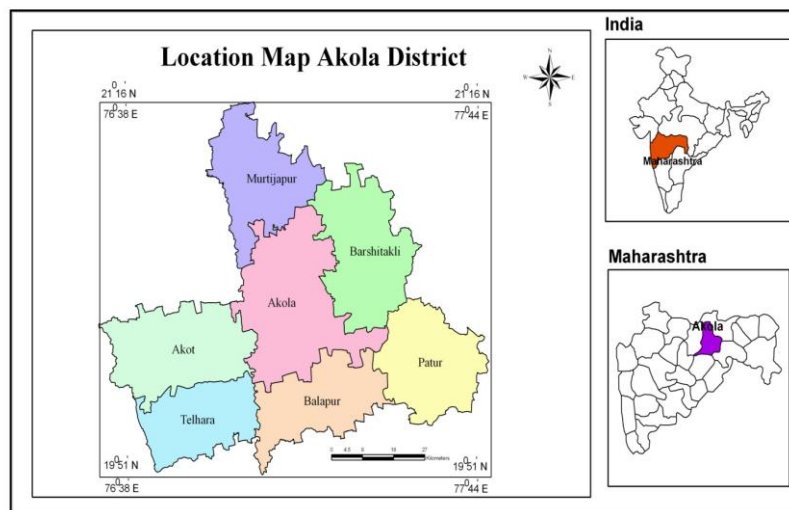
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Introduction:-

Geography of health is the most vital branch of human Geography, Which includes an obviously a study of human health and related human diseases. Human life but impossible without the presence of location, environment and nutrition, the said elements are an integral part of geography. Sound health is a key to happy life. WHO (1946), defines – “Health is a state of physical, mental and social wellbeing and merely the absence of disease or infirmity.” If a human is infected by Communicable and Non-communicable diseases, he has to go to the concern health care center to investigate proper course of the disease. In India 68% population is engaged in rural areas. Consequently, the infected patients go to rural hospital, PHC and Sub-PHC to get treatment. However, the rural population may not necessarily get proper required services the sources mention above. The present research paper tries to find out an impact of population and other geographical factors on the residents of Akola district tehsils wise rural region in eastern Maharashtra, Popularly known as Vidharbha.

Study Region:-

The present paper tries to focus tehsils of Akola district especially rural population. Akola district stretches between 19°51' N to 21°16' North and 76°38' E to 77°44' East in East Maharashtra (Vidharbha).



1. Akola district is least urbanized having 39.7 percent of its population in urban areas whereas 45.2 percent of State population lives in urban areas.
2. Literacy rate of Akola district is 88.0 percent
3. Village Hiwarkhed (23216) in Telhara tahsil is the most populated and village Ukli in Akola tehsils the least populated (1) in the district.
4. The percentage of Scheduled Tribe in the district is 5.5 percent.

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5. The economy of the district is primarily depend on agricultural sector, 67.5 percent of the population is engaged in agricultural activities.
6. The District Sex ratio 946 is higher compare to state sex ratio 929 even though there is increasing trend in last 10 decade.

Objectivs:- To study govt. aided health care systems across seven teshsills in Akola district.

Database and Methodology:- This study is based on availability of data related to govt. aided health care services across seven tehsils in Akola district and geographic accessibility of health services. The secondary data are collected from various officious such as District Health Office and Tehsils health office related to health care centers. Analyzing the data collection, the paper presents statically explanation.

Results and Discussion:-

Table -1.1
General & Govt. aided medical facilities: an Information

Sr. No.	Tehsil	General medical facilities							
		Rural Hospital	Special Hospital (Cancer & T.B.)	Hospitals	No. of Maternity Home	PHC	SUB-PHC	Doctors & Medical officers	Nurses
1	Telhara	1	0	5	1	4	25	16	49
2	Akot	1	0	6	1	3	27	15	37
3	Balapur	1	8	4	2	4	23	16	31
4	Akola	4	0	7	2	6	36	94	339
5	Murtizapur	1	0	3	1	4	25	19	55
6	Patur	1	0	1	1	4	23	12	31
7	Barshitakli	1	0	1	1	4	23	12	31
	Total	10	08	29	9	30	178	188	566

Source: - Computed by Researcher

The above table (1.1) reveals that mainly of PHC are found in Akola Tehsils, besides sub PHC, doctors and Nurses (063, 36, 94, 339) respectively higher than the other tehsils in Akola district.

Table No- 1.2

Sr. No.	Tehsil	No. of Beds			No of Admitted patients (00)			No. of OPD (00)		
		Total	Female	Male	Female	Male	Kids	Female	Male	Kids
1	Telhara	84	34	24	193	118	34	274	285	151
2	Akot	78	38	12	399	196	82	382	353	198
3	Balapur	54	24	08	126	71	56	355	285	326
4	Akola	1520	377	121	107	126	178	292	285	281
5	Murtizapur	124	39	10	121	120	53	571	572	354
6	Patur	36	30	00	108	64	56	216	181	151
7	Barshitakli	54	24	10	212	74	21	341	301	254
	Total	1950	566	185	1266	769	480	2431	2262	1715

Sources :- District Health Officer & Municipal Corporation, Akola

The statistical study of the chart no. (1.2) brings to our notice that majority of the beds re available for women patients in Akola tehsils which is 377, Whereas the number of beds in Balapur & Barshi takli tehsils is far low compared to Akola and other tehsils.

Table No- 1.3

Private Medical Practitioners: An Information

Sr. No.	Tehsil	Rural Hospitals	Special Hospital (Cancer &	Hospitals	No. of Maternity Home	No. of Beds
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			T.B.)			
1	Telhara	1	0	88	2	20
2	Akot	2	0	84	3	30
3	Balapur	7	0	88	0	00
4	Akola	101	6	71	31	705
5	Murtizapur	1	0	44	4	50
6	Patur	1	0	56	0	00
7	Barshitakli	3	0	71	0	00
	Total	116	6	502	40	805

Sources: - District Health Officer & Municipal Corporation, Akola

The above table no (1.3) shows that the number of private medical practitioners is again higher than the other tehsils in Akola district. Which is 101. On the contrary, the lowest number of the private medical practitioners is Telhara, Murtizapur and Patur Consisting a single hospital each.

Table No- 1.4

No. of Clinically checked females' patients before delivery

Sr. No.	Tehsil	No. of Clinically checked females patients before delivery	No. of delivered Patients	Average days of females admitted for delivery	Females/infants mortality during delivery	
					Female	Infant
1	Telhara	2934	2366	6	3	86
2	Akot	2774	2126	6	1	77
3	Balapur	2762	2269	5	3	87
4	Akola	5367	4196	7	3	136
5	Murtizapur	2363	2027	5	1	44
6	Patur	2090	1830	5	2	65
7	Barshitakli	3062	2449	7	1	71
	Total	21352	17263	41	14	566

Sources: - District Health Officer & Municipal Corporation, Akola

The above table (1.4) reflects that the number of female patients admitted for delivery in Akola is higher 4196 compared to the other tehsils. While the lowest rate of female admitted for delivery is I Patur tehsils (1830).

Table No- 1.5

Various causes of deaths in Number

Sr. No.	Reason of deaths	No. of deaths		
		Male	Female	Total
A		Communicable diseases		
1	Malaria	00	00	00
2	Typhoid	00	00	00
3	TB	13	06	19
4	Pneumonia	2	1	3
5	Decentry	1	2	3
B		Non-Communicable diseases		
1	AIDS	1	00	1
2	Heart attack	34	21	55

3	Cancer	27	10	37
4	Delivery deaths	00	3	03
5	Paralysis	21	11	32
6	Kidney failure	7	04	11
C		Accidental		
1	Suicide	4	3	7
2	Road Accident	9	0	9
3	Electric Shock	2	0	2
4	Burning	0	1	1
5	Other accident	8	1	9
D		Other Causes		
1	Other Causes	490	356	846
Total Deaths		620	419	1039

Sources: - District Health Officer & Municipal Corporation, Akola

Table no-1.5 proves that communicable disease TB took a toll of total 19 lives including 13 males and 06 females during 2013-2014. Non-communicable disease Heart attack took 55 lives including 34 male and 21 female. Finally accidental deaths are at the large extent numbering 846 with 490 males and 356 females.

Conclusions and Recommendations:- The present research paper while concluding and recommending mentions following observations of researcher.

- 1) Increasing of Govt. aided hospitals in Telhara, Akot, Balapur, Murtizapur and Barshitakli. Besides Akola, it is extremely necessary to increase no. of beds in Balapur and Barshitakli.
- 2) There is tremendous difference between the facilities provided by private practitioners and govt. aided hospitals. Hence the need to improve govt. aided facilities.
- 3) Except Akola tehsils, other tehsils lack number of female patients admitted for delivery. The govt. needs to improve its system.
- 4) In Communicable diseases the large No. of patients die due to TB which is a curable disease. Hence people awareness programmes regarding TB are to be undertaken.
- 5) Non-Communicable diseases Heart Attack seems at the top.
- 6) In accidental causes most of the deaths are due to other causes such as drinking liquor, smoking, other addictions like Afu, ganja, Murdering, killing, arson, theft, communal violence, assault etc. Lack of education is a root cause of the other causes of deaths. Hence, we need to improve and impart education at the last element.

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**A Geographical Study of PHC's and Their Ratio With Population In The Rural
Region of The Southern Piedmont Plain In The Western Vidharbha (Maharashtra)**

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Abstract:-

India is the second largest country by high population. Every citizen has many health problems. It is important to go to the nearest health center. In rural India, people have to go to a primary health center. The study region is a concern with the piedmont plain of Satpura mountains and the northern part of Purna river with eleven tehsils i.e., Muktainagar, Jalgaon Jamod, Sangramapur, Akot, Telhara, Daryapura, Anjangaon Surji, Achalpur, Chandur Bazar, Bhatakuli, and Morshi etc. The present investigation shows that the population is increased in the study area but PHC's are not increased accordingly. The burdens on public health centre are observed in the study region.

Keywords - Primary Healthcare Centers, Rural population, Piedmont Plain.

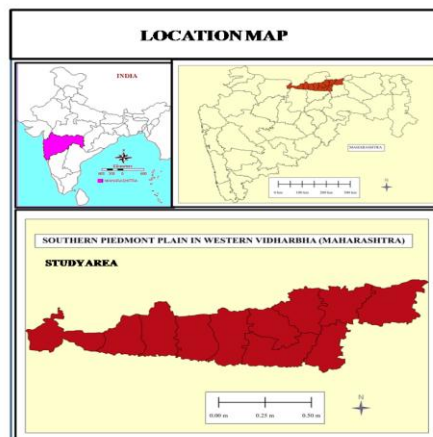
Introduction

Better health is a necessary thing for a happy life. Health Geography is an important branch of human geography. The health geography is studied mainly by human health and related diseases. In developing countries like India, people living in urban and rural areas have to face health issues. The Health Ministry of India has decided to set up one primary health center in rural areas and one primary health center for the population of 30000 and one primary health center for tribal areas in 20000 populations. The distribution of primary health centers in disciplines in the field of study is unnatural, as well as human factors in some parts too. In the field of study, the population is expected to increase the number of primary health centers as per population and people will be able to improve the health of the people.

Study Region

Southern Piedmont plain of Satpura Mountain in Western Vidarbha lies between 20°49' North Latitude to 21°27' North and 76°29' east to 78°09' East Longitude. The area of Jalgaon, Buldhana, Akola, and Amravati districts are occupied by this natural region with 11 tehsils. The southern boundary of this region is bounded by Purna River, and northern boundary occupied by the Satpura Mountain and the western boundary is bounded by the meet of Tapi and Purna River. The eastern boundary is occupied by the eastern Vidarbha.

FIG. NO. 1 Southern Piedmont Plain Satpura Mountain Area Western Vidarbha



Objectives To analysis the ratio of Population with Primary Healthcare Centres.

Database and Methodology

Current examine work is based on the population census data. The broader study area has inadequacy to survey at primary level. So the whole study depends on the secondary data of following sources.

- A. District census handbook of Jalgaon, Buldhana, Akola, Amravati (1991, 2001 & 2011)
- B. Main Government publications-
 - I) Socio-economical review of Jalgaon, Buldhana, Akola, Amravati.
 - II) Records of Zilla Parishad Health Department of concern study area.
 - III) District statistical abstract of Jalgaon, Buldhana, Akola, Amravati Districts.

The geographical study of over 20 years from 1991-2011 has been analyzed for decadal changes in population and distribution of Primary Health Centers. For the detailed study of changes in specific tahsils. The collected data has been processed and analyzed by using different quantitative, statistical technique. The tabulated data has have been presented by the graph. Preparation and analyzing of the data collection, the paper presents statistically explanation.

Results and Discussion

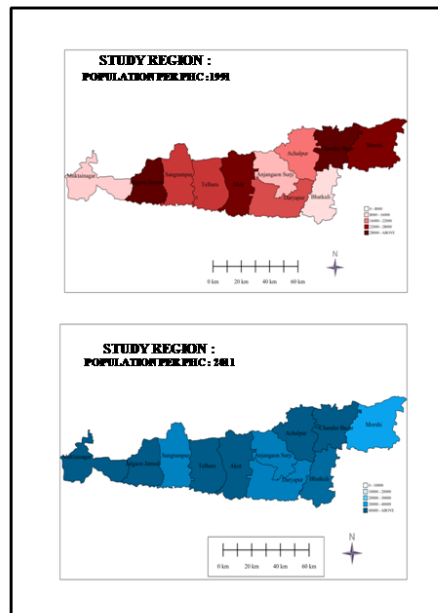
Table No -1

Tehsil	RATIO	RATIO	Weight on PHC
MUKTAINAGAR	9610	40861	31251
JALGAON JAMOD	439 73	64174	20201
SANGRAMPUR	19360	34273	14913
AKOT	26006	54301	28295
TELHARA	19450	50458	31008
DARYAPUR	18362	34650	16288
ANJANGAON SURJI	11233	34841	23608
ACHALPUR	16453	55723	39270
CHANDUR BAZAR	29308	44375	15067
BHATKULI	8305	37703	29399
MORSHI	25160	29030	3870

Source: District Census Handbook, Jalgaon, Buldhana, Akola & Amravati) (1991 and 2011)

Muktainagar, Bhatkuli these tehsils indicate the very low ratio of PHC's with a population of to 1991 while it rapidly increased during 2011 in both tehsils. Sangrampur, Telhara, Daryapur, Anjangaon Surji & Achalpur these tehsils are observed in medium ratio during 1991 while it not increased significantly in 2011. The high-level ratio is found in Akot, Chandur Bazar & Morshi Tehsils is also noted in 2011. The very high ratio is noted in Jalgaon Jamod in 1991 which is highest in both census years.

FIG. NO.2. PHC's Ratio with Population



Conclusions

- 1) The highest weight index on PHC's is observed in Achalpur tehsil.
- 2) The lowest weight index on PHC's is observed in Morshi tehsil.
- 3) The especially high-level burden on PHC's is investigated in Achalpur, Muktainagar, and Telhara.
- 4) The high-level load on PHC's is recorded in Jalgaon Jamod, Akot, Anjangaon Surji and Bhatkuli.
- 5) The medium level burden on PHC's is found in Sangrampur, Daryapur and Chandur Bazar.
- 6) The low-level load on PHC's is found in Morshi.

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Role of Agro-Based Industries in Socio-Economic Development in India

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Introduction

The term 'Industry' in its widest sense refers to all economics activities. Agriculture and industry both inter-related components of the development process due to their mutual relationship. Industries can be classified into three major groups-primary, secondary and tertiary which have many sub-divisions amongst them again. Agro-industries' include industrial activities based on the processing of agricultural raw materials and on the manufacture of products required for the land, and its people. The agro industries are those industries which are linked with, and are set up to meet the needs of the agriculture. Actually all industries draw their raw materials from agriculture.

Review of Literature

D.G. Gatade and M. D. Tawade (1983) He has examined "industrial potential of Konkan region of Maharashtra". Author has been considered physical characteristics, potential of natural resources such as water, geographical condition for the generation of hydel power, mineral resources, and agricultural resources. This study mainly focused on the depletion of resources and suggestion for their better utilization for economic development of the region. **Pawan Kumar Dhiman and Amita Rani (2011)** are discussed Agro based industry is regarded as the sunrise sector of the Indian economy in view of its large potential for growth and socio economic development. Some predigest suggest that in developed countries, approximately 14 per cent of the total work force is engaged in agro-industrial sector directly or indirectly. **P. L. Mishra (1994)** he has studied "Agro-industrial development in India". He suggests that the investigation in agricultural and agro industrial geography involves four stages such as the identification of the problem, the collection of the relevant data, the formulation of the hypothesis, and the testing and modification of hypothesis to provide an adequate explanation (Coppock-1969). The author has undergone through all these stages.

Hypotheses

1. The growth & expansion of agro-based industries form an inseparable part of the overall programme for socio-economic & industrial development.
2. The related groups of agro based industries has set up with inter-connected linkages.

Aims & Objectives

1. To analyze the base and performance of agro-based industries in India.
2. To find out the various problems faced by the Indian agro-based industries
3. To suggest the remedial measure to improve the status of agro based industrial units for effective socio-economic development.

Brief History Of Agro-Based Industries In India

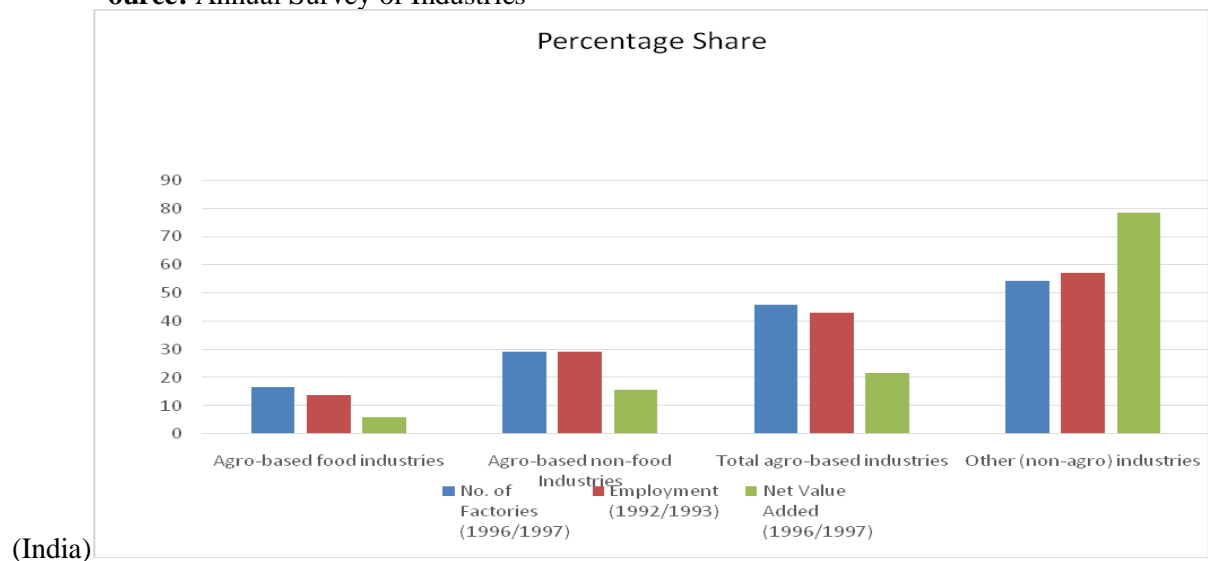
The movement for political independence up to the late 1940s under the leadership of Mahatma Gandhi included an encouragement of village agro-based industries. The objective was to involve rural people in development and the independence movement, and to reduce external dependence (Goyal, 1994). The ideology was economic, social, and political. Though the model involved the rural poor in development action, it later failed because it became a blanket basis for nationalists to favor less efficient techniques of production and oppose modern industry, and did not meet consumer wants. Data from the annual survey of industries¹ show that 46% of all factories in India are agro-industrial, and they contribute 22% of the manufacturing value added and nearly 43% of manufacturing industry employment (India Ministry of Planning, 1996). Table 1 indicates that 37%

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of the agro-industrial firms produce food and 63% produce nonfood products. Table 2 shows that 44% of the food related factories are in milling (mainly grain), another 13% are in edible oil, 10% are in sugar, and 33% in “other foods” such as higher value foods with higher income elasticities of demand. The “other foods” category accounts for 49% of total net value added and 43% of employment in agroindustry, while only 7% of value-added and 20% of employment comes from grain milling.

Industries	No. of Factories (1996/1997)	Employment (1992/1993)	Net Value Added (1996/1997)
Agro-based food industries	16.69	13.67	5.85
Agro-based non-food Industries	29.09	29.23	15.74
Total agro-based industries	45.78	42.89	21.59
Other (non-agro) industries	54.22	57.11	78.41

Source: Annual Survey of Industries



S. No	Description	Industries	Productive Capital*	Workers
1	Food products	35346	21979802	1232679
2	Textiles	18645	24860635	1267670
3	Rubber and plastic products	13147	10079179	466790
4	Tobacco products	3294	1310788	425799
5	Beverages	2103	3881305	121346
6	Paper and paper products	6810	5415903	193026
7	Cotton ginning, cleaning and bailing, Seed processing for propagation	3301	1474036	73096
8	Wood and products of wood and cork, except furniture	4269	891952	60034
	Total	86915	69893600	3840440

*Capital measured as Rs.. in lakh

Source: Annual Survey Industries 2013-14.

Above table shows that, as per the annual survey of industries 2013-14, there are 86915 agro based industries with 3840440 workers engaged and its productive capacity amounted to Rs.69893600 lakhs. Agro based industries can provide increasing employment opportunities to the landless poor's and rural peoples. Agro based industries will help to diversification of rural economy it will help to reduce extreme dependence only on agriculture which makes for in stability of rural economy. Agro based industries would help to solve the unemployment and under employment especially among landless agricultural labor and tribal population.

Conclusion

The effect of agro-based industries was significant on the income levels of all categories of the rural population and their socio-economic structure. Agro-industry have been given significant priority in economic development in India. The study finds that the agro-industrial sector in India contributes a large share of overall employment, income generation, industrial inputs and outputs, regional growth and associated with all kind of socio-economic matters. There is a need for new indigenous models to emerge for the organization of agro-industry. Government models alone do not show a good record of performance. Growth of agricultural sector became a growth of socio-economic development of the country. Therefore, it is concluded that, there is a vast scope in the export of agro based industrial products in future with huge volume of foreign exchange. There is a need of initiative and effective steps to be taken for promoting the agro- based export in future.

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Jail Tourism: New Concept In Tourism Industry In Maharashtra

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Introduction-

The Tourism phenomenon has attracted almost the entire World. Those responsible for managing the affairs of nations have almost universally recognized the economic advantages of Tourism. Besides the economic benefits to a country by way of earning foreign exchange and employment generation, Tourism also makes a tremendous contribution to the improvement of social and cultural trend of the country.

“Maharashtra would be the first state in the country to start jail tourism,” Maharashtra launches jail tourism initiative, opens doors of Yerawada Prison to visitors. Maharashtra Chief Minister Uddhav Thackeray on launched a 'jail tourism' initiative of the state government from Pune's Yerawada prison, in a move to help students learn about historical experiences. The launch of the event was done by 10 students from GenbaSopanraoMozeVidyalay, chaperoned by three teachers, and were among the first few tourists at the jail premise.

The Jail tourism will begin in the state from Yerawada Jail on January 26. Many freedom fighters were jailed at Yerawada Jail, so it will be developed as a tourism site. The first phase of this initiative will start from 150-year-old Yerawada jail in Pune. The second phase of this initiative will begin at Nagpur, Thane, and Ratnagiri Jails. It would be a novel experience for citizens, students, and history scholars to learn more about its historical values,

Keywords: -Tourism, New Concept in Tourism, Jail Tourism, Importance of Tourism, Current Trends in Tourism Industry.

Objectives:-

To Study New Concept in Tourism industry.

To Study Jail Tourism in Maharashtra.

To Study Current Trends in Tourism Industry.

Jail Tourism in Maharashtra:-

Maharashtra's largest jai thrown open to tourists! As India was celebrating the 72nd Republic Day, Maharashtra decided to take its tourism to the next level. The state's Prison Department on Tuesday launched its jail tourism initiative, and initially, it has opened the doors of Pune's Yerawada Prison, the largest jail in the state, for tourists, according to a report in IE. The jail is not only the largest one, but it is more than 150 years old and therefore has a rich history, including one related to the struggle for Independence.

Historical significance of the Yerawada Prison:-

Yerawada Central Prison had been constructed in 1866, and is now the largest prison in Maharashtra. It is also one of the largest maximum security jails in India and at the moment, it has an inmate population of about 5,000. During the struggle for Independence, several leaders had been imprisoned in this jail, which has a premise of 500 acres and has a women's jail and maximum security open jail, as well. Yerawada Prison has also witnessed Mahatma Gandhi as an inmate thrice. The report, citing prison records, said that the Father of the Nation had been incarcerated in Yerawada Prison from March 1922 to February 1924, then again from January 1932 to May 1933 and for the last time in August 1933, when he was an inmate for three days.

Mahatma Gandhi was not the only leader to have been imprisoned here. LokmanyaBalGangadharTilak, Sarojini Naidu, NetajiSubhas Chandra Bose, PanditMotilal Nehru and Pandit Jawaharlal Nehru were also incarcerated in this jail. Moreover, Iron Man SardarVallabhbhai Patel had been imprisoned here twice. The barracks where these leaders had been imprisoned have now been preserved, and the cell where Gandhi was lodged is known as the Gandhi Yard. The Gandhi Yard is also the place for the signing of the Poona Pact between him and Dr B.R.Ambedkar.

Maharashtra has a total of 16 functioning prisons dating back to the 19th century, and the oldest among these is Mumbai's Byculla District Prison from 1840. Many of these prisons had been used to lodge

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leaders of the Indian Independence struggle, and they would also be subsequently added to the jail tourism initiative, the report said. This would however be done in a phased manner.

About the Yerawada Jail:-

- 1.Yerawada jail is 150 years old where several freedom fighters, including Mahatma Gandhi, LokmanyaTilak were imprisoned; Pune-pact was signed within the premises etc.
- 2.The visitors will also get to see the faasi yard, the area where the death sentence is executed.
- 3.This is the place where Chapekar brothers were executed in 1899 for the assassination of British Plague Commissioner of Pune WC Rand.
- 4.The last execution that the faasi yard witnessed was in November 2012 of AjmalKasab, a convict of 26/11 attacks, who was buried inside the prison premises.

Jail tourism initiative of Maharashtra explained:-

The tourists will get a tour of two historic groups of cells known as Gandhi Yard and Tilak Yard, and these groups of cells do not house any inmate. Apart from this, the tourists will also get a tour of faasi yard, which is where executions are carried out in the prison. Chapekar brothers, who had assassinated WC Rand, Pune's British Plague Commissioner, had been executed here in 1899. Moreover, the most recent execution that the faasi yard in the prison had witnessed was in November 2012, when the 26/11 convict AjmalKasab was hanged, after which he was buried inside prison premises itself.

However, the prison officials are also aware of the COVID-19 pandemic and keeping in mind the safety concerns, have decided to allow only 50 tourists a day in the beginning. To avoid any confusion, the prison is currently only allowing groups from schools, colleges and registered organization's to visit, for which they would have to send an application to the prison superintendent a week in advance.

Under the scheme, however, researchers who are working on prison or issues related to it cannot visit, and all visitors would be allowed to enter only after thorough identity verification. Tourists would not be allowed to carry eatables or any electronic devices.

Apart from this, the detailed SOP regarding these visits has been uploaded on the website of the state's prison department. While there would be no entry fee initially, subsequently, the department would charge a nominal fee. Interaction with inmates or visiting places not covered under the tour would not be allowed, and photography/videography would only be done by prison staff. Images taken at select spots would be provided to the visitors.

Jail Tourism Yerawada in Maharashtra Guidelines, ticket prices:-

- 1.The Maharashtra government will levy a small fee, Rs 5 for school students, Rs 10 for collegians, and Rs 50 for general tourists.
- 2.Maharashtra government in a statement said that a tourism guide will be provided to the tourists and the total number of tourists per day won't be allowed to exceed 50.
- 3.Those who want to visit need to contact the Superintendent of Yerawada Jail or ADG prisons. The contact number of ADG prisons is 9823055177. The contact number of the prison is 020-26682663.
- 4.Visitors need to carry Aadhaar cards, ID cards of the Institution, or passports.
- 5.Visitors will not be allowed to carry baggage, eatables, water bottles, mobile phones, and cameras inside the jail. The jail department, however, has the authority to refuse entry to undesirable persons.

Security concerns in Jail Tourism:-

The prison is maximum security and therefore houses high-profile inmates – whether under trial or convicts – and these include people arrested under charges of terrorism, organized crime or extremely violent crimes, with some inmates even being on death row. The areas where the tour would take place are located close to the entry of the prison, while high-security areas, cells and barracks are near the back, so the officials said that routine guards would be sufficient to take care of any security concerns. Moreover, the prison superintendent has been given the right to deny entry to any person who he deems unsuitable for the visit.

Current Trends in Tourism Industry:-

The tourism sector is witnessing some new trends that are supplementing the established trends in the sector. These include solo trips, road trips, pocket-friendly travelling, and wellness tourism. These trends are expanding the horizon of the tourism industry in India and generating newer avenues for revenue creation.

General Upcoming Tourism Trends. There are a variety of tourism trends that are based on more general changes in consumer behavior, like the need for healthy and organic food & drinks, sustainability, personalized service the rising demand for digitalization and the use of technology.

Conclusion:-

Maharashtra has a rich historical and cultural heritage, which has been under-explored by the tourism industry and the government agencies. The well-built basic infrastructure availability throughout the state would provide an ideal platform for fresh investments in the development of tourism and in the process of creating many direct and indirect employment opportunities to locals in tourist destinations.

As different concepts are emerging in the tourism sector, radical changes are taking place in the tourism sector today. Yerawada Jail Pune in Maharashtra was the first in India to start prison tourism. Many new concepts are coming up in the tourism sector such as adventure tourism, Gambling Tourism, Disaster Tourism, Medical Tourism, Armchair, Virtual Tourism, Space Tourism, Tribal Tourism, Sports Tourism, Eco-Tourism, Agro-Tourism and mud tourism.

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