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June 2021 Volume-11 Issue-14

*Sustainable Development Goals: Initiatives,  
Execution and Challenges*

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Dr. R. V. Bhole

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

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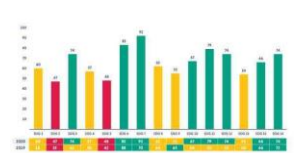
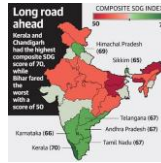
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## **Quality Education: Indian Higher Education**

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### **Abstract:**

*The reason of this paper is to look at the quality measurements related with the higher instruction teach. Through a thorough writing audit and by coordination bits of knowledge drawn from these ponders, the creator has proposed a set of quality measurements pertinent to the higher instruction teach. The discoveries uncover wealthy and significant experiences into quality measurement region of higher instruction educate. The set of quality measurements can act as a list of things for instructive organizing to address quality issues. It would offer assistance in guaranteeing that the basic issues and variables are secured amid usage. For scholastics, it gives a common dialect for them to talk about and consider the quality measurements from different viewpoints. This paper approves and expands the scattered discoveries of existing writing by giving a valuable binding together system for quality measurements.*

**Key words:** *Quality, Higher Education, System.*

### **Introduction:**

Indian Colleges and colleges are confronting major changes as they explore the 21st century and make choices that will not as it were affect higher instruction but will too contribute to our country's future competitiveness within the worldwide commercial center. This article analyzes different impacts on teach of higher learning as they move toward a customer-oriented center. It too stresses the importance of adjusting wants of different client bunches whereas proceeding to serve as purveyors of taught human assets in a worldwide economy. This article recognizes and assesses results from endeavors to adjust quality guidelines in higher instruction. Whereas change is unavoidable and higher learning faces troublesome choices, we will select to form proactive choices and ended up operators of alter. The money related commitments of running an institution nowadays are a major concern.

Due to expanded budgetary requests, there has too been a emotional rise within the fetched of going to post-secondary schools.<sup>2</sup> The Delta Project,<sup>3</sup> which centers on postsecondary costs, efficiency, and responsibility, focuses out that whereas understudies are paying more of the entire costs related with higher instruction, less of the tuition-generated income is really going into the classroom. Within the 1990s, understudy educational cost paid for roughly 24% of the working costs at open colleges and colleges, in 1998 that rate rose to 37%, and in 2005 it was about 50%.<sup>4</sup> Nowadays, teach depend on progressively expansive numbers of understudies to assist adjust uses. As educate confront developing budgetary limitations due to later financial occasions, there's indeed more prominent concern that teach will concede to the esteem of the financial benefits of expanded enrolments.

In spite of, its amazing development, higher instruction in India seem keep up as it were a really little base of quality educate at the best. Guidelines of the larger part of the teach are destitute and declining. There are a huge number of little and non-viable teach. Section to the little number of quality teach is exceptionally competitive giving rise to tall stake entrance tests and a prospering private educational cost industry. The stakes are so tall that quota-based reservation of seats in such teach within the title of certifiable activity has come to possess middle arrange in appointive legislative issues. In spite of a few justify, it has come about in fracture of justify space and encourage escalates competition for the constrained capacity in quality teach.

### **Objectives of the study:**

1. To study the concept of quality of higher education.
2. To study the importance of quality of higher education.
3. To give suggestions for quality of higher education.

### **Review of Literature:**

Whereas analyzing the accounts of colleges in India within the post change period, Tilak and Rani (2002) found that within the decade 1990, in a test of around 40 colleges, there have been unassuming to soak increments in students' expenses of different sorts such as, educational cost expenses, examination expenses, affirmation expenses, enlistment expenses, entrance examination, inn and different administrations, like application shapes, brochures, and so on. Government awards to the colleges have declined or remained stagnant in genuine costs, and some of the time indeed in current costs.

Fetches recuperation measures, especially climb in expenses, and are progressively turn to in a few colleges. Larger part of the colleges (as numerous as 20 colleges) have as of now expanded their expense, which secured more than 20 per cent of their repeating wage. The share of expense wage in repeating consumptions of the colleges was on the rise and come to up to 22 per cent of repeating fetched

within the year 1998-99. This shows that the expenses are as of now higher, nearing different committees' recommendations. In any case, it ought to be borne in intellect that assets that can be raised through expenses can be at a most extreme level of 15 to 25 per cent on a normal of the repeating use over a period of following ten years (UGC, 1993; 2000).

### **Research Methodology:**

Descriptive method is utilized in this think about. Quantitative investigation is done utilizing the information; data stream was collected through study strategy from different sources of data distributed from higher instruction procedures.

### **Higher Education structure in India**

Higher instructive educate offer the taking after, Beneath graduate B.Ed. M.Ed Post graduate M.Phi, Doctorate Open colleges too offer the taking after, Undergrad Post graduate Post graduate confirmation The taking after factual points of interest are examined in this paper. Sorts of degree granting colleges Number of colleges Number of enrolment of understudies and staff Sort shrewd enrolment and development of understudies Arrange astute subtle elements of understudies Level astute subtle elements of understudies Staff shrewd subtle elements of understudies

### **Higher education in India:**

Education in antiquated India was profoundly progressed as apparent from the centres of learning that existed within the Buddhist cloisters of the 7th century BC up to the 3rd century Advertisement Nalanda (Perkin, 2006). In these centres, gathering of scholars--Gurukula--used to be locked in in mental debates--parish ads--in residential campuses. A number of of these centres were expansive and had a few resources. Students of history hypothesize that these centres had a momentous likeness to the European medieval colleges that came up much afterward. The old education system in India gradually got quenched taking after intrusions and clutter within the nation. Till the eighteenth century, India had three unmistakable conventions of progressed grant within the Hindu Gurukulas, the Buddhist Viharas, and the Quranic madaras as, sometime recently the British set up a arrange of schools to give western instruction in English.

The formal higher instruction framework in India was started within the to begin with thousand years at Nalanda, Takshahila, Ujjain and Vikramshila Colleges. The subjects instructed at these Colleges were basically craftsmanship, engineering, portray, rationale, language structure, reasoning, cosmology, writing, Hinduism, Buddhism, Arthshastra, law and pharmaceutical (Ayurveda), etc. Each college was particular in a specific field of ponder, for occurrence, Takshshila for pharmaceutical and Ujjain for space science. Among them, the Nalanda College being the biggest instructive middle had all the branches of information (Ponmelil, 2015). The same Nalanda College is considered to be a Model College by Teacher Sanjay Dhanda, Chief IIT-Kanpur (Ugra, 2010). Simple reason behind typically the notoriety of Nalanda College in India and other nations counting China for its inter-disciplinary instructing strategy.

### **Barriers in Quality of Higher Education :**

Any field of human movement, amount and quality are similarly imperative. The same is pertinent within the field of instruction. 504 colleges and 25,951 collages in 2009 don't deliver an indication of catering to the developing needs of higher education (India, Government of India, Service of Human Asset, 2015). Within the 11th Five Year Arrange amid the period 2007-12, 1500 more Colleges are recommended by National Information Commission (NKC). So, numerical development is taking place with fast pace, but the quality viewpoint of instruction isn't however thought out truly. Due to need of adequate infrastructure in terms of workforce, library and gear in computer research facilities, the quality within the higher instruction is confronting a few obstructions.

The understudies who total their think about of UG and PG program don't have much employability in work showcase.

- Present society requests intrigue knowledge which is one of the foremost lost features in the display higher instruction system.
- Curriculum remains more or less stagnant for number of years, while the changes and slant within the society take put in speedy succession.
- Development of quality and visionary approach always begins with beat level of management but it isn't enough found within the head of the established, administration of the colleges or College chair people.
- Single measuring stick of encounter within the execution assessment without any responsibility loses the inspiration of instructors and in the long run the quality of instruction continuously deteriorates.
- Conventional and not well-organized class-room teaching accompanied by frail introduction skill adversely influence the intrigued of the students.

- Commercialization of higher instruction especially by self-financed colleges to gain more and more cash is the cause of giving less frameworks to the understudies and insufficient offices and motivating forces to teachers.
- Interest and inclination base selection of career is shockingly not seen in educating profession.
- For the modern enrollment specialists, settled pay has to a great extent influenced the quality of instruction imparted to the youthful minds of the nation.

**Conclusion:**

After the snap shot of NKC and redesign and revival committee of two famous identities i.e., Prof. Yashpal and Mr. Pitroda, a few individual perceptions are made in arrange to progress the quality of higher instruction. They are said here:

Committees headed by Kothari, Pitroda and Yashpal committee are concurred that independent bodies of instruction ought to be free from weight of party and control legislative issues. Genuine exposure campaign must be begun for enlisting way better instructors to induce freed of the brief drop and emergency of great instructors at undergrad and postgraduate level. The determination of the modern instructors ought to not be fair on the basis of individual meet and term paper composed by them, in expansion to that intrigued and fitness in teaching profession and introduction aptitude in choice would provide distant better much better higher stronger; an improved" a higher slot.

It is satisfying to note that the Service of HRD of the Government of India has set out upon an yearning extend of remodeling and upgrading the show instruction framework to advance greatness in higher instruction with a see to supporting the developing economy of the nation. The extend can succeed in full degree in the event that the central and state governments work hand-in-hand with most extreme participation by treating instruction as the national issue. Besides, the onus of effective usage of instructive changes lies with well-equipped, spurred and committed instructors. The qualities of such instructors can flourish in a conducive and empowering scholastic environment, which has to be made by colleges and colleges with the dynamic money related bolster of central as well as state governments without any undue political impedances.

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## **“Spatio-Temporal Variation of Cultivators to Total Workers in Northern part of Nandurbar district: A Micro Study”**

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### **Abstract**

*Cultivator's meaning is a person who prepares land for planting, a tool or machine that is use to prepare the soil and kill weeds around growing plants. Occupational structure this refers to the aggregate distribution of occupations in society, classified according to skill level, economic function or social status. The socio-economic development of any nation depends on the number of persons who are economically active in different occupations. The workforce participation rate also has nature of changing with the stages of economic development. Indian economy being agricultural one employs more than half of its workforce in primary sector. However, with modernization, urbanization and industrial development picking up, there is shift in the workforce participation in different occupational structure. Thus, this research paper attempts to study the “Spatio-Temporal Variation of Cultivators to Total Workers in Northern part of Nandurbar district: A Micro Study”. The main objectives in this research paper to analyze the circle wise spatio-temporal variation of cultivators to total workers in Northern part of Nandurbar district for the year 1991 to 2001. The total cultivators to total workers are 97390 persons (42.56 percent) in 1991 and 193780 persons (50.35 percent) in 2001 that shows increase in cultivators by 7.79 percent in the under study. The cultivator includes tenants and owners of total workers it is seen from this exhibit (table) that the percentage of cultivators have been increased in southern and eastern part of this study region.*

**Keywords:-** *Cultivator, Occupation Structure, Economic activity, main workers, marginal workers, Agricultural landuse, general landuse, decade variation.*

### **Introduction:-**

Indian agriculture began by 9000 BCE on north-west India as a result of early cultivation of plant and domestication of crops and animals. Settled life soon followed with implements and technique being developed for agriculture. Double monsoon led to tow harvests being reaped in one year. Agriculture in India is livelihood for a majority of the population and can never be underestimated. Indian cultivators is the top producer of rice, cotton wheat sugarcane, oil seeds, grainfoods, vegetables and fruits etc. Cultivator's meaning is a person who prepares land for planting, a tool or machine that is use to prepare the soil and kill weeds around growing plants. Occupational structure this refers to the aggregate distribution of occupations in society, classified according to skill level, economic function or social status. The socio-economic development of any nation depends on the number of persons who are economically active in different occupations. The workforce participation rate also has nature of changing with the stages of economic development.

### **Objectives:**

This research paper studied following objectives-

1. To analyze the circle wise spatio-temporal variation of cultivators to total workers in Northern part of Nandurbar district.
2. To find out the causes responsible for changing occupational structure in the study region.

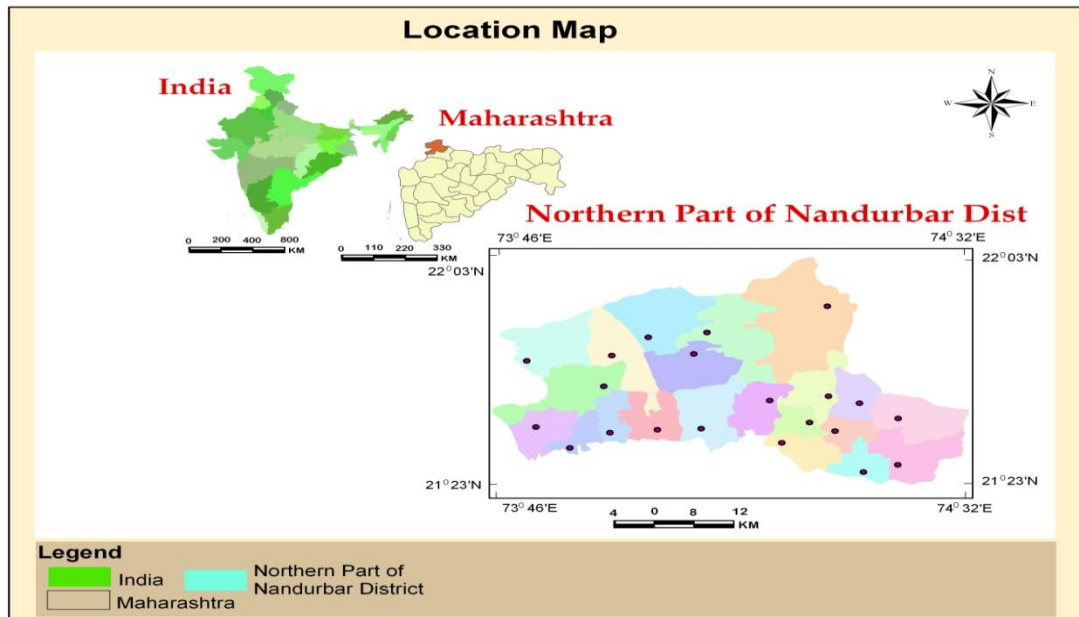
### **Study Region:**

The study region is at the North-West part of Maharashtra. It is lies between  $21^{\circ}.23' N.$  to  $22^{\circ}.03' N.$  latitude and  $73^{\circ}.46' E.$  to  $74^{\circ}.32' E.$  longitude. The northern part of the study region is occupied by Satpuda Mountain, southern part covers by Tapi basin. The Tapi and Narmada are main rivers; both are flowing east to west. In river basin black soil and mountainous region bared and low quality of soil is found. The west and south-western boundaries covered by Gujrath, towards the southern part is Nandurbar tahsil and south-eastern part is the Dhule district. The northern boundaries occupied by Madhy Pradesh state. Climate of the study region are dry except monsoon period. Daily range of temperature is higher, May is the hottest month of the year and December is the coldest month in the year. The average annual rainfall of the study region is about 800 to 900 m.m. The amount of rainfall increases in the northern part of the study area.



### Methodology and data base:

The present study is entirely based on secondary data. Data was collected from the Google www.nandurbarcensus 1991 and 2001, district census handbook of Nandurbar district, census abstract of Maharashtra state and socio-economic review and statistical abstract of Nandurbar district. Circles are considered as basic unit of investigation.



Two decade period of spatio-temporal variation of occupational structure pattern has been taken into consideration, i.e 1991 and 2001. The data thus collected will be processed, analyzed by using different quantitative statistical techniques the table is used are calculated with the help of excel computer software and used the Arc GIS software.

### Result and Discussion:-

Table gives comparative exposition of spatial distribution of the percentage of the cultivators to total workers for 1991 and 2001 in the study region. The total cultivators to total workers are 97390 persons (42.56 percent) in 1991 and 193780 persons (50.35 percent) in 2001 that shows increase in cultivators by 7.79 percent in the under study.

#### A) Spatial Distribution:-

The spatial distribution of cultivators to total workers in 1991 is shown in maps. The eastern and southern parts have less than 40 percent cultivators to total workers whereas more than 60 percent cultivators are in northern, central and western parts in the study region. The high cultivators in percent occurred in the circles namely Valfali (88.67), Dab (79.77) in the western part, Molgi (84.52), Roshmal (75.71), Khuntamodi (82.77), Toranmal (83.23) are covered in northern part and central part is recorded in Chulwad circle (80.84) in the study region. It is clear from the exhibit 3.9/A that percentage of cultivators to total workers declined towards southern and eastern. About 40 to 60 percent cultivators to total workers are found in three circles are namely Akkalkuwa (47.09), Khapar (52.78) and Moramba (56.30) circles in the southern part of the study region. Except Somawal circles (62.55 percent to total workers), all circles in the southern part are observed less than 40 percent cultivators to total workers in the study region. Fig. no. 3.9 showed in 1991 the percentage of cultivators to total workers in the study region. It has been observed high proportion in northern and western part while it is low in southern and eastern part of cultivators to total workers in the study region.

**Table: Northern Part of Nandurbar District: - Circlewise Proportion of Cultivators to Total Workers (1991-2001).**

Sr.No.	Name of Circle	Total Workers		Total Cultivators		% of Total Cultivators to Total Workers		Variation (2001-1991)
		1991	2001	1991	2001	1991	2001	
1	Akkalkuwa	8202	15065	3862	8035	47.09	53.34	6.25
2	Khapar	9643	15343	5090	5194	52.78	33.85	-18.93
3	Valfali	3577	8533	3161	3263	88.37	38.24	-50.13
4	Moramba	9827	15827	5533	7941	56.30	50.17	-6.13
5	Dab	9842	16304	7851	8851	79.77	54.29	-25.48
6	Molgi	11563	17205	9773	9973	84.52	57.97	-26.55
7	Taloda	8527	19320	2366	10101	27.75	52.28	24.54
8	Borad	17005	27522	4468	15022	26.27	54.58	28.31
9	Somaval	8577	20185	5365	9138	62.55	45.27	-17.28
10	Shahada	12796	20103	1185	6035	9.26	30.02	20.76
11	Brahmanpuri	15749	20915	4138	10103	26.27	48.31	22.03
12	Aslod	18002	25135	6988	11220	38.82	44.64	5.82
13	Vadali	12344	22930	3460	10830	28.03	47.23	19.20
14	Sarankheda	10705	16520	2136	9001	19.95	54.49	34.53
15	Prakasha	13330	18230	2016	10630	15.12	58.31	43.19
16	Kalsadi	9537	15931	1717	9588	18.00	60.18	42.18
17	Mhasavad	21030	26405	5467	16155	26.00	61.18	35.19
18	Roshmal Bk.	10309	24120	7805	10588	75.71	43.90	-31.81
19	Chulwad	6700	13120	5416	7012	80.84	53.45	-27.39
20	Khuntamodi	5257	12540	4351	7980	82.77	63.64	-19.13
21	Toranmal	6298	13580	5242	7120	83.23	52.43	-30.80
<b>Rigion</b>		<b>228820</b>	<b>384833</b>	<b>97390</b>	<b>193780</b>	<b>42.56</b>	<b>50.35</b>	<b>7.79</b>

**Source: Computed by Researcher**

Table and map display the spatial distribution of percent of cultivators to total workers in 2001 in the study region. During the period 193780 cultivators were found (50.35 percent to total workers) in agriculture. It is seen from exhibit that the percentage of cultivators is increased by southern and eastern parts of the region. In the southern and eastern parts of the study region the cultivators have increased considerably. This ascribed to the fact that agriculture is dominant in this part. The maximum cultivators are observed in Khuntamodi circle (63.64 percent to total workers) in the northern part and minimum is found at Shahada (30.02 percent to total workers) in southern part of the study region. About 40 to 60 percent of cultivators to total workers were observed at Akkalkuwa (53.34), Taloda (52.28), Borad (54.28), Vadali (47.23), Sarankheda (54.49), Prakasha (58.31) circles in the southern part and Bramhanpuri (48.31), Aslod (44.64) are found in eastern part of the study region. While lowest was found at Shahada (30.02), Khapar (33.85) in southern part and Valfali circle (38.24) in north-western part of the study region. More than 60 percent cultivators were found in the circles namely Kalsadi (60.18) is observed in southern part, Khuntamodi (63.64) is recorded northern part and eastern part is found at Mhasavad (61.18) circle in the study region.

#### **B) Temporal Variation:-**

Table shows the spatial variation of cultivators to total workers for 1991 and 2001 in the area under study. It is seen from this exhibit that the percentage of cultivators have been increased in southern and eastern part of this study region. These circles are namely Shahada (20.76), Vadali (19.20), Sarankheda (34.53), Prakasha (43.19), Kalsadi (42.18) are observed in southern part and Bramhanpuri (22.03), Aslod (5.82), Mhasavad (35.19) are found in eastern part of the study region. This is ascribed to the fact that agriculture is dominant factor in this part of the study region. The percentage of cultivators to total workers in the central, northern and western parts of the study region has been decreased due to the infertile land and hence has found low yield per hectare. Shahada circle (15.12) shows low proportion of

cultivators in both of the periods but it is increased by 20.76 percent during the study period of ten years. Prakasha circle (15.12) showed low proportion of cultivators in 1991, but it is greatly increased by 43.19 percent as compared to the period of 1991. On the other hand, Valfali circle (88.37) had high proportion of cultivators and ranked first in the region in 1991, but it is greatly decreased by 50.53 percent as compared to the period of 1991.

**Conclusion:-**

Finally concludes the spatial distribution of cultivators to total workers in 1991 is shown in maps. The eastern and southern parts have less than 40 percent cultivators to total workers whereas more than 60 percent cultivators are in northern, central and western parts in the study region. The high cultivators in percent occurred in the circles namely Valfali (88.67), Dab (79.77) in the western part, Molgi (84.52), Roshmal (75.71), Khuntamodi (82.77), Toranmal (83.23) are covered in northern part and central part is recorded in Chulwad circle (80.84) in the study region. During the period in 2001, 193780 cultivators were found (50.35 percent to total workers) in agriculture. It is seen from exhibit that the percentage of cultivators is increased by southern and eastern parts of the region. These circles are namely Shahada (20.76), Vadali (19.20), Sarangkhedha (34.53), Prakasha (43.19), Kalsadi (42.18) are observed in southern part and Bramhanpuri (22.03), Aslod (5.82), Mhasavad (35.19) are found in eastern part of the study region. This is ascribed to the fact that agriculture is dominant factor in this part of the study region. On the other hand, Valfali circle (88.37) had high proportion of cultivators and ranked first in the region in 1991, but it is greatly decreased by 50.53 percent as compared to the period of 1991.

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## **To Analyze the Distribution of Periodicity of Market Centers in Yavatmal District**

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### **Abstract:**

*Marketing geography describes the various facts of retailing as aspect of geography which is concerned with territory economic activities and especially the distributive trades. The distribution of market centers is influenced by different physical and cultural factors. rural economy market plays a vital role in the interactions and exchanging the local products through certain norms where 'system of rural market serves as the nodal points for the collection and distribution of large range of goods and services of both local and external origin' Therefore attempt is made here to analyze distribution of Periodicity of market centers in Yavatmal District. The paper is based on secondary data. To analyze distribution of market centers Statistical techniques i.e. mean and Standard Deviation has been utilized.*

**Key Words:** *Distribution of Periodicity of Market centers.*

### **Introduction:**

“Marketing Geography describes the various facts of retailing as aspect of geography which is concerned with territory economic activities and especially the distributive trades” (Davies, 1976).

Geographers are mainly concerned with the spatial distribution of geographical phenomena. The distribution of market centers is influenced by different physical and cultural factors. Each factor has its own influence and affects directly or indirectly on the distribution of market centers (Pawar&Lokhande 2000). There is a great variation also in the distribution of market centers at tahsil level e.g. there are 20 market centers in Ner tahsil while they are only 04 in each of Maregaon, Zari-jamni and Wani tahsils.It Analyzes the distribution of Periodicity of Market Centers in Yavatmal district.

### **Objectives:**

The main objective of the present study is to analyze the Distribution of Periodicity of Market centers in Yavatmal district.

### **Data Base and Methodology:**

The present research paper to analyze the distribution of periodicity of market centers has been based secondary data. To fulfill the objective the data regarding number of markets area has been collected from district Census Handbook, Yavatmal, Part- XII.

Distribution of Market centers in Yavatmal district is grouped into four categories on the basis of these statistical techniques, the conclusions are drawn.

### **Study Area:**

The Yavatmal district is located South-western part of Vidharbha and South- eastern part of Maharashtra state. The absolute location of district is 19°26' to 20°42' north latitude and 77°18' to 79°28' east longitudes. The total geographical area of district is 13584 sq.km, which constitutes 4.50 percent of the total area of the Maharashtra state. The district has hot and dry climate with average annual rainfall is 970mm, as per 2001 Census, Yavatmal district has 24,58,272 population for administrative purpose the district is divided into 16 tahsils.

### **Discussion**

#### **Distribution of Periodicity:**

In the study region it has been noticed that there are two types of market centers. Out of 173 market centers in the district, 155 are the weekly market centers as they meet only once in the week of seven days and remaining 18 market centers are daily in the study region. It is observed that there is no bi weekly market centre in the study region.

At tahsil level in Ner tahsil most of the market centers are weekly and they are 19 in numbers and 01 market center is daily. The lowest numbers of market centers have been observed in Maregoan, Zari-Jamni and Wani tahsils. 03 market centers are weekly and 01 market centre is daily. In Babulgoan and Dharwa tahsils there are 16 and 17 market centers weekly respectively and 01 daily. (Table and fig)

**Table- DISTRIBUTION OF PERIODICITY OF MARKET CENTRES**

Tahsil	NO. OF MARKET CENTRES		TOTAL NO. OF MARKET CENTERS
	Daily	Weekly	
Ner	01	19	20
Babulgaon	01	16	17
Kalamb	01	15	16
Yavatmal	01	13	14
Darwaha	01	17	18
Digras	01	04	05
Pusad	02	09	11
Umarkhed	02	06	08
Mahagaon	01	12	13
Arni	01	04	05
Ghatanji	01	10	11
Kelapur	01	09	10
Ralegaon	01	12	13
Maregaon	01	03	04
Zari-Jamani	01	03	04
Wani	01	03	04
<b>Region</b>	<b>18</b>	<b>155</b>	<b>173</b>
<b>Mean</b>	--	--	<b>10.81</b>
<b>SD</b>	--	--	<b>5.39</b>

*Source: Compiled By Researcher on District Census Handbook, Yavatmal, Part XII,*

06 weekly market centers and 02 daily market centers are observed in Umarkhed tahsil. 09 weekly market centers and 02 daily market centers are observed in Pusad tahsil. In Kalamb tahsil 15 weekly and 01 daily market centers are observed. In Yavatmal and Mahagaon tahsils 01 is daily and 13 and 12 market centers are weekly respectively. In Digras and Arni tahsils each 01 is daily and 04 market centers are weekly. In Ghatanji tahsil 01 is daily and 10 market centers are weekly. Kelapur and Ralegaon tahsils 01 is daily and 09 and 12 market centers are weekly respectively.

**Tahsil-wise market centers:**

The District has a whole 173 Market centers in 2010, but spatial distribution of market centers various from tahsil to tahsil on the basis of mean and standard deviation. The tahsil of Yavatmal District is categorized into four categories.

**Tahsils of low number of market centers:**

The tahsils which have numbers of market centers below mean minus 1 standard deviation are included in this category. The table indicates that low number of market centers are recorded in Wani, Zari - Jamni, Maregon, Arni and Digras tahsils in 2010, due to the rugged topography and forested area which resulted into lower development of transportation and low agricultural production.

**Tahsils of medium number of market centers:**

The Tahsils which have numbers of market centers in between above mean minus 1 Standard deviation to mean are included in this category. The moderate numbers of market centers are recorded in Kelapur and Umarkhed tahsils in 2010.

**Tahsils of high number of market centers:**

The tahsils which have numbers of market centers above mean to mean plus 1 standard deviation are included in this category. The table exhibits that high number of market centers are found in Kalamb, Yavatmal, Pusad, Mahagaon, Ghatanji and Ralegaon.

**Tahsils of very high number of Market centers:**

Tahsils which have numbers of market centers above mean plus 1 standard deviation are included in this category. The very high number of market centers are found in the tahsils of Ner, Babulgaon and Dharwaha mainly because of these are located in Painganga basin, where fertile soil is available; furthermore these tahsils having high rainfall, both these high rainfall and fertile soils resulted into high agricultural productivity, high density of population and high Accessibility.

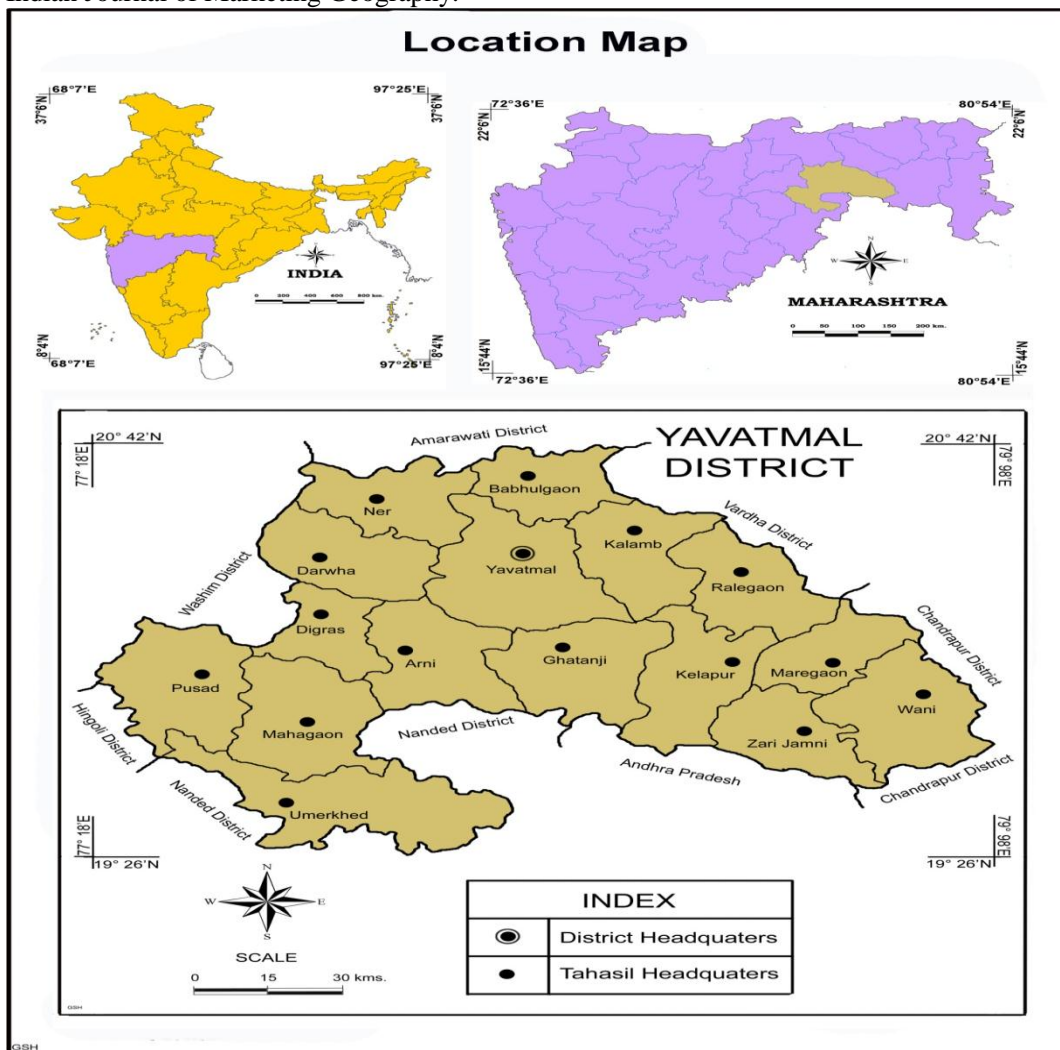
**Conclusion:**

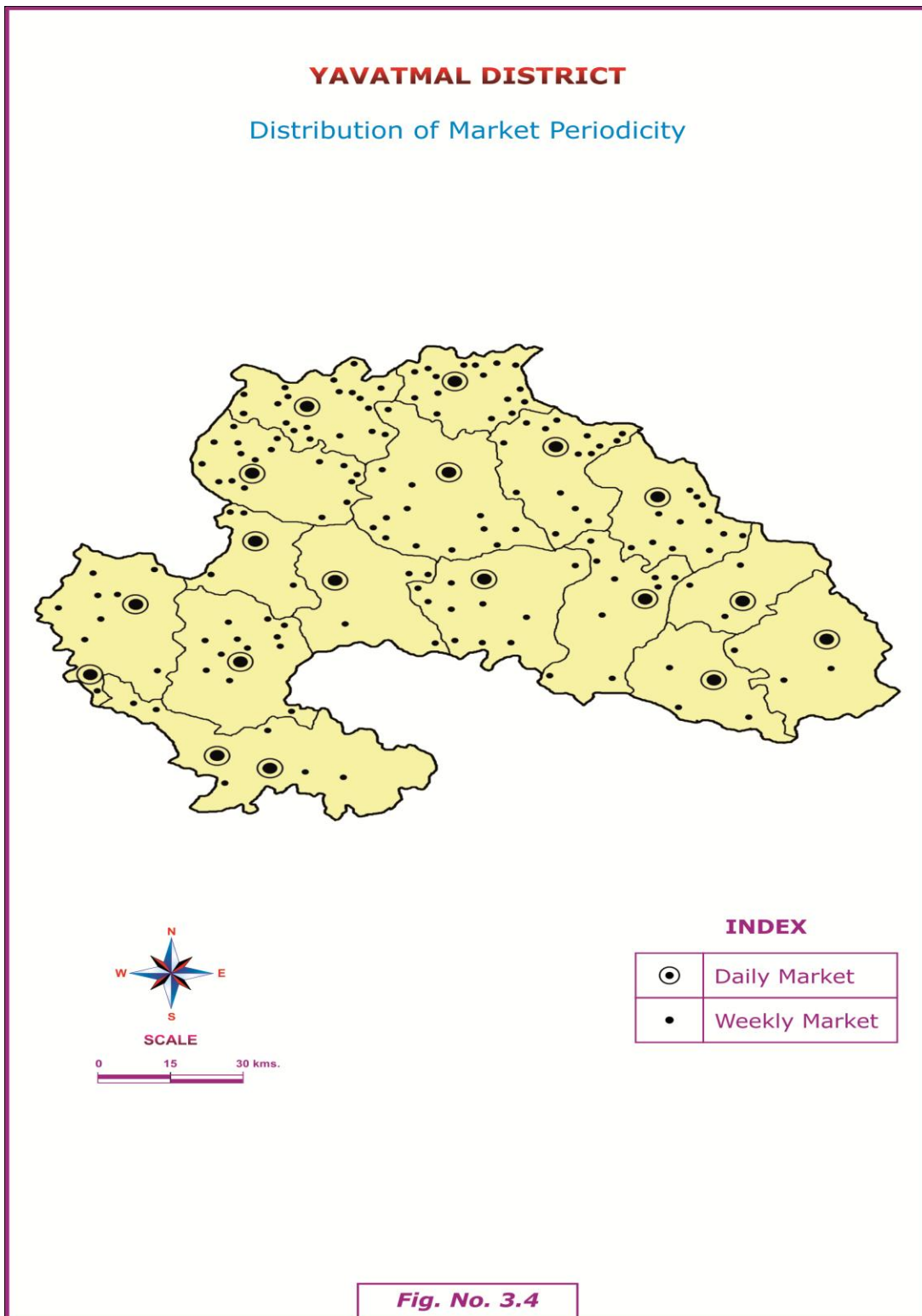
In the study region there are 18 daily 155 weekly market centers. The highest number of market centers are twenty in Ner tahsil, whereas the lowest number of market centers are only four in Maregon, Zari-Jamni and Wani tahsil. It seen that the daily markets are concentrated in eastern and southern and some central part of the study region the area. Because it is a plain, fertile, and well developed part of the study region. The weekly market centers are dominant in the north central part of the region. It is seen that the region has cluster to regular distributional pattern of market centers.

The above discussion indicates that there is great influence of geographical factors on distribution of market centers in Yavatmal District. Low number of market centers in Wani, Zari - Jamni, Maregon, Arni and Digras tahsils is a result of rugged topography and forested area. While very high number of market centers in Ner, Babulgaon and Dharwha mainly due to their location in Painganga basin leads to high agricultural productivity, development of transportation.

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**Source:** Compiled by Researcher.

## **Role of Indian Writing in English in Social Development with Indian Sensibility**

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### **INTRODUCTION:**

To Study Indian English Literature with the role of Indian Writing in English in both its matter and manner incorporates continuity with change, an unquestioned commitment to some basic tenets of the traditional blended with a reaching out to explore the new, a shifting of the focus to the individual and the personal but without serving of links with the familial and the societal. But in our Indian English Literature with Indian Writing in English it has come to have a throbbing, distinctive presence of its own, having graduated from the imitative, realistic and psychological stages to the experimental one.

The poets, short story writers and novelists reflect the Indian reality imaginatively, imbuing it with bold technical innovations-all of which deserve detailed analysis, definition, classification and evaluation. The term 'Indo-Anglian' is used to denote original literary creation in the English by Indians. Today there are a large number of educated Indians who use English language as a medium of creative exploration and expression of their experience of life. Their writing has now developed into a substantial body of literature in its own right. But today this literature is referred to as Indian English Literature and at present it is Indian Writing in English with which we are studying social development with Indian sensibility.

### **OBJECTIVES:**

- 1) To explore the Role of Indian Writing in English Literature in Social Development with Indian Sensibility.
- 2) To search and study different aspects of Indian Writing in English literature with Indian English Poets and Novelists for Social Development.
- 3) To evaluate thematic concern, narrative technique and comparative perspective of Eminent Scholars aim with my own words

Emergence of Indian writing has become a vital part of English literature today. Its basic reasons are so many; chief among them is the past of Indian political term. The Britisher's have been ruling the country for several decades and Macaulay's education policy has determined English Teaching in India as the important English policy. On account of wiser India's recommendation this has been possible, it is suspected by some Indians, but surely for administrative reason it was politically decided that the Masses be taught English and it was a hectic demand on the side of the Indians to prefer instructions in English. As a result of this, Macaulay's recommendations were fully accepted by the government, and it is somewhere in 1835 this education began operating with a view to promoting western science and literature among the natives.

The result of this the learners were exposed to the new discipline and to widen their attitude and the scientific, rational approach in life. It helped to liberate Indians from the creative, narrow outlook. It is related to the social cultural practices prevented in those days, under which comes caste ridden society which is the major setback to the Indians. This new method of instructing English helped the regional languages to develop slight higher level in the matter of creativity. Among greater men of letters, great social reformist and revolutionist like Raja Ram Mohan Roy come forward and their emerged Indian Renaissance of the 19<sup>th</sup> century for all Indian writers to write for Indian-ness. Apart from this, many Indian people engaged them in writing in English for the social causes but their purpose was not for English creation.

In the earlier period persons like Rabindranath Tagore, Keshubhai Sen and Shri Aurobindo, M.K.Gandhi, Dr.Radhakrishnan and writing of Jawaharlal Nehru were on one side and Dr. Babasaheb Ambedkar were on other side to flourish English Language. The output of this is nothing but the Indians began to use English language for creative Expression. The best example of it with simple imitation is Henry Derizeo's volume of poems published in 1823 and other work in 1983 entitled with, 'the Shair and Other Poems.' This has left chances of writing in English on the deep rooted English race. The other social, cultural problems of native Indians inspired to the great Indian writers for lot of translations of works. For example the great work of Shakespeare helped in early period as a model to the Indian dramatist and for their work in translation so output of it with direct result is our Indian Drama in English study. The best example of it is in 1832 entitled 'The Persecuted 'was the solid contribution in Indian drama.

If you look at the English poetry of Madhusudan Dutt, a Bengali poet of his talent, whose only aim in life was to win recognition as a writer of English verse. Similar to this the unforgettable names in the period of initial stage were Rabindranath Tagore and Sarojini Naidu they wrote not only prose work but also expanded good work in poetry. Added to this a major milestone work in the 20<sup>th</sup> century was



contributed by the great Indo- Anglican poet and prophet whose name is Aurobindo. He has contributed exhaustive treasure of his working to the new generations as a unique-one in that century. In this manner Indians proved as the beneficiaries by this particular benefit. If you look at the Indian Sensibility after getting Independence and the present period of it and all together challenges from all side only possible to remove if they drive Britishers from India. The spectacle presented challenges, dynamic problem of the partition of the country, the whole country bathed in blood so people worried in a mood to repent. The first problem of disunity and disintegration between Hindus and Muslims posed a great threat for the survival of the country due to this political division. Problems of cast and un-touch ability were no less grave. The speech of J. Nehru and his writings presents us the horror of the days. A Host of writers came forward recalled in their sentiments of pity, loss, and awakening of the masses and presenting the problems of division.

The best example of it was in the book of Khushwant Sing entitled, 'Train to Pakistan. 'It was written with honesty, truth and deep sorrow. Our country was facing total disaster, poverty growing population, extreme unemployment and horrible conditions of Indians victimized by this. But the brief story enough to reflect conditions of communal riots and violence, murder and killing hatred and suspension is given by R.K.Narayan in his book, 'Another Community'. At the same time the born of Mulkras Anand as a creative man of social sense and deep concerns helped M.K.Gandhi to become giant personality. His contribution in novel writing helped Gandhi to mobilize public opinion with sermons. So today's work of Gandhi shows us the importance and greatness of Mulkras Anands literary contribution in the life of Gandhi. The best example of Mulkras Anand is given in his novel 'Coolie. In this way, one side of the Indian socio-cultural reality at the same time another significant problem of the inner world of an individual has been given authentic touches by the writers.

After Prose the need arises to pay attention to the poet's achievements after 1960's. These poets have carved out the serious dimensions of life of Indian sensitive citizens. An active citizen who has been exposed to the multidimensional undercurrents of socio-cultural, economic, and humanistic and the tender problems of the hearts are faithfully bended in the poetry of modern Indian poets. The problems of dignity of Indian and human mind to create new situation helps Indian sensitive citizen in their life. The factors like Science, Technology, economy, medicine, political awareness and above all a rational scientific temper of time spirit alter the vary life style of modern man and all these factors find voice in our Indian Writing in English as our Indian Sensibility.

The glorious part of our Indian literature is Indian Poetry. As we know literature has incorporated with universal values as far as the English Literature in India is concerned. It has its own sociological and racial interest means the literature is both universal and also Indian. Beauty and tragedy with fatality crisscrossed in the life of Indian poetry.

It is both subject matter and style. It also includes customs, beliefs, situations, places and superstitions. Indian poetry had started with its renaissance period especially Swami Vivekananda vedantic song are free made from his own Bengali. Thus, the poetry is the reality, no doubt, but poet too compels attention. The poetic contribution of Toru Dutt was so great though she had a rich and respectable ancestry. Romesh Chunder Dutt's work consists of translations of Mahabharata, Upanishad, Rig-Veda, Buddhist literature etc. Similar to this the work with classic touch of Manmohan Ghosh also plays important role in Poetry.

The first phase of poetry by Aurobindo Ghosh, Sarojini Naidu and Swami Vivekananda has the grace of divine love which they had defined in the words like the God, god's gift and grace. It is the god-bhkt relationship like lord Krishna and Meerabai. All they had mythological references with them to create a poetic act.

To review the new poetry as a modern poetry has no reference of ancient or antique poetry. No true poet can escape tradition for he isn't it and of it, and the best he can do is to relate the immediate present to the living past. But the Indo-Anglican poet is, no doubt, knotted in his particular and peculiar perplexity. As an Indian, he strives for all self-experience in English. Several of the poets in the various regional languages are like Arun kolatkar, Dilip Chitre, V.K.Gokak, Umashankar Joshi and Amrita Pritam are efficiently bilingual. In the anthology Modern Indian Poetry gives enough knowledge of English to translate their verse in regional languages. The whole point about the Indo-Anglian phenomenon is that it is a dialect of the mind rather than of the tongue. It is the focus of the mirror destinies in the Indian tradition, the classic Indian and the grafted western. But the use of the language is also important too.

According to P.Lal the anthology of Modern Indo-Anglian Poetry illustrates the body of poetry appreciating people. The Indian good Poetry is not always clear and lucid. The development within a poem

is a sign of maturity in the poet. Hence, in our Indian Writing in English the most well-known name in Indian writing poetry contribution is Nissim Ezekiel.

Towards end, in the study of our Indian sensibility in Indian Writing in English Novel writing assumes significant dimensions and the writers involved themselves in the process of investigating social, social-political and socio-cultural aspects of Indian situations in which the sense of native problem are found projected. Their identity of Indian sensitivity and the greatness of Indian writing lie in their full time orientation. The best example of it is Raja Rao's Indian novel, "The Serpent and the Rope." But it doesn't mean that this writing is only particular about only Indian mind. In many of the books there is universal touch relating to man and woman of the world. Writers in general chose to tackle problems of poverty, unemployment, caste-ridden society and the problems of education, superstition, freedom of women etc. But the writers like Raja Rao had devoted themselves to the specific area of typical behavior. Raja Rao's 'Kanthapura' is a literary document to present Indian situation, authentically making Kanthapura as a model village. All problems being faced by Indians are tackled in the book and it becomes microcosm of Indian with the role, Gandhi's personality plays.

In present novel, "The Serpent and the Rope" Raja Rao tries to present interracial and international marriage problems and the typical Indian sensibility. In short, Indian fiction writing in English has proved a boon in projecting grass root reality in successful colors and attracting global attention of eminent scholars even from abroad and yet its future growth is fantastically bright. But lately women writers have commendable status. The group of women writers accepted the challenges to reveal most innate problems with their own kind. Out of these groups of the novelist Kamala Markanday, Ruth Jhabwala and Anita Desai showed remarkable awareness of the challenges of present day reality, feminism, free sex, Isolation, alienation and identity crisis etc., are some of the major thematic concern of the women novelists of today.

Before conclusion a lot can be said very positively about women writers in fiction. It is the surprising improvement that was began to participate in this challenging activity in Indian side. Hence, it has sensibility to conclude, the ability to write about social development with Indian Sensibility in Indian Writing in English which has opened the new vistas for young Indian writers (women/men) as a new trend of writing in our English Literature in postmodern period.

#### **CONCLUSION:**

Lastly, in our conclusion we may say that emergence of Indian writing in English of Indian writing in English is a vital part of English and the past of Indian political term is the chief among them. In 1835 how education is began with a view to promote western science and literature among natives. It helped to liberate Indians from the creative, narrow outlook. To write about Indian-ness greater men of letters, great social reformist and revolutionist like Raja Ram mohanroy come forward in 19<sup>th</sup> century. Similar to this Dr. M.K. Gandhi, R. Tagore, Dr. Radhakrishnan and J. Nehru use one side and on other side Dr. B.R. Ambedkar began to use English language for creative expression. But in the contribution of English Poetry Dr. Madhusudan Dutt's work as a writer of English verse and in the work of good Prose of Poetry R. Tagore and S. Naidu's work played most important role in our literature.

Similar to that, the work of 'Train to Pakistan' by Khuswant Singh and J.N.Nehru's work of 'Discovery of India' presented Indian sentiments of loss, pity, awakening of the Masses and problems of division during this time. But after 1960 the poets have carved out the serious dimensions of life of Indian sensitive citizens. Thus, the glorious part of our Indian literature is Indian Poetry and the body of poetry appreciating 'People' so the work of Nissim Ezekiel in our Indian Writing in English is mostly well known to us in our Indian Writing in English Poetry. Add to this, the work of Raja Rao in his novel 'The Serpent and the Rope' also Proved the process of investigating social and cultural aspects of society with their identity of Indian sensitivity and greatness of Indian writing.

Lastly, the work of women writers like Kamla Markanday and Anita Desai showed awareness of the challenges of present day such as Feminism and Identity crisis recently. Thus all of them had sensitivity and ability to write about social development with Indian Sensibility in Indian Writing in English so they opened new vistas for young Indian (Men/Women) writers as a new trend of writing in our English Literature.

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## **Gender Equality and Women Empowerment of Dr. B.R. Ambedkar: A Perspective Dr. Kulkarni Sanjay Ganpatrao**

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### **INTRODUCTION:**

The promotion of Gender Equality and Woman Empowerment is the most important status of our Nation to build Nationalism and Nation Building. Swami Vivekananda had said that "Country and that nation which did not respect women have never become great nor will ever in future." In recent decades this issue came up in the light when United Nation declares 1975 be 'International Women's Year' and our India celebrated year 2001 as 'Women Empowerment Year'. Added to this, if we look at the Gender Equality it is nothing but the equal treatment of justice to equitable values of sexes. Therefore, Gender Equality is a fundamental human right and the basic problem is related to Indian social set up with regard to gender justice or gender equality. So in present paper my purpose is to illustrate the constitutional contribution of Dr. B. R. Ambedkar to build our nation with Nationalism and Nationality with Gender Equality and Empowering Women in various ways in male dominated society. Empowerment refers to increasing the spiritual, political, social or economic strength of individuals and communities.

Dr. B.R. Ambedkar is one of the greatest men that India had produced in the 20<sup>th</sup> century. He was and he is one among those men who contributed to the fullest of their capacity with all their intellectual depth vigour and vitality for making India emerge as the greatest power of the age. He, who is undoubtedly the man of the masses could rise to such great heights and scale the highest peaks of public veneration, respect and reverence from those beginnings which were so simple and humble and become the father of the constitution of India and even modern India as a whole. The first and foremost thing that should be done to probe deep into Dr. Ambedkar's ideas on Nationality and Nationalism is to understand the way he uses the terms. According to him Nationality and Nationalism are the two different stages of human mind. Nationality means "Consciousness of kind, awareness of the existence of that tie of kinship, whereas, Nationalism means the desire for a separate national existence of those who are bound by this tie of kingship. Lastly, to prove how he advocated a strong nation, state in the capacity of being the chairman of the Drafting committee of the Constitution of India.

### **OBJECTIVE:**

As per the title significance of my research paper the prime aim of my paper is to search Nationalism and Nationality with the help of Gender Equality and Empowerment of Women in our India with reference to Dr. B.R.Ambedkar as a father of Constitution of India. Added to this, I preferred to study the need and essentiality of Gender Equality with the views of Dr.B.R.Ambedkar with the help of secondary data and details collected from some related books, Journals and websites related to Gender Equality and Women Empowerment. I also decided to study the Empowerment of Women about empowering in various ways such as financial, cultural, social, legal, political and historical in our Indian male dominated society. But the most importance is given to the educational status of the women with the economic development to find out the status of the women with reference to Gender Equality and Women's Empowerment.

Man and Woman are two wheels of vehicle to run family, society and nation. Nature created these two wheels, which the reflection of eternal dualism as per natural law theory. Therefore it is crystal clear that man and women are treated at par by the nature of it establishing equality and justice. However after establishment of society secondary treatment was given to woman and there was male dominance in the society. This situation is continued in every society of the world. Gender equality and justice are denied to woman. But Men and women are equally and until; men and women are equally empowered, our nation will not be progressed rapidly. But the present scenario is different in Indian context where women are not as empowered as men are. Actually, there are various reasons for this low status of women empowerment in the society. As a result it has become the need of the time to think about women empowerment.

The concept of empowerment is related to gender equality but distinct from it. The word "to empower" means "to enable" or "to give power to." The very term "empowerment" consists of a conspicuous word "power" which means control over material assets, intellectual resources and ideology. Empowerment is not one-way process but it is multi-dimensional process which enables one to realize his full identity and powers in all spheres of life. Power is not a commodity to be trans-located nor can it be given as alms. Power has to be acquired and once acquired; it needs to be exercised, sustained and preserved.

According to the socialist view, Women's inferior status is rooted in private property and class divided society, sexist ideology and structures maintain women's interior status in society. Socialist feminists feel that overthrow of the capitalist system by itself will not mean transformation of patriarchal

ideology. It would be necessary to organize struggles against capitalism and patriarchy. Socialist feminists are of the view that the powerless of women in society is rooted to four basic structures that is, production, reproduction, sexuality and socialization of children. Here feminism is struggle for power to the women.

Basic objectives of feminism are to remove male domination from the society, to remove all forms of inequality between men and women, to remove oppression against women, to create just social and economic atmosphere for the women at national and international level and so on.<sup>8<sup>th</sup></sup> March is celebrated as international Women's Day for reviewing the women's right to development which includes civil, political, economic and cultural rights within its ambit. These are Human rights equally available to women as that of men. Article 21 of our constitution includes right to life and right to personal liberty. It includes various aspect of liberty within its ambit such as right to education, right to privacy, political rights of women etc. Article 15(1) of our constitution embodies a principle of non-discrimination. It says that there should be no unreasonable discrimination between men and women. But still discrimination is observed between men and women everywhere in male dominated patriarchal societies including Indian society. Thus, Feminism includes concept of struggle for the empowerment of women, with objective of social justice. Basically feminism studies reasons for unequal treatment to men and women on the ground of gender, creation of awareness of unequal treatment in the minds of women, to create atmosphere for establishing equal treatment to man and woman so establish equality by suitable legislations and its implementations.

If we look at the Gender Equality the United Nation has given all the responsibility to ensure that all its actions promote and protect gender equality and women's empowerment. UN efforts to help establish the rule of law for all on the basis of equality are essential to this end. Advancing gender equality and women empowering are widely recognized as ends in themselves as well as means to achieve the UN goals of sustainable peace and security, women rights protection, and sustainable economic and social development.

Need for women empowerment in India to gain the same amount of the power that men change have now? It is time to forget that men are the only holders of power India. Women are skill facing difference obstacles in male dominated cultures in society. They only think with related to women's status and their future. However, our observation is that Indian women getting empowerment very slowly if we look at the sectors like education, the political economics, cultures religious and justice in the work force and power within their own households.

Women's empowerment is a process in which women gain greater share of control over resources material. If we look at the human and intellectual resource like knowledge, information, ideas and financial resources like money with access to money are the multi-faceted, multidimensional and multilayered concept. But at home we have to control over decision making to gain power. Similarly, to gain power in community, society and nation it is very essential. According to the country report of Govt. of India, 'Empowerment means moving from a position of enforced powerlessness to one of power.' Empowering women means to recognize women's contribution and knowledge and help her to fight their own feeling and fears. Added to this enhance their self respect and self dignity to become economically independent and self-reliant-women to control resources like land and property. Lastly, reduce the burden of women's work within the house and create her strength in group and organizations.

Both Men and Women should aware of about the concept of women empowerment so they will know the change in the attitude of humankind. The change in the women's attitude and control over decision is very important to control over resources, mobility and social interaction in their life. Gender bias is not a product of eco-political framework. It is in-fact, a materialization of prejudice rooted deeply in our ideological thinking. It simply shows male power and privilege at large. But in-fact women are powerful human resources in development of the nation and unfortunately their contributions go unnoticed and neglected as they have to play different roles like a daughter, wife and mother. She has to do all the household and domestic chores. Therefore, the focus must be on the laws and practices frequently made in the country. The status of the women has to be determined on the basis of social and political ideology and the role that the woman is obligated to play in economic and public affairs. Who makes the difference? Is it a male or female domination? And for what the difference is made needs to be taken into our serious consideration. 'Save a girl child' is a cry of all nations. It is so because the destiny of being male or female is determined by the society.

Thus, to conclude, in my present paper it was my search to redefine the Gender difference, in the context of discrimination and deeply rooted patriarchal sex role ideology. First of all, our perspective of Gender Equality need to be changed that leads our nation to progress and prosperity. The focus is essentially on the material needs of woman including education, role, status and rights. In this context, the

question of individuality and freedom naturally arises as a male and female domination. None of them can be called superior or subordinate. They are just the entities of a new life production. Man is biologically free but woman has to undergo through serious complications like pregnancy, childbirth and long illness. Truly she is vulnerable having fewer blood corpuscles in body. She also has less lung capacity. The biological difference has to be taken into serious consideration. The physiological weakness of women is different from the concept of weakness. It has its reference to social, economic, psychological and moral considerations. The supreme power gives births as male and female .Both have their own individuality and freedom. In short, woman needs to a cultural space to form her own social and national identity.

**CONCLUSION:**

Lastly, in our conclusion we may say that how Dr. B.R. Ambedkar was a first rate patriot and nationalist, who behaved with responsibility, keeping in mind national interest only. Education of both men and women will lead to change in attitude and perceptions. It is not easy to eradicate deep-seated cultural value. The empowerment of women so as to enable them to become equal partners with their male counterparts so that they have mutual respect for each other and share the responsibilities of the home and finances should be the ultimate goal that we must aspire to achieve. Enforcement of basic human rights of Gender Equality must take place without undermining the institution and sanctity of marriage, and family. Hence, it is necessary to improve the support system for working women.

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## **“No Poverty”**

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### **Abstract-**

*Poverty Strategy for Poverty, Resolution of the Poor Local Line As stated by the Tendulkar Committee, the concept of poverty has been deprived of a social perspective in relation to the basic. "These basic human needs are usually listed in physical dimensions because they need to be adequately nourished, modestly dressed, properly sheltered, preventable diseases need to be prevented (at least) and have minimum social engagement and participation in economic activities. The need to be educated and mobile for this purpose indicates that the concept of poverty is multifaceted. However, it is not possible to measure income to describe the poverty line based on the concept of poverty line scope.*

*Usually focusing on physical dimensions and even in this context, only the minimum consumption requirements. Indian Rural and Urban Poverty Line, Anchorage Poverty Strategy for Poverty, Resolution of the Poor Local Line As stated by the Tendulkar Committee, the concept of poverty has been deprived of a social perspective in relation to the basic need. "These basic human needs are usually listed in physical dimensions because they need to be adequately nourished, modestly dressed, properly sheltered, preventable diseases need to be prevented (at least) and have minimum social engagement and participation in economic activities. The need to be educated and mobile for this purpose indicates that the concept of poverty is multifaceted. However, it is not possible to measure income to describe the poverty line based on the concept of poverty line scope. Usually focusing on physical dimensions and even in this context, only the minimum consumption requirements.*

**Key words – dimensions, Poverty Line, Strategy, (SFDA), (CSRE), NREP, large-scale. Complementary Introduction-**

The first strategy to directly attack poverty through rural development and rural employment programs was in the 1970. The economy was adopted in the decade of , adopted as the main objective of poverty alleviation in this country, the number of special programs undertaken by was small scale farming. Development Agency (SFDA), Marginal farmers and Agricultural Labor Development Agency (MFAL) Drought-Prone Areas Program, (DPAP)), Crash scheme for Rural Employment (CSRE), Pilot Intensive Rule Employed project (PIREP) and food and work programmer ( FWP) Some of these programs are inclusive of the whole country, however some of these programs were run simultaneously for the same target group. Apart from these regional areas, the main limitation of these programs was that they were reduced to grant programs only and there was a lack of planning. The elimination of implications in these programs with the aim of enabling the rural poor to reach higher levels of income has reduced their effectiveness.

Poverty Alleviation Approach. Therefore, there was a need for program initiatives that were not only comprehensive in scope but could also directly attack rural poverty. The next step was the enactment of the Comprehensive Program Integrated Rural Development Program (IRDP), the National Rural Employment Program (NREP) and the Rural Landless Employment Guarantee Program (RLEGP) with a view to poverty alleviation. IRDP was started in 1978-77 in development blocks.

A program of total development was extended to the IRDP country in the Sixth Plan. The NREP was also launched at the same time as part of the Sixth Plan, and aimed at helping this section of the population which drastically reduce employment on wages and was not a literal source of income during the weak agricultural period. RLEGP was launched on 15 August, 1983 with the objective of expanding employment opportunities in rural areas. However, NREP and RLEGP were merged into a single rural employment program from April 1989. The merged program was named Jawahar Rozgar Yojana.

The IRDP was conceived as an anti-poverty program to help poor and marginalized farmers, landless workers and artisans. It was thought by the planners that these were poor because they had no productive assets or any special skills. Therefore, the IRDP was designed to help the poor by creating new assemblies for them. These assets will include foreign sources.

### **Theme or idea-**

#### **1. Poverty alleviation programmers-**

In addition to oxen and equipment, seeds and fertilizers for agriculture, anise and other animal husbandry and tools for dairy farming and cottage employment training for the poor are provided with the help of these properties so that dust and handicrafts. The basic policy was to sell - they manage to make enough carbon to go above the poverty line. The training of Youth for Self Employment (TRYSEM). Included aspects of internal skill recognition (IRDP). Time Issues the general conclusion that falls short of

this study is that the IRDP was not very effective as a poverty alleviation measure. However, the bus was reorganized and renamed as Swarnajayanti Gram Swarozgar Yojana (SGSY) Moreover, merging some of its affiliated programs with TRYSEM.

Until the merger of Sampurana Grameen Rozgar Yojana (SGRY) in September 2001, the Employment Guarantee Scheme (EAS) provided 100 days of unskilled manual work to the rural poor in search of employment. These poverty alleviation programs faced specific shortcomings that resulted in Sandeep Bagchi's launch, which was essentially to "create their workspace instead of pursuing multiple and conflicting objectives, focusing on a single operational goal, regardless of environmental complexities." Appropriate and viable strategies on this basis. "Currently, special employment-related programs are being implemented in rural and urban areas. The objectives of all these programs are poverty alleviation as well as the Golden Jubilee Village Self-Employment Scheme (SGSY).

Rural Employment Scheme (SGRY) Nehru Employment Scheme (NRY) October 1989 in was started for the benefit of the urban poor in; they were merged into the Golden Jubilee Urban Employment Scheme in 1997-98. The Complete Rural Employment Scheme (SGRY) was launched in September 2001. Jawahar Gram Samrudhi Yojana (IGSY) and Employment Assurance Scheme. The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) was launched in February 2006. The scheme aims to provide wage employment as well as food security in rural areas. Therefore, it is planned to provide employment to those who work for at least 100 days in a financial year unskilled mammal work subject to the conditions laid down in the act.

## **2. Strategy of poverty alleviation-**

Poverty alleviation Strategies Careful scrutiny of poverty alleviation programs has shown that employers have come to the conclusion that the poor are a uniform class. Planners have made no effort to divide groups in terms of common characteristics and their needs. According to Indira Hirve, there must be a difference between the two categories of the poor, who have some skills and thus can take self-employment and who will be given wage-employment to others. According to her, appropriate strategic measures should be taken by the catch type. Nilkanath Rath criticized the IRDP's approach to asset transfer. The role of self-employment in the poverty alleviation program should not be underestimated, he said, adding that Harvey and Dantwala are in favor of a large-scale.

Salary employment program, which is considered separately. Self-employment is a major form of employment in rural areas and this fact should not be overlooked in poverty alleviation policy, moreover, relying solely on wage employment to solve the problem of poverty will be entirely up to the employers. The gap between rich and poor is likely to narrow by strengthening the former property base. Therefore, any poverty alleviation policy would have the right approach to include both self-employment and wage-employment programs. Currently there seems to be little consolidation in the transfer from the point of view of assets and skills and from the point of view of employment.

It is suggested that there should be more coordination between these two components of a future poverty alleviation program. The actual mix between the two will depend on the specific situation in which the micro-level is planned. One of the major limitations of the current poverty alleviation policy is that there is no program for households that do not have assets or skills and, in addition, no competent body has no adult members and thus cannot benefit from pay-employment programs. Such a category would require separate strategic measures. Of course these fortunes are included in the Social Security Schemes. In the Seventh Plan, the basic emphasis was on productive employment rather than poverty alleviation. Poverty alleviation programs were seen as complementary to the basic plan of overall growth. Therefore, the Seventh Plan did not focus on poverty eradication. The planners claimed that the policy of the seventh plan was consolidated

At the beginning of the plan period after the analysis of the policy of the lessons of the population below the poverty line at the beginning of the plan period by 39.9 per cent was reduced from 1 per cent to 90 per cent in 1990. Incidence has decreased only slightly. As a poverty policy in the 1980s and early 1990s, the Eighth Plan became a major tool for achieving this goal by expanding employment opportunities and increasing the productivity and income levels of the poorest and most unemployed. However, as this strategy can only show medium and long-term desired results, under the Eighth Plan; short-term employment was made available to the unemployed and the unemployed through special employment programs. The Ninth Plan relied on the difficult consequences of economic growth to eradicate poverty. However, he acknowledged the role of anti-poverty programs and said, "At present, there is no reason to consider the usefulness or size of anti-poverty programs.

## **3. Critical evaluation of the Strategy for Poverty Alleviation-**



Policy adopted by the government of India suffers from following limitations. Eradication Program does not recognize the nutritional, social security and minimum needs of persons with disabilities and social disabilities in the internal distribution of the family.

Third because of the elimination programs, the maximum income of the poor is that they can buy food. But programs do not ensure that rising incomes can provide enough food for the poor throughout the year because it depends on ease of evening supply and on-time delivery Fourth, it guarantees other self-employment ventures or wage employment from a domestic point of view, and is not appropriate in terms of employment-oriented demographic pressures and G. Parthasarathy's reduction in farm size. Needs to be restructured

Poverty alleviation program to create what he calls wrap power to develop land and water resources, to prevent exploitative practices A, to purchase low-income Households side of the purchasing power (especially in the state) Fifth, the current approach ignores the approach to secondary poverty reduction Is the doer. May have done so only to maintain physical functioning, part of which may have been absorbed by other expenditures, leading to alcoholism, gambling, and inadequate household arrangements. "Crossing the poverty line criterion for measuring success is unsatisfactory in terms of income changes below the poverty line. However, the use of these resources will no longer be feasible and as a result they are declining rapidly and unfortunately the government should take note of the consequences of this environmental potential that has taken place so far.

Making necessary changes to opposing laws and policies It has failed. These laws and policies particularly hurt the tribal who depend on non-timber forest products for their livelihood and cash. Income tax ultimately, poverty alleviation programs ignore the impact of poor earnings on the health risks of professionals and the adverse environmental consequences. Conclusion As stated earlier in this chapter, the international poor per capita is defined as 25 per day. It shows that the population of every component in India remains below the poverty line. Struggles still show high levels of poverty.

#### **Conclusions-**

Therefore, we have been able to learned that poverty is one of the major issues in the world that need to be address quickly in the poorest villages in which thousands of people are dying, and most of these people are children's. We have learned that poverty refers to the condition of not having the means to afford basic human needs such as clean water, nutrition, healthcare, clothing, food, and a place to live, poverty is a deadly issue that's killing our population slow and that we as the affected ones need to take actions against it.

We have also learned that poverty that affect mostly poor people, because of the little resources they have, this means that poverty is an issue that's harming poor people that want to get out of poverty, but they can't because they don't have the support of rich people. Even though there are a lot of people trying to stop poverty, it is impossible to stop it without the support of rich countries, this is because to fight poverty we have to fight it with a lot of money and their only a few countries that could support us with this need. Something else that we have learned is that poverty today is looking worst then when it first started; millions of kids are living on piles of trash dying of starvation.

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## **Need of Agriculture Development**

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### **Abstract**

*Agriculture development is the burning issue in the Indian Economy because 70% population in India lives in rural area and directly or indirectly they depend upon agriculture for employment. But last few years due to low income, indebtedness, illness in the family, marriage of daughter and sister, expenses of education, increased expenses in agriculture and less income etc. the farmer make suicides. Most of the Indian agriculture land specially in Marathwada[specially Latur district ] depends upon mansoon. No permanent source of water, old pattern of doing farming, increased prices of pesticides and fertilizers, increased rate of labourers, etc. results in expences were more and income were less. So the budget of farmers in this area was always negative. So the development of agriculture is very important.*

**Key Words:-** Agriculture, Mansoon, Development, Crop, Irrigation.

### **Introduction**

India is second in the world for largest population after China. There are full natural resources in India. Three seasons i.e. mansoon, winter, summer were existed. These three seasons were very important for growing crop in agriculture. But most of the area in our country depends upon mansoon for need of water. Other reasons i.e. different disease on crop, increased prices of fertilizers, pesticides, old pattern of cultivating land, lack of use of modern technology, prices of agriculture goods in the market, lack of marketing of goods, etc. are the reasons which results the farmers were ready to leave their land when they get other source of income. This mentality is found in most of the farmers. But agriculture is very important because it is the only field which grows and give food and vegetables to human life for being remain alive. There is no any substitutes for this. So agriculture development is very important in every nation which were developed, developing or under developed.

### **Objectives of the study:-**

- 1) To study why agriculture development is necessary.
- 2) To study the importance of agriculture in economy.
- 3) To study why farmers make suicides.
- 4) To study the ways of farmers income.

### **Hypothesis of the study:-**

- 1) Agriculture development is necessary for human being.
- 2) The importance of agriculture was increased day by day.
- 3) Last few years farmers make suicides.
- 4) Agriculture crop is the main source of farmers income.

### **Research Methodology:-**

For writing this research paper primary and secondary sources of data were used. In primary source discussion with farmers, agri officers in Latur district were made. In secondary source reference books, news papers, news on t.v. conference proceedings, internet etc. were used.

India constitutes 28 states and 9 territory sectors. Its population reaches near about 139 crores. 664369 villages were existed in India and 70% population were lived in rural area. They were depend upon agriculture and related activities for employment. Now a days this sector has gone from bad and adverse condition from last few years. So people migrate from rural to urban area for employment. But till agriculture is the biggest employment creator sector in India. It is very important sector in the economy. So its development is very necessary.

Agriculture plays a crucial role in the economy of developing nations and provides the main source of employment, food, income to the rural people. However, improvement in agriculture and use of land are fundamental to achieve the poverty alleviation, food security, employment and over all sustainable development of that nation. So agriculture development is very important and necessary as well as urgent need of our country. After British rule there is scarcity of food in our nation due to low productivity, lack of use of modern technology, lack of use of fertilizers, pesticides, etc. due to high prices, pricing policy of agriculture goods, traditional method of doing agriculture, crop method etc. So the development of agriculture is very necessary. It is the largest and biggest sector for creating employment opportunities, providing food, vegetables, milk and other reasons for agriculture development were :-

- 1) It provides directly or indirectly the employment to rural people.
- 2) It provides food grains, vegetables, milk and other necessary items to the society.

- 3) It provides raw material to the industries such as sugarcane, oil seeds, cotton, jute, etc. to sugar factory, oil mill, and other agro based industries.
- 4) IT helps the economic development of the nation.
- 5) In economic planning it is important to take in to consideration the agriculture sector.
- 6) Due to agriculture goods transfer from one place to another place transport vehicles are developed.
- 7) It is base of internal trade. The food grains and other materials are purchased and sale within the nation where there is necessity.
- 8) It exports agriculture goods are more than other goods. It generates foreign exchange in the way of taxes.
- 9) It is the main source of government's income .Due to agriculture goods various taxes are charged on it and it is the income of govt.
- 10) Importance in economic development. Wilson, Barker, Barsodi these economist says that agriculture is the base in economy. It plays a very important role in economic development of nation.
- 11) Share in national income .Agriculture is the biggest sector in India for employment generation. 70% of the population lives in rural area depends upon agriculture.
- 12) Economic stability. Agriculture plays a very important role in economic stability because in India all other activities are depend upon agriculture in the market. All market was depend upon the agriculture. That is why its development is very necessary.

As seen in rural area of Latur district there were no permanent source of water for agriculture. It is totally depend upon the monsoon. Last 10 to 20 years it is very less or come while it is not necessary. Sometimes all monsoon season were draught, crop were not cultivated by farmer. The main source of farmer's income is crop. Most of the farmer did not do the supportive business like milk, poultry farming, goat rearing and pig rearing or any other supportive business. So their main source of income is only crop. Due to this they were fall in indebttness. Because there is no guarantee of getting income from crop.

Agriculture development is defined as the process that creates the conditions for the fulfillment of agricultural potential. Those conditions include the accumulation of knowledge and availability of technology as well as the allocation of inputs and outputs. Agricultural development means providing assistance to the crop producer with the help of various agricultural resources providing protection, assisting in the research sphere, employing latest techniques, controlling pests and facilitating diversity all fall within the purview of agricultural development. It will be achieved by increasing crop area, increasing crop grown, improving irrigation facilities use of fertilizers and high yielding variety of seeds, mechanization of agriculture.

- 1) Improvement in irrigation facilities and promoting smart irrigation because very less irrigation facilities are available in Latur district .There were no permanent source of water for agriculture.
- 2) Providing institutional credit to the farmers for encouraging them. The farmers did not get loan easily for agriculture purpose. such as for digging a well, taking boar, purchasing sprinkler set, purchasing pipe or any other work for development of land.
- 3) Provide technological training to farmers to promote advanced farming methods. Farmers cultivate their land on traditional method. So there were various delay in ploughing ,sowing ,etc.
- 4) Adequate marketing facility to the farmers for selling their crops. Agricultural goods were sold in market committee, aadat shops etc. So they decide the price of farmers goods. So less price will be given to the farmers goods.
- 5) Availing high quality inputs for yields. Most of the farmers use their own seeds. High quality seeds give more income but farmer use their own seeds. It results in less income.
- 6) Agri colleges and universities check the quality of soil and develop the seeds which grow and give more yield to farmer.

#### **Conclusion:-**

Agricultural development is necessary because it is biggest and largest sector in India to create employment. Most of the Indian population depend upon directly or indirectly on agriculture for employment. It is the 100% responsibility of agriculture to produce and provide the foods, vegetables ,milk and other such items to human beings for living alive. Agro based industries are depend upon agriculture for raw material, govt. get foreign exchange by exporting the tea, coffee, spicy items etc. So the above reasons agricultural development is important and must necessity in the current situation. Because most of labour force due to covid 19 return to their own villages. All industries were close due to lock down. The distension on agriculture for work of the labourers were increased.

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## **Study of new strategies for sustainable rural development in India.**

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### **Abstract:**

India is known as a country of villages. Therefore, rural development should be the goal of the country's development. Indicators of rural development should be considered while achieving this goal. By discussing these indicators of rural development in detail, this research paper seeks to suggest some new strategies for sustainable rural development in India.

### **Introduction:**

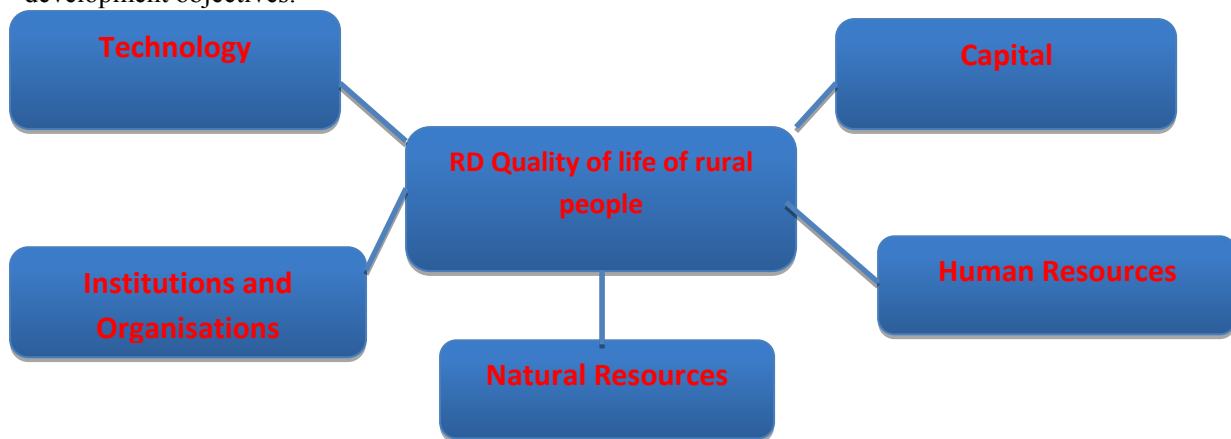
The term "rural development" is a subset of the broader term "development." However, we define it, development is a universally cherished goal of individuals, families, communities, and nations all over the world. Development is also natural in the sense that all forms of life on planet Earth have an inherent urge to survive and develop. Given these two attributes, that is, its universal supremacy as a goal and its natural occurrence, development deserves a scientific study and analysis. Hence, it is not surprising that the subject of development has been studied by scholars of all faiths, ideologies, and disciplines.

Since time immemorial, India has been, still continues to be and will remain in the foreseeable future, a land of village communities. As a matter of fact, the village was the basic unit of administration as far back as the Vedic age. There is a reference to gramini (village leader) in the Rig Veda, the oldest of Indian scriptures. The predominantly rural character of India's national economy is reflected in the very high proportion of its population living in rural areas.

### **Objectives:**

- 1) To study the major determinants of rural development in India.
- 2) To throw light on strategies required for sustainable rural development in India.

**Determinants of Rural Development In India:** There are many diverse factors that have a positive or negative impact on rural development in India. It is very difficult to separate all these diverse determinants from each other. There are many physical, technical, economic, socio-cultural, institutional, organizational and political factors that affect the level and pace of rural development. These elements work at all levels. Ex: household, village, district, state, nation and the whole world. How these factors are managed can have a favorable or unfavorable effect on development. For example, if a country's human resources are not properly developed and used productively through proper nutrition, health care, education and training, these resources hinder development. But if they are used properly and developed, they contribute a lot to the development of the region. Rural Development Managers need to be informed about the nature and extent of impact of various determinants on rural development and enable them to effectively achieve rural development objectives.



### **Determinantes of rural development**

#### **1) Natural Resources:**

By a natural resource we mean any product, thing, or circumstance found by man in this natural environment that he may in some way, utilize for his own benefit. In this sense, the resources provided by nature include air, climate, soil, water, plants, animals, mineral ores, mineral oil, environment that he may, in some way, utilize for his own benefit. In this sense, the resources

product, thing, or circumstance found by man in his natural because of changes in what constitutes a resource. Natural resources can be classified into two Coal, natural gas, solar radiation, and certain amenities that can be used for tourism. As time Soes by, the world's resource pattern changes, not because nature's basic provision alters, but categories: non-renewable or stock resources, such as metal ores, mineral oil, and coal deposits, and renewable or flow resources, such as solar radiation, animal and plant species, and winds, among others. This distinction is very important from the point of view of policies for resource development, conservation and utilization. Natural resources play a very important role in the process of rural development. Mother Nature provides us natural resources free of cost and performs functions in the process of economic growth, namely, providing inputs to production processes and assimilating the wastes generated in the process of production Since planet Earth is finite, closed, and non-growing, there is a natural limit to both these critical functions, that is, both inputs provisioning and waste assimilating capacities of our planet are limited.

At any level of economic development, utilization of domestically available natural resources constitutes the bedrock of an economy.

The quantity and quality of available natural resources along with the intensity and efficiency of their use determine, to a considerable extent, the level and pace of the economic development of a nation. products that depend primarily on natural resources. If capital is scarce and labor tends to be unskilled, then the role of land and natural resources of other kinds tends to be very significant in production and their ownership becomes an important social issue.

## **2) Human Resources:**

Human Resources The size, quality and usability of human resources all play an important role in this development process. The important point here is that the manpower needs to be trained to be productive. If time is reduced according to the need to work for children, it results in less productive labor in the long run. On the other hand, if the work is postponed and the children go to school, the influx on public institutions like educational establishments increases and the net utilization of per capita income decreases as resources go to institutions for training and maintenance. For use instead. Thus, per capita income is temporarily reduced until people finally enter the labor force, at which time per capita income will increase if labor is given enough output to spend on schooling and training.

**3) Capital:** Most developmentalists in developed western countries consider economy capital as the main tool of economic development. The Harrod-Domer model presents a characteristic example of this thinking. In this model, capital accumulation plays an important role in the process of economic development, as the rate of economic growth is expressed as the product of savings rate and output-capital ratio, therefore, the formation of capital is an important prerequisite for theistic development. An increase in capital reserves increases the marginal productivity of wages, which in general raises wage rates. Capital can be classified in different ways. Private and public capital investment is required to drive rural development. At present, both types of investments in India are less than required and therefore have adversely affected the level and pace of rural development.

India's rural sector is starved of capital , and this is perhaps one of the most serious constraints on rural development .

## **4) Technology:**

In all likelihood, technological advancement is the most important component of economic development. Advances in technology revolutionize the manufacturing sector. Technology improves the production process, leading to an increase in each product per unit. Notably, Hayami and Rutton and Rosto have developed evolutionary theories whose technological advancement is at the center of concern. Schultz argues that the transition from traditional to modern agriculture is essentially one of the use of modern tools, defined as being technologically advanced. In Rosto's plan, once the steady phase of traditional life is disrupted, society goes through the following stages: (a) the establishment of a precondition for growth; (B) take off; (C) maturity drive; And (d) mass consumption. During the period of establishment of pre-conditions for growth, the insights of modern science begin to translate into new production functions. This is another way of saying that technology is advancing.

## **5) Organizations and institutions:**

The economist and Karl Marx recognized the important role of institutions and associations in the process of economic development.

Institutions and organizations contribute significantly to development. It can affect agriculture and rural development in a variety of ways, including the provision of production equipment and services, lowering the cost of transactions, increasing the bargaining power of rural producers at the level of organizations and associations.

Co-operatives and Charitable Trusts are various types of organizations that can cater to the needs of farmers in India. And are. The nature of such an organization as conducive to agricultural development should be fully recognized in the interest of the farmers and they should be fully considered to meet both organizational and operational needs. The government is in the near future and still is - an important institution in the field of agriculture and rural development. Development is seen as a specific responsibility of the government. The effects of the role of the public bureaucracy, which is responsible for carrying out the will of the political leaders, are felt so far. Efforts to improve the living standards of the rural people depend heavily on the administration and the bureaucracy.

**The concept of sustainable development:**

**"Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs."** This definition emphasizes the need of the present generation to ensure land equality, while protecting the interests of future generations while preserving the planet's natural resource capital. In this context, it is similar to the concept of sustainable livelihood through which we get basic needs like food and clothing, shelter, security, livelihood, safe access for present and future generations. Freedom and honor, oh! Human development, which should be the highest goal of humanity. Some people think that sustainable livelihood is more environmentally friendly and globally accepted than the goal of economic development.

Sustainable development of rural India requires strategic planning. I think if we think strategically with a view to balanced development, it will definitely help rural India to become self-sufficient. When planning for the sustainable development of rural India, it is imperative to strategically include the following.

**1) Sustainable Agriculture, Food Security And Ecological Security:**

Food security dependent on sustainable agriculture is a prerequisite for sustainable agriculture, food security, and environmental security, which in turn becomes an integral part of sustainable development. Food security at the national level can be defined as the safe access of all individuals and households in the country to adequate food for an active and healthy life. On a long-term basis. Now the concept of food security has been expanded and life security has been used, i.e. balanced diet, safe drinking water, environmental hygiene, primary education and basic health care security Physical and economic access (Swaminathan 1996, 66-66). The three components of food security are physical availability. Maintaining peace and social harmony nationally and internationally requires economic access and sustainability. Therefore, it would be logically correct to say that food security is an integral part of sustainable development.

Priority will be given to promote sustainable agricultural production system to achieve food security. Sustainable agriculture is an antithesis of rising soil prices and depleted and polluted water resources. The use of agricultural land should be based on scientific assessment of land capacity. Moreover, the annual depletion of topsoil, fish stocks, or vegetation should not exceed their natural reproduction rate. Future growth in developed and developing countries is based on better controlled use of water and agrochemicals as well as more widespread use of non-chemical means of organic fertilizers and pest control. Despite natural disasters such as droughts, floods, and unseasonal rains and hailstorms, the biggest challenge facing India is how to increase its relatively low crop production at the global average.

National Food Security Act was passed in Parliament on 12 September 2011 to ensure food security for all and especially the poor. The law aims to provide subsidized food to about two-thirds of the people. According to the provisions of this Act, eligible beneficiaries have the right to purchase eligible kg of cereals per month as follows: Rs. Per kg of rice; Wheat 2 per kg; And coarse grains (1 million per kg. This law, if implemented by all state governments in good faith, would provide food security to the poor.)

**2) Judicious Management of Natural Resources and Natural Disasters Strategy:**

Natural Resources and Equitable Management of Natural Disasters Natural resources of land, water, plants, animals, forests, fisheries and the environment are the basic supporting systems of life on Earth. Sustainable development depends on how wisely such natural resources are used. Rich biological systems, land, water, forests and environmental factors should be at the forefront of sustainable development strategies. These components can provide sustainable benefits in the form of food, fodder, fuel wood, fiber, timber and various environmental facilities.

Natural disasters have become a problem for the Indian economy. From time immemorial. Ancient Indian literature refers to natural disasters such as prolonged droughts, flash floods, hailstorms, landslides, hurricanes and forest fires. About 60% of the land in India is vulnerable to earthquakes, more than 40 months of floods are expected, 8% of the total area is at risk of cyclones and about 68% of the total area is prone to drought. The 8,000 km long coastline is at risk of severe cyclone forces. About 55% of the total

area is in seismic zones III and V and there is an earthquake risk. The sub-Himalayan region and the Western Ghats are vulnerable to landslides. Such disasters need to be managed strategically. natural and man-made disasters increase people's insecurity, economic development will not be sustainable. Drought could force them to sell their animals or other productive assets needed to sustain future production. The disease can cause complete damage to the crop and the crop will be abandoned - growers will go bankrupt. Similarly, a fall in the price of agricultural products can lead to a decline in agricultural yields and this will lead farmers to over-exploit natural resources. According to Parsell and Gulati (1991), liberalization of domestic and foreign trade in agricultural commodities could exacerbate the problem of food insecurity among the poor in India due to high grain prices. PDS needs to be better targeted and made more effective as a safety net to protect against adverse effects.

### **3) Optimal Development and Utilization of Human Resources strategy:**

Human development is both a means and an end of overall societal development . The focus of the development policies and programs should be people and their well - being . People should be provided freedom and opportunities to develop their capabilities and should be educated , empowered , and motivated to contribute to achieving sustainable and equitable development . Human resource development is a crucial requirement not only to build up technical knowledge and capabilities , but also to create new values to help individuals and nations cope with the rapidly changing social , environmental , and developmental realities . Knowledge , shared globally , would assure greater mutual understanding and greater willingness to share global resources equitably . Providing more and better education , health care , and other related social services is an essential element of any strategy of sustainable development . Current priorities need to be changed to commit more public funds for providing basic services and amenities to all , particularly the poor . According to a recent study , developing countries could usefully redirect much of their current spending over 2 % of their GDP.

The sustainability of development is also intimately linked to the dynamics of population growth. Projections of India's population to the year 2150 have been made based on several alternative scenarios . Of all the scenarios , the medium fertility scenario seems most probable . Under this scenario , fertility is assumed to stabilize at replacement levels of slightly above two children per woman . Under this scenario , India's population is projected to grow from 929 million in 1995 to 1,533 million in 2050 , 1,617 million in 2100 and 1,669 million in 2150 ( UN 1998 , 187).

Urgent steps are needed to limit the present ( high ) rate of India's population growth . Choices made now will influence the level at which the population stabilizes around 1.25 billion people . But this is not just a demographic issue ; providing people with education , incentives , and facilities that allow them to choose the size of their families is a way of assuring , especially for women , the basic human right of self - determination . Inculcating values and habits that are congenial to sustainable development among the people from the very childhood days is the key requirement for sustaining livelihoods in perpetuity.

### **4) Removing Market Imperfections and Getting the Prices Right Strategy:**

In a well-functioning market, the price of a good or service reflects both its marginal value to the consumer and its marginal cost to the producer. So long as there is no divergence between the private and the social values and costs of these goods and services, the market system is likely to bring about the most efficient allocation of economic resources. However, it is true that in many situations prices are distorted and that a market economy may fail to allocate resource efficiently. Potential sources of market failure are (a).externalities, (b) incomplete or asymmetric information, (c) public or collective goods, and (d) imperfect competition. When market failures occur, appropriate government interventions are needed to improve upon the market performance and enhance the overall economic well-being. Economists can provide important insights into the circumstances in which government can intervene to improve upon the market performance, how it can do so in a cost-effective manner, and how the costs and benefits of such interventions are likely to be distributed.

Given the wide year-to-year and place-to-place fluctuations in agricultural production and given the inelastic demand for staple food grains, free market forces cannot be depended upon to safeguard the interests of farmers, and to attain and sustain food security in India. Therefore, government intervention in agricultural markets and marketing has been accepted as fully legitimate all over the world. To enable Indian farmers to derive full benefits from the new liberalized world trade regime, it is necessary to remove various constraints and deficiencies in the existing domestic markets and marketing practices. The policy instruments that were developed and used to regulate markets and marketing in a food scarcity era need to be carefully reviewed and then scrapped if they are no longer necessary, or if they create unnecessary obstacles in the way of efficient marketing. Such instruments include administered prices, procurement of rice and sugar from millers/processors as levy, restrictions on inter-state trade/movement of food grains,



purchase/ sales taxes, rural development cess, monopoly procurement by the government, and so on. Farmers' organizations, especially the Anand-pattern producers' cooperatives, could play an important role in protecting the farmers from adverse effects of the new world trade regime and in enabling them to derive full benefits from it. With appropriate farmers' (cooperative) organizations at the secondary level for processing and marketing of agricultural produce, including high value export-oriented commodities, preponderance of small size of landholdings in India would not be a handicap (Vyas 1998: 14). The role of the state agricultural marketing boards, commodity boards, FCI and state and national agricultural cooperative marketing federations also need to be re-examined in the light of new policy of privatization, deregulation, and globalization. In developing countries such as India, most of the natural resources and their products are highly undervalued, and that has led to the overexploitation of those resources and ecological degradation. Realistic pricing of natural resources and their products, and the recognition of the value of environmental amenities would promote more sustainable development.

#### **5) Mainstreaming gender in development strategy:**

**Mainstreaming of Gender Development Strategies:** The development process cannot be sustained unless women and men take joint responsibility for the sustainable development process. In other developing countries of the world, including India, there is a lack of gender equality in development policies. A gender perspective emphasizes the relationship between men and women and the relationship of both men and women to their social and natural environment. In India, where about 65% of the total employment in agriculture is women, it is most important to bring them into the mainstream when making decisions. Ordinary women are less available in productive resources than men and also have fewer opportunities. Reducing this sex gap can lead to significant gains in terms of food security. According to the FAO's 2010-11 State Food and Agriculture Report, "If women have the same access to productive resources as men, they will be able to increase their farm production by 20-30%." When developing policies to promote rural and agricultural development, policy-makers need to keep this in mind. There are many ways to institutionalize a gender-sensitive approach to sustainable development. The policy of equal development of both men and women is the first and foremost need in development projects. Further, women should be assigned specific roles, responsibilities and rights in making various decisions rather than just attending project meetings. In addition, the development project team should, as a whole, promote sexual awareness according to sensitivity to sexual issues. This team also needs to be trained and should be held accountable for the implementation of gender sensitive practices.

#### **6) Creating a congenial international economic and political environment strategy:**

Economic, political, and ecological links between nations have grown rapidly. This has increased the vulnerability of the developing countries to the adverse consequences of relations compounds the inequalities, as developing nations are generally influenced by but international inequalities in economic growth. The asymmetry in international economic are unable to influence international conditions.

International economic relationships pose a particular problem for developing countries such as India trying to manage their environments, since the export of natural resources remains a large factor in their economies. The processing of certain raw materials, for example, pulp and paper, oil, and alumina, can have a substantial environmental side-effects. Thus, in the case of exports from industrial countries, these costs are paid by the consumers in importing nations, including those in the developing countries. But in the case of exports from developing countries such as India, such costs continue to be borne entirely domestically, largely in the form of damage costs to human health, property, and ecosystems.

In the short run, for most developing countries including India, the new era of economic growth hinges on effective and coordinated economic management among major industrial countries designed to facilitate expansion, to reduce real interest rates, and to halt the slide to protectionism. In the longer term, major changes are also required to make consumption and production patterns sustainable in a context of higher global growth.

#### **Conclusions:**

- 1) The process of sustainable development of rural India will create conditions for Indians to achieve sustainable agriculture, food security and ecological security.
- 2) The Sustainable Development Process will achieve the sustainable goal of human development or prosperity without harming the rich natural resources in rural India. Moreover, the balance in these natural resources will enable fair management of natural disasters.
- 3) The Sustainable Development Process will provide optimal opportunities for human resource development in rural India and will result in the development of the region.
- 4) The process of sustainable development will eliminate the imperfections in the rural market and create an opportunity for all the productive elements to get a fair price for their produce.

- 5) As the process of sustainable development is inclusive, gender inequality in rural development policy will be reduced and responsibility for development will be shared jointly between men and women. And so the gender factor will come into the mainstream of development.
- 6) Sustainable rural development will create an economic and political environment in India that will have an impact internationally in terms of rural development.

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## **E-waste – environmental pollutant and alternative source of metal recovery**

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### **Abstract:**

*The present review deals with the study of different types of E waste, composition, importance and hazardous effect on ecosystem and living organisms. Globally increase the amount of E waste due to technological advances and day to day up gradation of electronic and electrical gadgets. E waste generates a large volume as compared to its decomposition, recycling or reuse, hence the government and common people are aware of its hazardous effect and economic value. In electrical and electronic waste, the basic unit is printed circuit boards containing various metals and precious metals. The E- waste directly dumped or landfill methods along with solid waste causes environmental hazardous and lost valuable metals, therefore it is needed to recover, recycle, reuse of E waste, and emphasis on to find out ecofriendly strategies for treatment of end life of electrical and electronic waste.*

**Key words:** E waste, decomposition, landfill.

### **Introduction:**

E waste or Electronic and electrical equipment waste (WEEE) is stated to be discarded Electronics and electrical equipment which is no longer used by consumers and end of its economic life span (Arda isildar et al 2018). Waste electric and electronic equipment (WEEE), or electronic waste (e-waste), are the rapidly increase waste stream, so government and common people aware to its hazardous effect. Currently, the main options for the treatment of electronic waste are involved in reuse, remanufacturing, and recycling, as well as incineration & landfilling. (Cui & Zhang, 2008). Generation of large volume of waste WEEE is challenging for its recycling and appropriate treatments, due to continuous increase demand of consumers for new electronic and electrical devices and decrease the economic life span or short end life of electronic devices. (arda Isildar,2017). WEEE generation nearly, 1.3 billion tons of wastes are generated yearly across the world, which will be expected to increase to 4.3 billion tons per annum by the year 2025.(Abdelbasir & Dina, 2018); Debnath, Chowdhury, & Ghosh, 2018). Electronic waste contains of different types of material including 50% of which constitutes of iron and steel followed by 21% plastics, 13% non-ferrous metals and 16% other constituents like rubber, concrete and ceramics. The E waste is considered toxic waste, when it contains lead, mercury, arsenic, cadmium, selenium, and hexavalent chromium and flame retardants are present beyond permissible. (Pant, Joshi, Upreti, & Kotnala, 2012). Electronic products contain hazardous and toxic material treated with either landfill or incineration create an environmental problem. Many electronic devices consist of batteries, which contain nickel, cadmium and other heavy metals. These toxic metals can be mixed with water, air and soil as well it affects the people who engage in recycling of E waste, Hence it is needed to improve e waste management technology in India..(Mundada, Kumar, & Shekdar, 2016).

Currently different techniques are available for recycling and recovery of metals from E waste like pyro metallurgy, hydrometallurgy, bioleaching, but each method has its own limitation and advance, therefore need to find out ecofriendly methods.

The present review mainly focuses on two aspects of E waste, hazardous effect of its constituents and composition of metals and precious metals from it, which act as the secondary source of metal.

### **Composition of Electronic waste**

The E waste categories into different types include big and small household appliances, information technology and telecom equipment, consumer equipment, lightning devices, electrical and electronic non industrial tools, toys, relaxation sports instruments, medical and non-infected devices, monitors and control units, and automatic dispensers. Different classes of e-waste according to European Union classification. Table 1 shows the classification of E waste.(Nithya, Sivasankari, Thirunavukkarasu, & Silver, 2020). The structural composition of e waste depends on type and the model of electronic devices, its manufacture and age of waste .Table 2 contains the characteristic material fraction of E waste component.(Abdelbasir & Dina, 2018).

The basic component of electronic and electrical devices is printed circuit boards (PCBs) which regulate function of equipment, consist of various metals and precious metals, PCBs are also known as printed circuit wire boards (PCWs), the PCBs which assemble of electronic component is consider as printed circuit assembly (PCA).(Pejman et al 2014).The PCBs contain valuable materials. PCBs consist of metals, polymers and ceramics. Printed circuit boards are composed of polymers, ceramics and metals. About 28–30% of the content is metal, with 10–20% copper, 1–5% lead, 1–3% nickel, and 0.3–0.4%

precious metals like silver, platinum and gold and other elements (Ga, In, Ti, Si, Ge, As, Sb, Se and Te) may be found in chips, with An, Pb and Cd in solder joints, and Ga, Si, Se and Ge in semiconductors, and tantalum in capacitors. Extraction of metal from PCBs act as secondary source or act as artificial ore, which prevent loss of metal and environmental pollution also support the conservation of natural resources of metals. (Vossenber, Rene, Hullebusch, & Lens, 2015; Karwowska et al., 2014; Xiang et al., 2010)(Xiang et al., 2010) . Most electronic waste has a short lifespan e.g. mobile phone and computer which contain precious metals and hazardous metals. A mobile phone contains different metals, including N, O, F, S, B, C, H, K, Co, In, Zn, Al, Pb, Ag, Au, Ti, Pd, Cu, Ni, Fe, Mn, Sn and Sb, that may be hazardous are precious metals. phone PCBs contains more than 40 elements .(Arshadi & Mousavi, 2015).

Table.1 Classification of different types of E waste (Nithya et al., 2020)

Class of E waste	Name of the equipment
Heat exchange equipment	Fridges, Freezers, Air conditioners, Other cooling equipment, Professional cooling equipment, Cooled dispensers.
Screens and monitors	Cathode ray tube, monitors Flat display panel monitors, Cathode ray tube, televisions flat display, panel televisions, Laptops and tablets.
Lamps	Compact fluorescent lamps, Straight tube fluorescent lamps ,Special lamps Light emitting diode lamps.
Large equipment	Central heating, Photovoltaic panels, Professional heating and ventilation, Dishwashers, Kitchen equipment, Washing machines, Dryers, Household heating and Ventilation, Professional IT equipment, Leisure equipment, Professional medical, equipment, Professional monitoring and Control, equipment, Non-cooled dispensers, Professional tools.
Small equipment	Microwaves, Small household equipment, Equipment for food Preparation, Equipment for hot, water preparation, Vacuum cleaners, Personal care, Small electronics, Audio and video, Musical instruments, Video and projectors, Speakers, Cameras, Lighting equipment, Household luminaires, Professional luminaires, Household tools, Household medical Equipment, Household monitoring, and control equipment, Toys.
Small information technology (IT)	Small IT equipment, Desktop computers, Printers Telecommunication, equipment, Mobile phones Game consoles.

Table.2 **Characteristic material fraction** (Abdelbasir & Dina, 2018)

Component of E waste								
Fraction	Metals	Screen	Plastics	Metal plastic mixture	Pollutants	Cables	PCBs	other
Percentage	60.20 %	12%	15.3%	5%	3%	2%	1.7%	1.4%

**Harmful effect of E waste.**

E waste contains various metals, material which are toxic to the environment and humans when they are not handled properly. Hazardous effect of various metals present in electronic waste on human are summarized in Table 2.(Dissanayake & Consortium, 2014; Pant et al., 2012) (Ari, 2016; Kiddee, Pradhan, Mandal, Biswas, & Sarkar, 2020)

**Table 2 Metals and its harmful effect on humans**

Metals	Effect
Lead (Pb)	Damages occur on the nervous system, blood, reproductive system in adults. Headaches, nausea, ulcer in stomach, skin damage
Cadmium(Cd)	Its effect on neurodevelopment of the fetus and young children as well affect the respiratory system, kidney, bone problems and carcinogen.
Mercury(Hg)	Effect brain, central nervous system, causes of tremor, depression, and behavioral disturbances.
Chromium(Cr)	Defect in neurodevelopment, multiple organ failure, carcinogen and lead to oxidative stress.
Arsenic(As)	Its effect on respiration, cardiovascular system, risk of bladder cancer, liver and renal problems and reproductive health effects.
Nickel(Ni)	Skin allergy and carcinogen
Selenium(Se)	Neurological damages, hair loss, fatigue, irritability.
Lithium(Li)	Its effect on digestive system disorder and neurological system.
Americium(Am)	Effect on chromosomes
Zink (Zn)	Cytotoxicity, ischemia and trauma

**Conclusion:**

In this study, point out the metals present in waste electronic and electric equipment. This waste continuously rapidly increase in large volume, when these waste discarded inadequate methods causes the human health and environmental problems, moreover loss of valuable metals. The printed circuit board is basic component of electronic and electrical equipment, which regulate the function of equipment. The PCBs of mobile phone, computer, and television etc. has consist of metals and precious metals. This study reveals that waste PCBs are the valuable scraps for recovery of metals, hence waste electronic and electrical equipment is an important source of raw material and act as alternative source of metal recovery, it benefit for minimum use of natural resources and reduce environmental pollution. Current waste electronic and electrical equipment recycling methods are inadequate, each method has its own limitation. This is the interesting area for scientific community as well as scrap business for recovery of metals for economic development. It's helps to conservation of natural resources and reduce the environmental pollution. It is necessary to find eco-friendly methods to recover metals from printed circuit boards.

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## **Fundamental Duties In Constitution Of India And Its Significance In Achieving Sustainable Development Goals: A Critical Analysis**

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### **ABSTRACT**

*In this modern period, the world has undergone significant change. In our daily lives, we are reaping the benefits of development. However, there are still two sides to any coin, and we have some negative effects on growth in today's world. Environmental resources degradation, rapid urbanization, scientific and technological advancement, and growing population are all serious threats to human existence. These problems are no longer limited to individual nations but are now becoming global concerns. As a result of the global community's efforts, a popular movement known as Sustainable development was born. It is a social mechanism that combines social, economic, and environmental goals to address current social desires without jeopardizing future generations' expectations. Sustainable Development Goals (hereinafter referred to as SDGs) are the blueprints for addressing international issues and achieving the best future. Sustainable development has been profoundly rooted in both the national and international scenarios. India is also concerned about sustainable development, environmental conservation, and development. There is a significant amount of literature on the positions of countries, governments, and organizations, as well as the extent to which they lead to long-term growth. But what role the citizen plays to achieve the same. This paper aims to highlight the role of individuals efforts which can greatly contribute towards advancing sustainable development goals which can also be reflected in our Fundamental Duties under Article 51-A in the Constitution of India. It must be understood that sustainability issues are not confined to the government but equally to individual's contribution. The researcher concluded that the Indian Judiciary, Government, and Citizens have evolved as one of the most essential means of supporting sustainable development. And citizen participation can positively influence our sustainable development behaviour. The research method adopted to write this paper is purely doctrinal in nature based on primary and secondary data.*

**Keywords:** *Fundamental Duties, Sustainable Development Goals, India*

### **INTRODUCTION**

Our Mother Earth is possibly the sole human ecosystem in the a humongous cosmos, and we intend to give it to future generations to protect our biosphere's sacred heritage from waste, depletion, and devastation. Change has always been a part of the natural world, and as a result, the world changes. However, there will be several problems, including a period when mankind must decide its future. Every country strives to be the greatest it can be in terms of growth. The growth mindset and development has created a gap in economic and social development among nations. Since this place's human life on the planet in danger, a plan of action that ensures a stable world for future generations has become critical. The term "sustainable development" has become a catchword in the global community. To achieve long-term sustainable growth, several strategies must be involved in the planning, decision-making, and execution at all levels.

The ancient Indian term *Vasudhaiva Kutumbakam*, which means "the world is one family," complements the definition of India's attitude to all aspects of life, specifically economic prosperity, succinctly. As a result, the Sustainable Development Goals (SDGs) are an essential component of the 2030 Agenda for Sustainable Development. India has had a significant influence on the development of the Sustainable Development Goals (SDGs). As a result, the SDGs represent the country's national objectives. As a result, India was already fundamental to attaining the SDGs before they were completely established

### **Meaning and Concept of Sustainable Development**

The concept of sustainable development is multifaceted. It has gained widespread acceptance as a policy change objective for governing human life. The etymological definition of sustainable development is "continuous development." It evokes memories of conservation and protection. In simple terms, it combines environmental protection and sustainable growth. Sustainable Development is defined as long-term growth that is both economically and environmentally beneficial. The phrase refers to a method of development planning that is systematic. Socio-economic, and environmental conditions all play a role in the paradigm of long-term development. In 1972, the Stockholm Declaration established the doctrine of 'Sustainable Development.' In the declaration, it was mentioned that : "Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that

*permits a life of dignity and wellbeing and he bears a solemn responsibility to protect and improve the environment for present and future generation–.”*

### **Origin of Sustainable Development**

The phrase "sustainable development" was established in the early 1970s during the *Cocoyoc Declaration* on Environment and Development. Since then, it has become a hallmark of a multinational organization dedicated to the promotion of humanity. The theory of "Sustainable Development" was explored for the first time in the Stockholm Declaration of 1972. Following that, in 1987, the World Commission on Environment and Development (WCED) published "Our Common Future," commonly known as the Brundtland Commission report. The panel was chaired by G.H. Brundtland, Norway's prime minister, and an attempt was made to reconcile economic progress and environmental conservation. The Rio Declaration on Environment, which is widely recognized as a watershed moment in environmental history, established a new goal and defined the notion of sustainable development in 1992. The goal is to attain harmony/balance between environmental, financial, political and social sustainability. It is critical to plan for sustainable development in attempt to reach the difficulties of long-term growth without adversely destroying the environment.

### **Need of Sustainable Development**

These resources must not be squandered and depleted by a single generation. Every general owes it to coming generations to utilize and preserve the natural resources and environment to the utmost of his or her ability. It is in the best interests of the entire world. It is in the public interest. While man's scientific and technological advancement has given him colossal power over ecology, It has also led to an increase in the vapid implementation of that power, infringing on the rights of others. natural world indefinitely. One significant distinction between the SDGs and its pre-2015 predecessors, the Millennium Development Goals (MDGs), appears vital. Whereas the MDGs had a limited emphasis, aiming to increase the attention of policymakers, particularly financial consideration, to certain areas, the SDGs have a far wider perspective. The new objectives include a wide range of topics. They are tackling a complex web of interconnected global governance.

### **Fundamental Duties in Constitution of India**

The citizens are the Constitution's fundamental guardians. The Constitution emboldens the citizen, but the citizen also emboldens the Constitution by obeying, complying to, safeguarding, and enduring in making it more significant through word and deeds. There were almost no provisions relating Fundamental Duties to Citizens when the Constitution was written in 1949, while there was a Part III for Fundamental Rights. The 42nd Amendment to the Constitution included the Fundamental Duties of Citizens in 1976. based on the recommendations of the Swaran Singh Committee, which was formed by the government. The Committee proposed that efforts be taken to ensure that the person did not neglect his duties while exercising his Rights. The 42nd Constitution (Amendment) Act of 1976 created a new Chapter IV-A with Article, 51-A, dealing with a Code of Ten Fundamental Duties for Citizens. After the 86<sup>th</sup> Constitution, (Amendment) Act of 2002 one more Fundamental duty was added to this list and now they are eleven in number. Fundamental duties are designed to act as a continuous recall to every citizen that, though the constitution expressly confers some Fundamental Rights on individuals, it also compels citizens to follow some basic principles of democratic conduct and democratic behaviour because rights and duties are linked together.

### **Role Fundamental Duties in the Constitution of India and its significance in achieving Sustainable Development Goals**

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by all United Nation Member States in 2015 as a global call to action to eradicate poverty, protect the environment, and ensure people live in peace and prosperity by 2030. India is determined to achieve the 17 SDGs and the 169 associated targets, which encompass the social, economic, and environmental elements of development and are aimed at eradicating poverty in all of its forms and manifestations. . The 17 SDGs are interconnected, in the sense that they acknowledge that initiatives in one domain will have an impact on the success in others, and that development must reconcile social socioeconomic, and environmental sustainability. The SDGs are global, unified, and interconnected, to leave anyone behind. The 2030 Agenda for Sustainable Development seeks to link the five Ps: "People, Planet, Prosperity, Peace, and Partnership".

India is successful in executing the SDGs on the basis of domestically specified metrics that conform to national needs and objectives. At the national level, NITI (National Institution for Transforming India) Aayog has paired the SDGs with government supported programs in an attempt to integrate the SDGs into the country's important preliminary and sub-national programs and strategies. Use the "Insert Citation"



button to add citations to this document.

. In a multicultural country like India, it is essential first to evaluate the structures in place to ensure involvement from all stakeholder groups, from the grassroot level to the largest levels of government. Although the government is taking steps, the SDG is also public-centric in nature. Development is impossible without people, and development is unattainable without people. So, community involvement is nothing more than a first step toward an accountability revolution. If one looks to our fundamental duties in Constitution that are derived mostly from Indian heritage, culture, faiths, and traditions. Essentially, they were the duties that codified chores fundamental to the Indian lifestyle. We can correlate our Fundamental Duties with this SDG framework if we focus and compare it. When we look at these SDGs, we can see that if a citizen recognizes and follows the fundamental duties, we will be bringing out the best we can to the nation's progress. The multidimensional sustainable development indicators (MSDI) connect a community at large economy, environment, and society. If we separate them, we can see that the fundamental duties are likewise focused on these three components. The fundamental duties include social, environmental, and development-related duties that are quite similar to the SDGs. So, if we focus on this, we may provide our greatest contribution to the nation as citizens. It will not be achieved by policies; rather, it must be adopted as a principle by society, influencing the myriad decisions that each individual makes on a daily basis, as well as the major political and economic ones that impact numerous. We can only promote sustainable development by emphasizing citizen and stakeholder involvement. Finally, the goal will become a reality only if everyone participates to a world where economic freedom, social justice, and environmental conservation coexist, making our coming generations better off than they are now.

### **Conclusion and Suggestions**

The SDGs will never be achieved unless there is widespread public awareness and involvement. Citizens will be the ones to hold governments responsible for their commitments. Only through such an "accountability revolution" will we be able to meet the SDGs' objectives, and community participation is the cornerstone for such a revolution. Citizens have been participating in the Sustainable Development Goals before they're even established. Although our acts may appear minor, they can have a major and constructive impact on sustainability; our dedication and consciousness are necessary to accomplish truly sustainable development. India would proceed implementing the SDG program by working closely with national and sub-national governments and actively involved all other key players. However, India is projected to perform inadequately on social development metrics and has multiple pockets of backwardness, necessitating a rethinking of our sustainable behaviour, which can be achieved by adhering to the Constitution's fundamental duties.

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## **The Ecology Of Tuberculosis Disease: A Study in Medical Geography**

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### **Abstract:**

*The ecology of tuberculosis disease consists of a complex phenomenon. This reveals a multitude of interaction of physical and cultural environment in relation to the infection, morbidity and mortality of tuberculosis disease. Thus in this paper, emphasis is given to outline some of the ecological factors and to demonstrate the ways in which such ecological factors as - terrain, tubercle bacillus, factors affecting host-resistance, over-crowded dwellings, social factors, space, ventilation, spirituous liquor etc. are intimately linked with the disease. The spatial organization of these ecological factors in the world is more heterogeneous in character. Each of these factors is linked with one another in complex relationship. In short, the paper concentrates on three major techniques, of describing and measuring the causes of prevalence of infection, morbidity and mortality of tuberculosis disease in different parts of the world, which are given as under:*

The Monsoon countries of Asia, the South-Western Asian countries, Mexico, Chile and Southern-most countries of Africa are revealing the highest range of infection, morbidity and mortality, while the Western advanced countries, Soviet Russia and Australia, revealed the lowest range of these problems. But else where in the world, normally the infection, morbidity and mortality are of medium grades. Thus tuberculosis is a global disease.

Success in solving and" problems will not be achieved until the ecological conditions are more fully studied and until inter-disciplinary co-operation is established to analyse and understand them more fully than had been the case in the past. The geographers may contribute significantly to this work, for the majority of the factors involved, have spatial distributional conditions. The macro-scale approach.

### **Introductory**

Tuberculosis is a chronic bacterial disease. It is caused by tubercle bacillus. Before the name tuberculosis came into common use, the disease was known as consumption disease. The ecology of tuberculosis consists of many geographical and ecological factors, among which there is always some interplay or some inter connection . Since there is a great deal of interrelationship between geographical conditions and infection or morbidity or mortality of tuberculosis, it is very difficult for the geographer to achieve more knowledge of influences of factors which may be or which definitely are not related to tuberculosis in a given range of geographical environment.

It is known that the 'Human' and 'bovine' types of infection are responsible for the spread of My co-tuberculosis disease. The infecting organism, first recognised by Robert Koch, in 1882, is a small rod-shaped bacillus. Infection in man from human tubercle bacilli is mainly by the sputum and inhalation of bacilli coughed up by patients specially of pulmonary tuberculosis disease. It affects particularly the lungs of the person. Thus pulmonary tuberculosis a major form of the disease. The of tubercle bacilli is found in raw milk of cow, the ingestion which tends to affects specially the intestines, bones and lymph nodes. It is not necessary that non-pulmonary tuberculosis is exclusively bovine and pulmonary tuberculosis is exclusively human in Origin. Generally, bovine type of tubercle bacilli infection particularly causes non-pulmonary and human type of bacilli infection causes pulmonary diseases.

The Tubercle bacillus breaks through the tissues, and if the defence against infection in the human body is adequate, it is deflected. The natural defence of human body helps the tissue to develop a scar which seals off the germs of infection temporarily or for the whole of life. On the other hand, if the defence is inadequate, the tissue loses its battle, the germs multiply inside the tissues, new foci are developed in the lungs or in the intestines and eventually the patient dies. Tuberculosis can attack other parts of the body as the bacilli always pass into general circulation causing abortive foci in many other parts of the human body. The following are the main symptoms. Any patient who has a cough for more than three weeks, who seems to recover rather slowly from an attack of 'influenza' or upper respiratory tract infection, who coughs up blood, who loses weight, who has dyspepsia, or bovine type who seems vaguely unwell.....in digestion may be a first symptom of tuberculosis' The other symptoms are excessive fatigue, failure of appetite, rise of temperature in the evening, night sweating, husky cough and chest pain.

Ecology of infection, morbidity and mortality of tuberculosis.

The ecological interpretation offers the greatest promise in defining the causes and prevalence of tuberculosis. The intensity in the prevalence of infection and disease varies from region to region, unfavourable adaptation of man to his environment (i.e. environment of Tubercle bacilli, overcrowding of persons in a house or in an office etc.) results in infection and tuberculosis disease. In short, the paper

concentrates on three major techniques, of describing and measuring the causes of prevalence of infection, morbidity and mortality of tuberculosis disease in different parts of the world, which are given as under:

- I. To examine the linkage between the Ecological factors and the spread of tuberculosis.
- II. To highlight the Ecological variations and associated concentrations of infection, morbidity and mortality of tuberculosis disease.
- III. To examine if man can check or alter the spread of tuberculosis disease. The major ecological factors which affect infection and tuberculosis disease are as under:

#### **A. Natural Environmental Ecology**

**I. Terrain** - Altitude and the nature of terrain generally affect the infection and tuberculosis disease; as an eminent British Geographer says, 'When the patient is in poor health or of poor physique however, the tissue loses its battle, infection spreads and eventually the patient dies. The lungs are helped in their battle by an abundance of fresh, specially mountain air, hence the building of vast sanatoria often in lonely mountain areas, where patient sleep whenever possible out in the open air'. Thus the areas of incidence of infection and mortality seemed to vary widely in their physical geographical character, specially the altitude and terrain. For example, normally the morbidity of respiratory and pulmonary tuberculosis is prevailing in every part of India, but the mountainous regions of the North revealed the lowest incidence of both the kinds of tuberculosis. The same results were obtained in the micro region of the lower Chambal Basin (Central India) where the high-risk areas from the view point of infection and tuberculosis mortality, are located in the low land area of Morena plain (10/1000 cases of mortality) than the upland areas of Sheopur (2/1000 cases of mortality).

**II. Climate** - The variation of temperature and moisture conditions are mainly responsible for the area! differentiation of the intensity of infection and the disease. For example the cold climate, with a mean annual temperature of 38 F. or lower, severe winter with heavy snow fall and short summer is disadvantageous for lungs. Even in Britain, the cold weather wind chill is disadvantageous for skin and lungs. Hence chill of cold air had been partly responsible for the growth of infection and tuberculosis disease in Britain. On the other hand, the temperate dry and sunny climates like prairies of North America are advantageous for lungs, human resistant and health. In the same way the hot and damp climate of Kerala (India) is disadvantageous for lungs and human health in comparison to the North-West-dry parts of India. Hence the rates of infection . The micro study of the Lower Chambal Basin (Central India) reveals that the sandy and dry soils of Morena and Dholpur plains are suitable for human health.....on the other hand the clayey moist alluvial soils around the tank areas of Sheo-pur plain are not suitable for health. In the clayey damp soil zone of high water table of Sheopur plain, the tuberculosis and rheumatism are the diseases where they have their strong grip (about 5 cases of morbidity per 1000 persons).

**III) Organism** - (a) Bovine type of tubercle bacillus - The tubercle bacilli conveyed by raw milk are of course, of the bovine type. These are of similar virulence to human strains. Children are normally most likely to be infected. With an elementary mode of infection the primary lesion is likely to be in the intestinal tract, giving rise to tuberculous cervical adenitis. Netherlands, Britain, and in particular Scotland, formerly had an unenviable reputation for bovine tuberculosis.

Urban and Rural areas of Netherlands, when bovine tuberculosis was common in cattle, about 44% of non-pulmonary and 10% of pulmonary disease in children under 15 years of age, was of bovine origin. In the same way. when bovine tuberculosis was common in cattle, about 10.4% persons of the total population in United Kingdom died of tuberculosis. On the other hand, in 1961 when dairy cattle were being freed from Tuberculosis, the farmers were helped to produce 'Tuberculin-Tested (T.T.) milk, the numbers of tuberculin-positive cows were decreased and the supply of pasteurised milk was steadily increased,. Then, only 0.62% persons out of the total population died of tuberculosis in United Kingdom. But these facilities are not available in most of the countries in the world. Therefore, higher intensity of infection and disease in comparison to U.K., is noted in most of the countries of the world. In developing countries like India, although the cows and buffaloes do not suffer from tuberculosis to the same extent as in Scotland as they live in open air and sunshine during most part of the year, yet due to the absence of supply of pasteurized milk and other facilities, the rates of respiratory cases per 1000 of population. It reveals that the supply of pasteurized milk also plays an important role in determining the infection, morbidity and mortality of tuberculosis disease, as it is indicated here in the table below, (b) Human type of the tuberculosis bacillus. The infection in man from human tubercle bacilli is much more complex. The tuberculous infection can theoretically be acquired from patients who are discharging sinuses etc., but these sources are of minor importance. The persons who are coughing up infectious sputum are worldwide and more numerous specially in South-East and South-West Asiatic countries. They are moving around in the community and worst of all, many do not know that they have tuberculosis, in halation is the

commonest mod of entry of infection of tuberculosis disease. The bacilli are inhaled through 'drop-lets' ejected during coughing or through 'dust' contaminated by dried sputum. As a result, due to infection pulmonary tuberculosis is the commonest form of the disease in the world.

**THE EFFECT OF SUPPLY OF PASTEURIZED MILK  
(Tuberculosis mortality rates per 100000 persons)**

Countries consuming mainly pasteurized milk	Mortality rates	Countries consuming mainly non-pasteurized milk	Mortality rates
Australia	Under 0.31	Turkey	Under 2.2
U.S.A.	0.31	Mexico	2.2
Canada	0.32	Chile	2.3
New Zealand	0.33	Burma	2.4
Finland	0.3 <sup>^</sup>	Philippines	2.5
Norway	0.35		About
	About	INDIA	
Sweden	0.35		2.4

With the increased facilities, now available in Great Britain, U.S.A., Canada, Norway and in certain parts of Australia, it is possible to isolate all diagnosed cases of infectious tuberculosis and to make almost all of them non-infectious. Thus these facilities are mainly responsible to get rid of most of pulmonary tuberculosis in these countries. It made a dramatic fall in infection, morbidity and mortality rates of tuberculosis disease specially in the Western European and North American Countries, as it is indicated below in the table.

**B. Cultural Environmental Ecology**

**a) Host-Resistance**

The factors affecting host-resistance are numerous. Although all of them are important and linked with the resistance and infection, yet they cannot be discussed in detail. A few important factors have however been individually dealt with hereunder.

**I. Racial Characteristics** - Resistance to infection and tuberculosis, in human beings differs from race to race and region to region. For example the Urban Englishman is less susceptible (Morbidity cases 0.5 per 1000 persons) than the Highlander or the rural Irishman (morbidity cases 1.2 per 1000 persons). In the same way Jews have the largest and the most extensive exposure to tuberculosis. In them the rates of morbidity and mortality are the lowest (1.5 morbidity and 0.1 mortality per 1000 persons). In India, the Punjabi have the most extensive exposure to the disease, hence revealed the lowest cases of respiratory tuberculosis (below 2 morbidity cases per 1000 persons) in India. Thus the racial variations are partly responsible for the areal differentiations in the rates of infection, morbidity and mortality of disease.

**NEWLY REPORTED TUBERCULOSIS INCIDENCE CASES RATES PER 10000 (in 2020)**

The countries having facilities of isolation of infected cases		The countries having no isolation of infected cases	
U.S.A.	Under 2.00	Turkey	Under 17
Norway	2.00	Japan	17
Australia	3.00	Burma	18
Britain	4.00	Ceylon	19
Canada	5.00	India	20
Sweden	6.00	Malaya	Above 20
Netherlands	Above 6.00		

(Based on W.H.O. data)

**II. Age Structure** - Age structure is one of the important factors from the view point of variations in resistance. Children from the ages of five to twelve are much less susceptible, but during puberty, adolescence and young adult life, the resistance is again lowered, progressive pulmonary tuberculosis is the main danger at these ages. Sex in relation to age, plays a great role also. Resistance in woman is lowest in young adult life and rises sharply after the age of forty, but male susceptibility remains much the same throughout life, and at the present time the majority of male mortality are in old men.

**III. Nutritional Level** - Resistance is lowered by starvation or under nutrition. There is some evidence that fats and proteins are important in protection. Meat, fish, eggs, milk, butter and cheese are generally accepted as protective foods. It is also proved that protein and vitamin D deficiency favoured the persons more susceptible to tuberculosis than others. Thus differences in the nutritional level of population, living in different regions of the world, are responsible for the geographical variations in tuberculosis intensity. For example, the nutritional level in Asiatic tropical countries is "much lower than the North American countries. Thus it is one of the factors which caused higher rates of infection, morbidity and mortality in the Asiatic tropical countries than the North American countries (Table 1).

**IV. B.C.G. Vaccination-** B.C.G. (Bacilli Calmette-Guerin) Vaccine has derived its name from its discoverers Drs. Calmette and Guerin, the two French Scientists. The aim of Vaccination is to increase the patient's resistance by an artificial primary tuberculosis infection manner. The number and percentage of vaccinated cases differs from country to country which is partly responsible for the variations of infection, morbidity and mortality in different countries of the world. The vaccination is recommended to be used for gaining immunity against tuberculosis.

**V. Occupational Conditions** - Occupations involving exposure to Silica (SiO<sub>2</sub>) lower the resistance to tuberculosis. Working conditions in mica mining, Gold mining, Coal mining and stone quarrying lower the resistance of persons and are deeply linked with tuberculosis. Chronic alcoholism has the same effect, and barman have a high incidence of tuberculosis. In other occupations (specially in tropical S.E. Asia) such as printing, shoe making and repairing, tailoring, raw cotton works etc., lower the resistance. Being relatively sedentary they attract, infection in poor health, and because infectious patients are liable to remain longer at these works, the incidences of tuberculosis are very common.

#### **C. Ecology of Associative Occurrence.**

**I. Disease** - Some of the chronic diseases favour the growth of tuberculosis. The most important of these are chronic fever and diabetes mellitus. Besides, the significance of physical and mental strain is not less. It is noted that many patients seem to develop tuberculosis after a period of mental strain and worry. In India, due to the lack of medical facilities, poor diet and low standard of living, most of the patients of chronic fever and diabetes mellitus, due to the inadequate treatment and old chronic disease turn into the patient of tuberculosis.

**II. Overcrowded Dwelling** - The size of the infecting dose is likely to be much greater if an individual is living in an overcrowded dwelling in close contact with a patient who is coughing up large numbers of tubercle bacilli, especially if that patient does not know he has the disease and is taking no precautions against infecting others. Due to the over population, overcrowded dwelling and illiteracy, the size of the infecting dose in most of the countries in monsoon Asia (specially India) is much greater than those of Western European countries and U.S.A. At present, in Britain or in U.S.A. most people are infected at some time in their lives, but of those who do become infected only a relatively small proportion develops clinical disease. While in various developing countries of Monsoon Asia, where dense population and inadequately constructed housing is a common phenomena, a larger proportion of infected persons develop clinical tuberculosis.

**III. As a Social Disease** - An unknown infectious case may do most damage by infecting others. The unknown infectious cases in the course of their work can come into contact with a large number of people in the day and infect them. For example the hotel food servers, bus conductors, shopkeepers, hair dressers, barman, cinema attendants, school teachers, ticket collectors, dentists, doctors and all hospital employees can socially be infected.

Little has been done in this direction even in the developed countries like Britain, Soviet Russia, U.S.A., Canada and Australia. This is one of the most important tasks that lie before the preventive and social medicines.

Because this is the main source of infection in most of the countries of the world; specially in the countries of South-Asia.

**IV. Space and Ventilation** - It is observed that in the cold countries in winter no one is going to endure draughty ventilation without adequate heating. Thus in the cold countries, (like Scotland, Sweden, Norway etc.) in the absence of adequate warmth and ventilation, the houses, places of work, cinemas, theatres and other places of entertainment are also the sources of infection. On the other hand, in the tropical countries like India, Ceylon, Burma etc., there is a problem of infection and disease due to heat, inadequate space and ventilation. Micro study shows that in the tropical areas the ventilation in houses is a must, because there is an association between the ill-ventilation and lung diseases. For example, in the Lower Chambal Basin (Central India), the cases of tuberculosis and rickets are partly due to ill-ventilation, dark and compact houses, and multi-purpose use of the houses.

Spread of infection is less likely if a factory population is working in a large numbers of small rooms than if every one works in a single large hall. An unknown case will come into contact with many more of his fellow-workers if they all work together in a large hall.

**V. Spirituous Liquor and Smoking** - Use of spirituous liquor and tobacco is disadvantageous for human health. There are many countries in the world, where local alcoholic spirit taking is common specially in lower income groups. It is very harmful for the lungs. It also encourages coughing and infection. In the same way smoking is also not good for health. It is very disadvantageous for lungs. In spite of harmful results, the usage of spirituous liquor and smoking is still prevailing in the world and caused the spread of tuberculosis. In India, the spirituous liquor and smoking are The major causes of spread of tuberculosis in the persons of lower income groups (i.e. in the Rickshaw drivers, Hair dressers mansons, Shoe makers etc.). The spirituous liquor and smoking are also one of the factors of tuberculosis spread almost in all countries of the world.

**VI. Treatment Chemotherapy** - Of all the ecological factors, treatment plays the greatest role in determining the morbidity and mortality rates in the world. But the efficiency of treatment differs from country to country which is responsible for the variation in the rates of morbidity and mortality in different countries of the world. At present it is found out that, by using proper combinations of two or more drugs, drug resistance can be avoided in almost all cases. Now a days there are three standard drugs whose efficacy is generally accepted. These are streptomycine Isoniazid or isonicotinic acid hydrazide (some times known as INAH or INH), and para-amino salicylic (PAS). Other drugs are used only when the previous Chemotherapy is unsatisfactory or the primary infection is with a resistant organism.

when Chemotherapy was not available, even in the technically advanced countries like Britain and U.S.A. about 50% of all cases of tuberculosis died of the disease; which is reduced to 1% in. This fall in mortality rates was due to the introduction of effective use of Chemotherapy. On the other hand, due to the lack of effective use of Chemotherapy, Chile, India, Pakistan, Thailand and Burma revealed 40% mortality out of the total cases of tuberculosis disease .

### **Conclusion**

Thus the geography of tuberculosis gives a description of the assemblage of known problems of infection, morbidity and mortality in an area, as related to the physical, biological and cultural spheres of the environment. This helps to identify those medical and ecological factors which are area wide, those which are centred in any area or segments of the country.

Success in solving the problems will not be achieved until interdisciplinary cooperation is established to analyse and understand them more fully than had been the case in the past. The geographers may contribute significantly to this work, for the majority of the factors involved, have spatial distributional conditions. The macro-scale approach, which is presented in this study and the wide-ranging over all view is maintained. But in terms of planning for action it needs to be linked with investigations-at a more detailed micro-scale.

The prevalence of tuberculosis is markedly higher in the lower income groups of the world. It would appear that the diseases is largely the result, excluding the effects of nutrition, of infection from the unknown cases of tuberculosis disease. Raw milk consumption also appear to have played a similar role. We must hope that pasteurization of milk, rising living and housing standard, health education, rising nutritional level, environmental sanitation, extension of B.C.G. vaccination and medical facilities will certainly check up the infection, morbidity and mortality of tuberculosis, with all these remedies the disease will still remain a problem however, until the discovery of unknown cases of tuberculosis comes to be a popular habit in a community.

We can very easily kill our children or mother unless we understand the dangers of over-crowded dwellings or usage of spirituous liquor, and unknown patients of tuberculosis in the society and bovine bacillus. Therefore the most important task we can do at present is to look at some of these intricate geographical relationship and problems, the solutions of which will reduce, the infection, morbidity and mortality of tuberculosis in the world. Further, we sincerely hope that a close co-operation and mutual assistance specially among physicians and geographers will contribute to the eradication of tuberculosis to a greater extent.

Study of the ecological associations, thus reveals alternative points of intervention for handling known tuberculosis problems and indicates where future problems might emerge. In view of paucity and quality of data and Short span of time the study is exploratory and tentative in its findings and conclusion. However, within possible limit of reliability it clearly indicates and highlights the regions or countries which call for greater and immediate attention in any future programme of health planning in the world. In

short, the ecology of tuberculosis provides one of the essentials needed for planning a description of what places are like in terms useful to health planning.

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## **Evaluate the Affect of Covid-19 on Select States in India**

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### **Abstract**

*The episode of COVID-19 in various pieces of the world is a significant worry for every one of the regulatory units of particular nations. India is additionally confronting this intense undertaking for controlling the infection flare-up and has dealt with its development rate through some severe measures. The current examination is for the most part on an endeavor to assess the effect of Coronavirus on select states in India alongside the effect of different measures taken for it. With the help of data sources (till fifteenth may 2021) from different state units of India and Ministry of Health and Family Welfare, Government of India, The current examination covers the absolute crown contaminated cases, all out dynamic cases, passing, recuperation rates canvassed in select states in India. This examination will be helpful for the Government of India and different territories of India, Administrative Units of India, Frontline wellbeing labor force of India, analysts and researchers. This examination will likewise be ideal for the regulatory units of other countries to consider different angles identified with the control of COVID-19 extended in their particular districts.*

**Key-words:** - Covid-19, impact, various measures, administrative and controlling.

### **Introduction**

The identification of the infection in the human host was first detailed in Wuhan, China, on December 31, 2019 as a group of instances of pneumonia. As the exceptionally infectious illness communicated quickly everywhere on the globe, the flare-up was pronounced as a pandemic by the WHO on March 11, 2020. Handling the extended of the infection is discovered to be trying across the world for the accompanying reasons: (a) regular influenza like aide effects in human carriers and (b) human-to-human transmission through asymptomatic human hosts and (c) the shortfall of a legitimate clinical doctrine (e.g., antibodies, drugs, substantial thoughts regarding the immunological response, and so on) Broad testing and the burden of containment measures to keep up friendly separating end up being the successful solutions for forestall illness transmission at the current phase of the scourge at a few spots. To assess the effect of these preventive measures on disease spread, recuperation, losses of life, and different other related elements, numerical models become helpful in foreseeing reasonable, quantitative appraisals.

India carried out a cross country lockdown from March 25, 2020. Upon the arrival of the declaration of the cross country lockdown, India had around 657 corona positive cases, while the primary COVID-19 positive was distinguished on January 30, 2020. The financial requirements in the Indian setting suggests that: (a) 'too-delayed' lockdown is hard to maintain; (b) the sole burden of regulation measures without a complex expansion in testing limit is a useless undertaking; (c) if the execution of the lockdown measures is merciful, control of the spread is profoundly implausible. Hence, the attainable answer for restricting the spread lies in cautiously adjusting different key epidemiological components. That is the place where the significance of the current model forecasts gets important.

### **Literature Reviews**

According to various papers accessible in writing, there are a couple of studies that emphasis on the pattern investigation and determining for Indian district. The studies [1][2] on Indian region presents long haul and momentary pattern, separately. These investigations utilized time arrangement information from John Hopkins University data set and introduced determining utilizing ARIMA model, Exponential Smoothing techniques, SEIR model and Regression Model. Anyway network demonstrating and design mining were not endeavored in these variants of the investigations and that too at the regional level, consequently the current examination endeavors to do that. Additionally, the investigations in Indian locale from the past are more focused around introducing time arrangement examination dependent on the general information for Indian area as opposed to covering different wellsprings of data separated from simply thinking about the quantity of contaminated patients, so the need to dissect the patients foundation and data is needed for the specialists to improve knowledge about the circumstance.

Essentially, there are other mathematical models that were produced for examining the patterns of COVID-19 flare-up in India. A model [3] for contemplating the effect of social removing on the age and sexual orientation of the patients in India was introduced. It analyzed the country socioeconomics among India, Italy and China and recommended the most weak age classes and sexual orientation bunches among every one of the countries. The investigation likewise anticipated the ascent of tainted cases in India with various



lockdown periods. Essentially, an organization structure approach was utilized by one of the examination [4] to see whether a particular hub bunches were getting shaped. In any case, just travel information hubs were considered by the creators to check which the unmistakable locales are influencing Indian explorers returning to the India. Likewise, the investigation introduced the SIR model to see the pace of spread of the Corona Virus among patients in India. Investigation on the testing labs and framework was likewise introduced by before creators.

Work of clinical experts and cutting edge wellbeing laborers was additionally introduced by certain examinations [5]. It was found that in India, the part of wellbeing laborers was less focused as the spread phase of Covid was as yet in stage two or the period of neighborhood transmission instead of the local area transmission when contrasted with different countries like Italy, Spain and USA. In any case, it was additionally guaranteed that Indian medical care framework isn't solid according to the WHO rules and in the event of local area spread, the Indian government may think that its hard to deal with the spread. Some definite conversation on the idea of the Corona Virus was additionally introduced by certain investigations [6] [7].

As for the exploration exercises directed in the Indian district, the examinations are yet to deal with the effect of various arrangements running after control of the Covid. Indeed, even in the preprint data sets, there are less confirmations accessible which worked in the Indian locale with more granularities and concocted examination that can uphold the dynamic of the different heads in India to control the lockdown and work on future methodologies.

Therefore, this study attempts to work on an attempt to evaluate the affect of covid-19 on select states in India along with the impact of various measures taken for it. With the help of data sources (till 15<sup>th</sup> may 2021). The present study is covers the total corona infected cases, total active cases, death, recovery rates covered in select states in India.

**Objective of the study:** - The present study is mainly on an attempt to evaluate the affect of covid-19 on select states in India along with the impact of various measures taken for it. With the help of data sources (till 15<sup>th</sup> may 2021) The present study is covers the total corona infected cases, total active cases, death, recovery rates covered in select states in India.

**Hypothesis:-**

H<sub>0</sub>:- there is no significant effect of covid-19 on between select states in India.

H<sub>1</sub>:- there is a significant effect of covid-19 on between select states in India.

**Research Methodology:-**

Secondary Data:-The states-wise Covid-19 cumulative infection and death cases data were taken from the daily bulletins of the Ministry of Health and Family Welfares of Government of India (<https://www.mohfw.gov.in/>) and The daily compiled data from the Central and the State Government bulletins are also available at [api.covid19india.org](http://api.covid19india.org). We use the data till 15th may, 2021.

**Period of Study:** - The period of study is from January 27, 2020 to 15<sup>th</sup> may 2021.

Statistical Tool:-statistical tools applied for analyze like, percentiles, bar charts, pie charts, and line charts.

**Analysis and Interpretation:-**

Table: 1 Total covid-19 cases among the six select states in India

States	Total Cases	Total Deaths	Total Recovered	Total Active Cases
Maharashtra	5344063	80512	4767053	494032
Kerala	2118264	6340	1666232	445333
Karnataka	2171931	21434	1544982	605494
Delhi	1387411	21244	1299872	66295
Uttar Pradesh	1609140	17238	1414259	177643
Telangana	525007	2928	469007	53072

Source: <https://www.mohfw.gov.in>

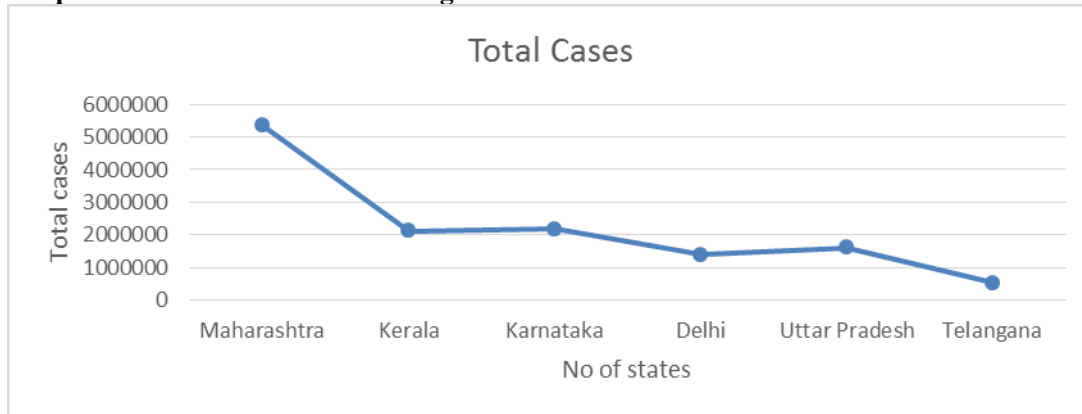
From the above table we can analyze the covid-19 cases right from January 27, 2020 to 15th may 2021 for 6 selective states they are Maharashtra, Kerala, Karnataka, Delhi, Uttar Pradesh, and Telangana.

**Table: 2 Total covid-19 cases recorded among six select states in India**

States	Total Cases	Percent (%)
Maharashtra	5344063	40.62
Kerala	2118264	16.10
Karnataka	2171931	16.51
Delhi	1387411	10.55
Uttar Pradesh	1609140	12.23
Telangana	525007	3.99

Source: [Https://www.mohfw.gov.in](https://www.mohfw.gov.in).

**Graph:-1 Total covid-19 cases among six select states in India**



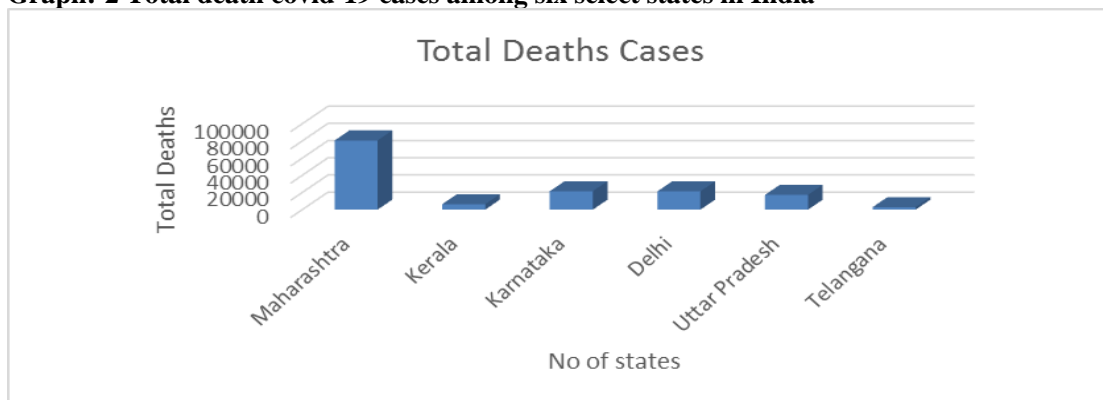
From figure: - 1. We can graphically present the data regarding total covid-19 cases for respective states. Based on the above inter states analysis Maharashtra (40.62 percent), Karnataka (16.51 percent) and Kerala (16.10 percent) states stands in the first three places for number of total covid-19 cases recorded and The least covid cases recorded is in Telangana with (3.99 percent) share in total covid-19 cases recorded taking the average percentages into the consideration.

**Table: 3 Total Death covid-19 cases among six select states in India**

States	Total Deaths	Percent (%)
Maharashtra	80512	53.78
Kerala	6340	4.24
Karnataka	21434	14.32
Delhi	21244	14.19
Uttar Pradesh	17238	11.52
Telangana	2928	1.96

Source: [Https://www.mohfw.gov.in](https://www.mohfw.gov.in)

**Graph:-2 Total death covid-19 cases among six select states in India**



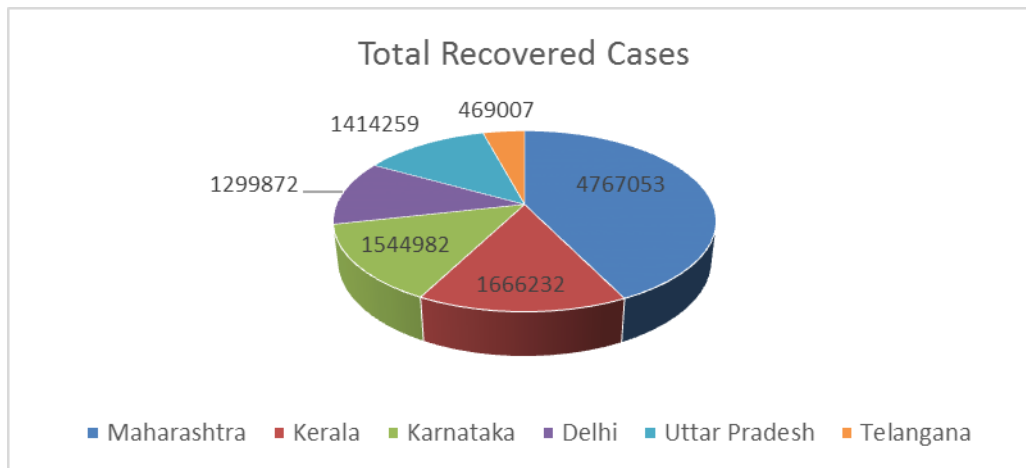
From figure:-2. We can graphically present the data regarding total deaths caused due to covid-19 in respective states. Based on the above inter states analysis Maharashtra (53.78 percent), Karnataka (14.32 percent) and Delhi (14.19 percent ) states stands in the first three places for number of total Death covid-19 cases recorded and The least covid-19 death cases recorded is in Telangana with (1.96 percent ) share in total covid-19 cases recorded taking the average percentages into the consideration.

**Table: 4 Total recovered covid-19 cases among six select states in India**

States	Total Recovered	Percent (%)
Maharashtra	4767053	42.71
Kerala	1666232	14.93
Karnataka	1544982	13.84
Delhi	1299872	11.65
Uttar Pradesh	1414259	12.67
Telangana	469007	4.20

Source: [Https: //www.mohfw .gov.in](https://www.mohfw.gov.in)

**Graph:-3 Total recovered covid-19 cases among six select states in India**



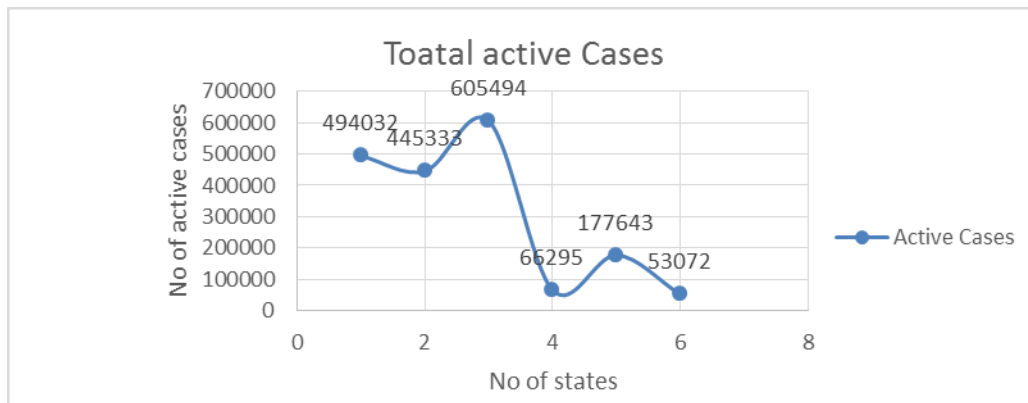
From figure:-3 we can graphically present the data regarding total Recovered cases caused after covid-19 in respective states. Based on the above inter states analysis Maharashtra (42.71 percent), Kerala (14.93 percent) and Karnataka (13.84 percent ) states stands in the first three places for number of total recovered covid-19 cases recorded and The least covid-19 recovered cases recorded is in Telangana with (4.20 percent ) share in total covid-19 cases recorded taking the average percentages into the consideration.

**Table: 5 Total active covid-19 cases among six select states in India**

States	Active Cases	Percent (%)
Maharashtra	494032	26.82
Kerala	445333	24.18
Karnataka	605494	32.87
Delhi	66295	3.60
Uttar Pradesh	177643	9.64
Telangana	53072	2.88

Source: <https://www.mohfw.gov.in>

**Graph:-4 total Active covid-19 cases among six select states in India**



From figure:-4:-We can graphically present the data regarding total Active cases of covid-19 in respective states. Based on the above inter states analysis Karnataka (32.87 percent), Maharashtra (26.82 percent) and Kerala (24.18 percent) states stands in the first three places for number of total Active covid-19 cases recorded and the least Active covid-19 cases recorded is in Telangana with (2.88 percent) share in total covid-19 cases recorded taking the average percentages into the consideration.

#### Conclusion:-

I can conclude that the maximum covid-19 cases are recorder in Maharashtra ,Karnataka and Kerala states as well as highest death covid-19 cases recorded in Maharashtra ,Karnataka and Delhi, highest recovery rate recorded in Maharashtra ,Kerala and Karnataka and as an today highest no of total active covid-19 cases are recorded in Karnataka, Maharashtra and Kerala. The least no of cases recorded and least death rate recorded in Telangana and Kerala state as on today.

#### Suggestions/Proposals:-

I want to app/ give suggestions through this my article to the users or government has to undertake more precautions for save the life of peoples of India. Provide the vaccination to every individual of Indian as possible as and for covid-19 patient provide free treatments. Final one is nothing is more than life. Because of that I want to suggest to government of respective states and government of India has to take care of poor peoples of nation.

**Gap for the further study:** - this study restricted to selected six states of India.

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## **Challenges Faced by the Indian Ancillary Industries**

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### **Abstract**

Ancillary units engage a fundamental place in the overall industrial development. Their importance lies in the stipulation of employment, promotion of entrepreneurship, low capital requirement, generation of foreign exchange resources, dispersal of industries and value addition. These are also the benefits derived from the development of small-scale industry. But the benefits of ancillarisation goes one step ahead leading to sustainable development of small-scale sector. Ancillarization has variety of Range in Various Industries depends on the requirement and Economies of scale.

### **Introduction**

Ancillarisation is a part of small industries development programme. The intention of ancillary development is also therefore synonymous with the overall objective for the growth of small industries, i.e. capital formation, growth of employment, development of entrepreneurship, dispersal of industrial activities particularly in the backward areas of the country etc. In addition, special advantages relating to complementarity of output to bring about reduction in cost, development of specialization in specific fields, creation of cadres of single discipline experts and reduction in gestation period of setting up small scale units. Establishment of industrial activity by the ancillaries also generates tertiary activities in the backward areas.

### **Objectives of the Study:**

1. To know the Ancillarisation
2. To analyze the challenges/Issues involved in building and running an ancillaries
3. To deal with the actions taken by govt. and other agencies to solve the issues of ancillaries

### **“Ancillarisation”**

Ancillarisation is a sub-set of sub-contracting. Ancillarisation refers to a type of inter-firm connection where large/medium firms acquire manufactured components sub-assemblies and products from a number of small-scale industries. In some cases ancillaries are associated with ‘Job-Work’ where a ‘parent’ firm provides the essential raw materials to small firms which return these materials after turning them as per the required technological specification, at a pre-determined rate. These transactions between firms of different sizes are not random or occasional business deal but are much more enduring and often collaborative relationships.

An ancillary unit as defined by the Government of India, is an “undertaking having investment in fixed asset in plant and machinery not exceeding Rs 100 lakhs and engaged in a) manufacturing of parts, components, sub-assemblies, tooling or intermediaries, or b) rendering of service and supplying or rendering or proposing to supply or render 50 percent( later it reduced to 30%) of their manufacture or the total service, as the case may be to one or more other industrial undertakings for production of other articles, provided that no such undertaking shall be a subsidiary of or owned or controlled by, any other undertaking” (Notification No. 857 dated 10.12.97).

### **Review of Literature**

**1. Naga Vamsi Krishna Jasti, Srinivas Kota, Kuldip Singh Sangwan** - reviewed that Lean manufacturing (LM) plays a major role in eliminating wastes (activities/resources) in a manufacturing organization. Value stream mapping (VSM) is one of the critical tools in LM which will help in identifying wastes in materials and information flow in a detailed product family. Lastly A cross functional team has been formed to develop the current state of VSM and perform a critical analysis to identify shortcomings

**2. Patil Nitin Yashwant, and Dr. R. Warkhedkar** - This paper elaborates various linkages between knowledge management (KM) and productivity measurement (PM) in competition of developing productivity measurement to sustain automobile ancillary industries. Conversely, productivity will be increased if the level of input is decreased quicker than that of output. Finally, producing more output with a reduced level of input will result in increased productivity.

**3. N. Manimekalai**- author selected one industrial estate in Thiruverumbur enjoying ancillary status to BHEL was chosen for the study. All the 24 ancillary industries were covered for the purpose of this study. According to the study on parent units have positive complaints against the ancillaries such as non-diversification of ancillary production, failure to minimize the costs, delay in meeting deadlines, inability to innovate, complete dependency on single unit. Author finds problems like Lack of work order, faulty price policy, Delay in providing the raw material, Failure to follow the guidelines of the BPE by parent units, Lack of finance and defective policy of the government.

**4. Ramu Pandit-** he has discussed regarding definition and scope of ancillaries. Unlike Japan, the subcontracting units are small in India; they should be assisted by parent company or the government to get them the benefits of Research and Development. He has pointed out that nonappearance of free competition results in arbitrary prices. In respect of future growth of ancillaries the author suggests that the concerned authorities like government institutions should evolve ground rules, establish subcontracting exchanges, and provide facilities for up gradation of their technology.

#### **Limitations Of The Study**

This paper is based on largely secondary data which is available in various sources. The data published earlier by the agencies who promote the small scale, tiny and ancillary have not been regular. Further, the data published by different organizations on particular issues for a given period of time have not been uniform.

#### **The Issues/Challenges Relating To Ancillary Industry Development:**

Following are the some issues related to ancillary industries development. These issues may vary from industries to industries and place to place.

1. A large number of items which otherwise could have been farmed out to the small scale ancillary units continue to be manufactured in house by the large undertakings in private and public sectors. Large undertakings do not seem to be anxious to promote ancillarization.
2. There is a necessity to incorporate certain provisions in the Industrial licensing policy so that suitable clauses regarding ancillarization are incorporated in the industrial license and its implementation is monitored at various levels.
3. Delay in payment to small and ancillary units is the largest single factor responsible for retarding the growth of this sector but in a number of cases, small units were reluctant to express their grievances for the fear of losing work. Payments should not be delayed beyond thirty days. The parent units delay payments either by not inspecting the components or by rejecting.
4. Big industrial houses express the view that the development of ancillary industries should be left to the operation of economic principles alone and no government control should be exercised.
5. There is no official status for ancillary industry, so, it cannot exercise any of the so called rights that have been conferred on small industrial units.
6. Ancillaries fall victims to exploitation from parent units. The parent units compel the ancillaries to cut down prices, accept un-remunerative prices.
7. Since the parent unit often goes on changing the design and even the specifications, the small ancillary units are compelled to make new components and the cost for the same is borne by small units,
8. Complexity of Raw Material: The constraints operating due to non-availability of raw material have been a main problem with small and ancillary units in our country. Ancillary units face the problem of non-availability of scarce critical, indigenous/imported raw materials and components every year
9. Quality problems ancillary units before they proceed with the manufacture. The ancillary units also should get acquainted with checking and inspection methods. They should try to install necessary inspection fixtures.
10. Small ancillary units have to purchase raw material in open marketplace at higher prices and small engineering ancillaries do not get right type of raw material they necessitate in market.
11. Small ancillary units do not get their payment on the dates they supply their machinery to large parent company. But the ancillaries dare not lodge complaints against parent company, lest they lose orders.
12. It has been said that ancillaries should enjoy equal status vis-a-vis parent units, but the small ancillaries who are the sellers, cannot claim this equality as it is a buyer-seller relation, the latter being dependent on the former.
13. There is no technology transfer from parent company to small ancillary unit. Technology transfer must be based on a commitment to share technological resources and technological information.
14. Long-term contracts are not generally given to ancillaries. This is on the cause that since the technologies are advancing new products are constantly required in the market and hence long-term contracts cannot be assured as far as supplies of the components are concerned.
15. It is generally seen that parent companies are large units and they collect the components supplied by small ancillaries. But now the order can be reversed with large unit producing components and small ancillaries assembling these components in the form of products.
16. Underutilization of capability; Absence of necessary tools, jigs and fixtures, raw material, lack of technical training, ignorance about product/process, market possibilities are the causes on account of which capacities remain underutilized. Small ancillaries depend too much on one parent company.

17. Problems of Infrastructural Facilities Unsatisfactory infrastructural facilities like electricity, water—supply, telephone service, non-availability of industrial sheds affect development of new ancillaries and expansion of the existing ancillaries.
18. Absence of Frequency, Regularity and Adequacy of Orders and Scheduling of Orders - If abrupt orders are given, the ancillaries, being small, may not be in a position to deliver the goods at scheduled time. Failure to meet the orders may provoke the parent companies to divert their orders to other ancillaries.
19. Insufficient Market Demand; Demand for components manufactured by ancillaries is a derived demand. When the markets for end-products fluctuate rapidly, the demand for the products manufactured by parent units also fluctuate, and this in turn affects the demand for components manufactured by ancillaries.
20. Lack of Working Capital: can be suggested that financial assistance in terms of Trade advance can be given. In giving this assistance past history of the ancillary unit and the interest of the parent unit should be taken into consideration.

The problems stated above are in the light of experiences of ancillary/parent ' units in industrial sector.

### **Solutions and initiations of government to solve issues**

Few of solution and actions stated in this paper is as follows.

- There should be unconditional directness in dealing with ancillaries in respect of quality control, Research and Development, stores etc. This is useful to clarify doubts.
- It has been said that unless the government provides a statutory backing to the programme of ancillarization, its intention to promote this sector will not materialize.
- Need of specialized financial institutions and special schemes of finance to ancillary industries
- Ancillary units cannot reimburse for to spend large sums on expensive R & D equipment. They should take help of facilities accessible at SISI, Technical Institutions. If it is not possible the parent unit should assist in conducting definite tests.
- The ancillary unit in finding solutions to the problems. There will to some problems which are faced by an individual ancillary or a group of ancillaries which will require top management attention of the parent unit. The parent unit may constitute a high level committee headed by a higher management person and comprising different departmental heads. The ancillaries can address such problems to this committee.
- Ancillary is re-assured that their outstanding troubles are receiving the attention of senior executives of the parent company and that obtaining solutions is only a matter of point in time.
- Quality, Safety and Environment - Meeting the increasingly rigorous requirements on quality, safety and environment, delivery and cost; in adding, firms will have to maintain clean accounting systems.
- New procurement policy for MSES and ancillary units passed by the government on 2013 to guide about procurement related procedures.
- Policy Issues- The development of ancillarisation in general and ancillary units in particular needs to be organized and structured by evolving a careful industrial policy;
- Industrial Policy Package of small scale industry 2001-02: The investment limit was enhanced from Rs 1crore for to Rs 5 crores for units in hosiery and hand tool sub 19 sectors. The corpus fund set up under the Credit Guarantee Fund Scheme was increased from 125crore to 200crore. Credit Guarantee cover was provided against an aggregate credit of Rs 23crore till December 2001.
- The Small and Medium Enterprise (SME) fund of Rs 10000 crore was started by SIDBI since April 2004, with 80 per-cent of the lending for small scale industry units. The interest rate was 2 per-cents below the prevailing Prime Lending Rate (PLR) of the SIDBI. The reserve Bank of India raised the composite loan limit from Rs 50 lakh to Rs One crore. Policy Package for SME 2005-06.
- National Manufacturing Competitiveness Programme (NMCP): The idea of NMCP with can be truly regarded as 'National Strategy for Manufacturing' is to ensure healthy growth of the MSME Sector. The 10 components of NMCP address the entire breadth of manufacturing in the sector being implemented in the Public Private Partnership (PPP) mode.

### **Conclusion**

Ancillarization is not possible in all industries in respect of economies of scale, better management and excessive capital. Where a given large or small undertaking- is concerned with assembly line production, it is economical to obtain components, intermediaries and services from others. Few of the items in which anillarization are possible or desirable. Ancillarization Range in Various Industries

depends on needs. Many ways are there to solve issues of ancillary's problems and also more policies needed from government and other institutions took to develop ancillary industries.

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## **Process and Functions of Management in modern business of India**

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### **Abstract.**

*Management is essential to any business or non business organisation. we can give an example of business organisation i.e Sapat Chaha Pvt. Ltd Co. Nashik . Which is manufacturing tea for the people. their main motive is to earn profit. when we talk about non business organisation we can give an example i.e. various colleges.schools.clubs,etc.all college are non business organisations.and main motive of these colleges are to provide education at affordable cost not to earn profit . Each and every organisation should have excellent management to develop and to become world class organisation . Management is nothing but it is very essential to any type of business either it is small, medium or larger, Management has to coordinate ,to control,to plan and and to do perfect and accurate uses of resources in any type of business for achieving the goal and objectives of the business and next important thing is that success of any type of business always depends upon efficient management. Management play's very important role in all business organisations in this modern age, the success of any business always depends upon the important qualities of managers and Skills of managers. Management is a developing science but we can not compare to physics, chemistry, biology etc. It is related to human being human behaviour is always changing and we cant predict it so the role management is very important to get success of any type of business.*

**Keywords :** Management ,Business ,Organisation ,Goods ,Development ,Quality ,Planning ,Direction.

### **Introduction :**

Many management thinkers have given us many definition to understand the meaning of management..

**George R.Terry**, "Management is a distinct process consisting of planning, organising, actuating and controlling performance to determine and accomplish the objectives by the use of people and resources".

**Theo Haimann**, "Management is the sum total of all processes including planning, direction, control and organisation" from both the definitions , it is clear that.management consists of getting things done through others by directing their efforts in an integrated and co-ordinated manner for business objectives. It is a process consisting of functions such as planning, organising and controlling etc .In this way manager should play very important role to get success.

Management is one of the most important activities of human life. To achieve aims that could not be achieved individually, people started forming groups. Management has become essential to ensure the coordination of individual efforts. Management applies to all kinds of organizations and to managers at all organizational levels. Principles of management are now used not only for managing business but in all walks of life viz., Government, Military, Social and Educational Institutions. Essentially, management is same process in all forms of organization. But it may vary widely in its complexity with size and level of organization. Management is the life giving element of any organization.

### **Objectives :**

1. To study the need and importance of management .
2. To study the levels of management.

### **Methodology:**

The information collected by secondary sources **Secondary source:** Newspapers, Magazines, Books etc. has been used to get information. The information was obtained through a study of published books.

### **Process of Management:**

As a process, management refers to a series of inter-related functions. It is the process by which management creates, operates and directs purposive organization through systematic, coordinated and co-operated human efforts, according to George R. Terry, "Management is a distinct process consisting of planning, organizing, actuating and controlling, performed to determine and accomplish stated objective by the use of human beings and other resources". As a process, management consists of three aspects:

#### **1.Management is a social process :**

Since human factor is most important among the other factors, therefore management is concerned with developing relationship among people. It is the duty of management to make interaction between people - productive and useful for obtaining organizational goals.

#### **3. Management is an integrating process :**

Management undertakes the job of bringing together human physical and financial resources so as to achieve organizational purpose. Therefore, is an important function to bring harmony between various factors.

#### **4. Management is a continuous process :**

It is a never ending process. It is concerned with constantly identifying the problem and solving them by taking adequate steps. It is an on-going process.

#### **Functions of management :**

There is a disagreement among management thinkers.

According to, **Henri Fayol** , he has given five functions are there viz. planning, organizing, commanding, coordinating and controlling.

According to, **Luther Gulick** , he has given seven functions such as planning, organizing, staffing, directing, coordinating, reporting and budgeting. For our purpose, we shall study the main five functions of a manager these are planning, organizing, staffing, directing, and controlling.

#### **1.Planning :**

planning is the most important function of management which is helpful to any type of organisation if manager has done proper planning to each and every organisation it will get success. Planning is a management process. It is the first step of management function. Planning is how to do a work, when have to do this work, who will do this work and by whom will do this work.

Planning means the process of achieving goals, development and establishment.

Planning means deciding how to achieve goals, profit and applying best strategies. various activities covered by planning for ex. budgeting ,assigning works, deciding objectives and framing policies etc.

#### **2.Organizing:**

Organizing is the second function of management. management follows the planning. Organizing is a management process that refers to the relationship between people ,work and resources that is used to achieve goals. In organizing system top level management fixes the common objective, . In organizing the manager makes different kind of department and mixed all the department for better work.

The elements of the organisations are grouping of activities, allocation of works, fixation of responsibility and deligation of authority etc.

#### **3.Staffing:**

After the organizing, the function of management is staffing. Employees are the most important resource of any organization. The right staff is very important for a company because he can change and ensure the organizations future success. Staffing is like a function that refers recruitment, selection,, training, etc.

#### **4.Directing:**

Directing is a process in which the managers guide and overview the performance of the workers to achieve goals. Directing is a very hard task of management process. It is the important function of management.

Planning, organizing, staffing have not any place .If direction function does not play its role properly. Directing is a continuous process that run its functions at top level to the bottom level .

Directing involves leadership, communication, motivation and supervision etc.

#### **5.Controlling:**

Controlling is the last step in the management functions process. This process is simple steps of manager to determine whether organizational goals have been fulfilled. Controlling is a continuous and forward looking process which is the standard of measurement of a company . There is a close link in planning and controlling in management function process. A manager requires to do prediction, taking decision, determining, controlling area etc various type of

#### **Conclusion :**

Management is one of the most important activities of human life. To achieve aims that could not be achieved individually, people started forming groups. Management has become essential to ensure the coordination of individual efforts. Management applies to all kinds of organizations and to managers at all organizational levels. Principles of management are now used not only for managing business but in all walks of life viz., Government, Military, Social and Educational Institutions. Essentially, management is same process in all forms of organization. But it may vary widely in its complexity with size and level of organization. Management is the life giving element of any organization. In this way we could study and understand the process of management and functions of management.

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## **Population Growth In Ratnagiri District Of Maharashtra: A Geographical Study**

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### **Abstract:**

*Population of a country or other area is the total number of people who live in it. Populations change as a result of migration and a process called natural increase. Natural increase is the difference between births and deaths. Most Countries have more births than deaths, and so their population increases, unless a net loss results from migration. In this paper the present study reveals the tahsil wise growth of population in Ratnagiri district during 1991-2011. The growth of population of Ratnagiri district from 1544057 in 1991 to 1615069 during 2011. It has studied on the basis of India reports, Socio-economic Statistical Abstract and Census Handbook. It occupies area of 8208 sq.km. According to 2011 census Ratnagiri district have shown negative population growth rate which was -4.81 percent so the Ratnagiri districts economically underdeveloped and it is the source area of migration to Mumbai metropolitan area, therefore causes slow growth of populating. 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.*

**Keywords:** Population growth rate, Decadal Variations, Percentage.

### **Introduction:**

Population of a country or other area is the total number of people who live in it. Populations change as a result of migration and a process called natural increase. Natural increase is the difference between births and deaths. Most countries have more births than deaths, and so their population increases, unless a net loss results from migration. The rapid increasing of population is a major problem in the socio-economic development of the region. The population is increasing at a very faster rate than the food grain production and its availability per head per annum. The large population size in area are directly affects resource available there e.g. reducing land-man ratio, shortage of food, water scarcity, shortage in electricity supply etc. From this point of view, the present study of population growth in Ratnagiri District has been undertaken.

### **Study Area:**

Ratnagiri a coastal district of Maharashtra state. situated in the western coast of India Maharashtra and lies between 16° 30' and 18° 04' north latitudes and 73° 02' east and 74° 52' east longitudes It has north-south length of about 180 km and average east-west extension of about 64 km sahyadri hills surround it in the east beyond which there are Satara, Sangli and Kolhapur district Raigad district in the north the Arabian sea in the west and Sindhudurg district in the south. It has an area of 8,208 square km which constitutes 2.7 percent of the total area of the state. As per the 2011 census the total population of Ratnagiri districts was 16, 15,069 the district ranks 22 in the state in term of population.

### **Objectives:**

The major object of this paper is to assess the population growth, decadal and spatial variation in population in Ratnagiri District of Maharashtra.

### **Database and Methodology:**

The present study is entirely based on secondary data and study period for the year 1991 to 2011. The secondary data is collected from socio – economic review and District census hand book. The following formula is used to calculate the growth rate of population:

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

Where, r = Denotes growth rate of population.

P<sub>n</sub> = Denotes current year population.

P<sub>o</sub> = Denotes base year population.

### **Population Growth in Ratnagiri District:**

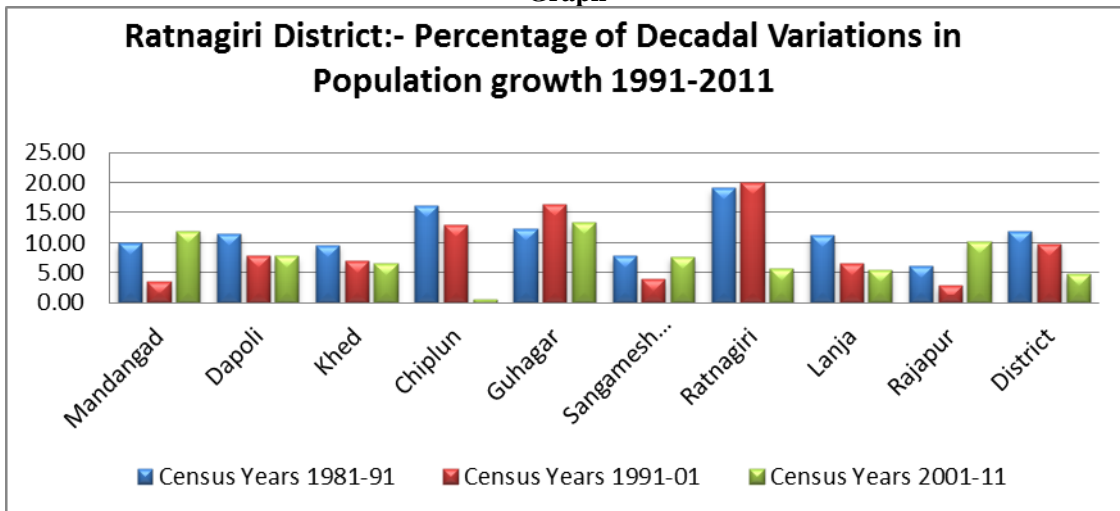
Table is revealed with percentage of Tahsilwise distribution of population from 1981 – 2011 in Ratnagiri district and it is observed that decadal growth rate of Ratnagiri and Guhagar tahsils were increased during the last two decades (1981 – 2001) But in 2001 –2011 decadal growth rate, Mandangad, Dapoli, Khed, Chiplun, Guhagar, Sangmeshwar, Lanja, Rajapur and in Ratnagiri shows negative population growth but only Ratnagiri Tahsil shows positive decadal growth rate. Ratnagiri is an industrial center as well as a district headquarters of the district were experiencing in migration and were recorded increasing growth rate. Guhagar was given urban status in 2001 that may be the reason for increasing Growth rate.

**Table**  
**Ratnagiri Distict: Percentage of Decadal Variations In Population Growth 1991 – 2011**

Sr. No.	Tahsil	Census Years		
		1981 – 91	1991 – 2001	2001 – 2011
1	Mandangad	9.92	3.50	-11.99
2	Dapoli	11.48	7.90	-7.80
3	Khed	9.57	6.91	-6.63
4	Chiplun	16.10	12.99	-0.69
5	Guhagar	12.28	16.47	-13.39
6	Sangmeshwar	7.78	3.95	-7.66
7	Ratnagiri	19.14	20.10	5.68
8	Lanja	11.20	6.53	-5.45
9	Rajapur	6.13	2.90	-10.19
10	District	11.92	9.87	-4.81

(Source: Socio – Economic Report of Ratnagiri District)

**Graph**



The Growth rate of all Tahsil is shows Negative Growth rate only Ratnagiri Tahsil shows positive Growth rate. The growth rate of population was low and Negative all tahsils due to lack of employment opportunities; people might have migration to nearby prospering areas.

Ratnagiri has the district with lowest rate of decadal growth during 1981 – 2011, but in 2011 the district were having negative growth rate of population and it is due to economically backwardness in the district hence people were entailed under such circumstances to me grate to prosperous areas like Mumbai, Suburban Mumbai, Thane, etc.

**Conclusion:**

The population of Ratnagiri district is constantly changing. These population changes represent peoples' adjustment to economic development, opportunities of employment, development of educational facilities, immigration and outmigration sources. According to 2011 census Ratnagiri district have shown

negative population growth rate which was -4.81percent so the Ratnagiri districts economically underdeveloped and it is the source area of migration to Mumbai metropolitan area, therefore causes slow growth of populating. The Growth rate of all Tahsil is shows Negative Growth rate only Ratnagiri Tahsil shows positive Growth rate during last decade.

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## **A Study of Marketing of Healthcare Services with Special reference to Jalna and Aurangabad City**

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### **Abstract:**

*Service sector in India is growing at a rapid pace and the healthcare sector is one of the major contributors in the service sector. Healthcare sector has grown at an enviable pace in India and there are various reasons for that. In order to attract new patients the healthcare service providers formulate various strategies. The paper throws light on the various means adopted by the hospitals and how the patients are satisfied with the various healthcare services of the hospitals.*

### **Introduction**

Health services are more and more globalized. It is seen as a new stage of economic integration in the region. This paradigm affects nations through transnational mechanisms that take place at all levels of economic operation. The development of digital and communications technology, liberalization of foreign investment, greater international accessibility of patients and population trends have enabled the globalization of health services. Therefore, health services became part of the world trade organization's multilateral trade talks. In this particular field India is one of the most prominent participants.

### **Need Of The study**

The private sector hospitals contribute a large number of bed capacity. As the number of various chronic diseases are increasing and the type of quality offered by the public sector hospitals forced even the low income group to avail the health services from the private hospitals. The number of patients availing the healthcare services from the private sector hospitals has increased considerably. All these factors are responsible for the private sector hospitals to keep their service standards high and retain the positive image they have created. At this stage the private sector hospitals require to keep their focus on the high standard of the services and marketing effectiveness to attract the patients and retain them for a longer period of time. Speaking at the two day conference held at Bangaluru on healthcare marketing S Premkumar CEO of Apollo Hospitals said we are able to attract the patients to the Apollo hospitals and clinics through marketing. He also mentioned that quality if the key to attract the patients.

### **1. Objectives of the Study**

- To Identify the Marketing Activities of selected hospitals in Jalna and Aurangabad City
- To Measure the patients satisfaction with the hospital services
- To suggest improvement methods for the marketing of the hospital services.

### **2. Methodology**

For the purpose of data collection two questionnaires were prepared.

One questionnaire was for the hospital to check the marketing activities and the second questionnaire was for the patients to check their satisfaction level. Each questionnaire contained five questions. Two hospitals from Jalna and two hospitals from Aurangabad were selected based on the convenient sampling method and from every hospital ten patients were selected using the purposive sampling method for the study hence a total of 4 hospitals and 40 patients were selected for the study.

### **3. Data collection and analysis: Hospitals**

1. Does your hospital plan formal marketing?

Sr. No	Option	Number Respondent	Percentage
1.	Yes	4	100
2	No	-	-

**Inference:** All hospitals use formal marketing for the promotion of the hospital services.

2. What types of marketing means are used by hospital?

Sr. No	Option	Response	Percentage
1	News Papers	4	100
2	Street Hoardings	3	75

<b>3</b>	Local Television	1	25
<b>4</b>	Leaflets	3	75

Some hospitals uses more than one mean of advertising hence the percentage is greater than 100

**Inference:** All hospitals selected uses newspapers for promotions of hospital services. There are three hospitals that uses street hoardings, one hospital uses local television to advertise and three hospitals distribute leaflets for advertising about their services.

3. Do you use social media for promoting hospital services?

Sr. No.	Option	Number of respondents	Percentage
<b>1</b>	Yes	4	100
<b>2</b>	No	-	-

**Inference:** All the hospitals selected uses social media as mean of promoting their services.

4. Do you organize any health camps for the patients?

Sr. No.	Option	Number of respondents	Percentage
<b>1</b>	Yes	3	75
<b>2</b>	No	1	25

**Inference:** There are three hospitals that organize various types of health camps. These types camps attract the patients to avail the hospitals services and a useful mean for marketing.

5. Does your hospital have a website?

Sr. No.	Option	Number of respondents	Percentage
<b>1</b>	Yes	2	50
<b>2</b>	No	2	50

**Inference:** There are two hospitals that have their own website and provide detail information about the hospital services.

## 6. Findings

1. All the hospitals selected for the study formally plan and form strategies for the marketing of the hospital.
2. Newspapers and street hoardings are the most important means of the advertising.
3. Social media is used for advertising by all the hospitals.
4. There are 75% hospitals organizes health camps to attract new patients.
5. There are 50% hospitals that have their own websites.
6. Newspapers and social media play important role to provide information to patients about hospitals.

## 5. Suggestions.

1. While panning the marketing the hospitals need to first study about the patients' requirement and accordingly form the marketing strategy.
2. Hospitals can organize health camps with more focus on creating health awareness among the general public.
3. Hospital should make sure that they are fulfilling what they have promised to the patients in their advertisements and deliver the healthcare services accordingly.
4. The hospital medical and paramedical as well as general staff should be trained on the courteous behavior and soft skills to serve patients more effectively and efficiently.

## 6. Conclusion

The marketing of healthcare services is significant in the contemporary situation and patients' satisfaction play very important role in that. The hospitals while formulating the marketing strategies should be very



transparent and focus on the needs of the patients. The marketing help to attract the patients and the effective and efficient services help the hospital to retain the patients for longer time.

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## **Spatial Distribution of Periodicity of Market Centers in Nanded District: A Geographical Study.**

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### **Introduction:**

Many geographers are mainly concerned with the spatial distribution of geographical phenomena. The distribution of market centers is influenced by different physical and cultural factors. In the study region market centers are unevenly distributed. At tahsil level there is a great variation also in the distribution of market centers. Each factor has its own influence and affects directly or indirectly on the distribution of market centers (Pawar & Lokhande 2000). Nevertheless merely numerical distribution of market centers in percent do not give correct picture as it ranges from 15 in Kinwat Tahsil to only one (01) in Bhokar tahsil. The co-relation between number of such phenomenon with area, inhabited villages and population etc. may give a more realistic picture (Gharpure & Pawar 1919).The present research paper is an attempt to analyze the spatial distribution of area and market centers ratio-in Nanded district from 1981 to 2001 and spatial pattern analysis has been carried out of the tahsil to tahsil.

**Key Words:** *Distribution of Periodicity of Market centers.*

### **Objectives:**

The main objective of the present study is to spatial Distribution of Periodicity of Market centers in Nanded district.

### **Data Base and Methodology:**

The present research study of spatial distribution of area and market centers has been based on primary and secondary data. The data has been collected from various sources i.e. District Census Handbook and District statistical Abstracts etc. It is collected for the period of 1981 to 2001. Finally the data has analyzed by statistical as well as cartographic techniques..

### **Study Area:**

For the present research paper Nanded district of Maharashtra state is selected as a study region Nanded district is situated in Marathwada region and south eastern part of the Maharashtra state. It lies between 18°15' to 19°55' north latitude and 77°7' to 78°10' east longitudes.

The study region has an area of 10532 sq. kms. This study about 3.41% of the total area of the Maharashtra state. As per 2001 Census, Nanded district has 28,76,259 population. For administrative purpose the district is divided into 16 tahsils.

### **Discussion**

#### **Distribution of Periodicity:**

In the study region it has been noticed that there are two types of market centers. Out of 87 market centers in the district, 68 are the weekly market centers as they meet only once in the week of seven days and remaining 19 market centers are daily in the study region. It is observed that there is no bi weekly market centre in the study region.

At tahsil level in Kinwat tahsil out of these most of market centres are weekly and they are fourteen in number and one market centres is daily. The lowest number of market centres has been observed in Bhokar tahsil is only one market centre and it is daily market centre. In Hadgaon and Kandhar tahsils there are Eight market centre and two and one daily. In which six weekly market centres and two daily market centres are observed in Mukhed tahsil. In which three weekly market centres and two daily market centres are observed in Biloli tahsil. In Mahoor market centre observed in which five weekly and one daily. In Naigaon and Degloor tahsils each one has four market centres. In Loha tahsils one has six market centres. In these are three market centres in each i.e. Himayatnagar, Ardhapur, Mudkhed and Dharmabad two are weekly and one is daily. Nanded and Umri tahsils have one weekly and one daily market centres. (Table)

**Table- DISTRIBUTION OF PERIODICITY OF MARKET CENTRES**

Tahsil	NO. OF MARKET CENTRES		Total No. of Market centres
	Daily	Weekly	
<b>Mahoor</b>	01	05	06
<b>Kinwat</b>	01	14	15
<b>Himayatnagar</b>	01	02	03
<b>Hadgaon</b>	02	08	10
<b>Ardhapur</b>	01	02	03

<b>Nanded</b>	01	01	02
<b>Mudkhed</b>	01	02	03
<b>Bhokar</b>	01	Nil	01
<b>Umri</b>	01	01	02
<b>Dharmabad</b>	01	02	03
<b>Biloli</b>	02	03	05
<b>Naigaon</b>	01	04	05
<b>Loha</b>	01	06	07
<b>Kandhar</b>	01	08	09
<b>Mukhed</b>	02	06	08
<b>Degloor</b>	01	04	05
<b>Region</b>	19	68	87

**Source:** District Census Handbook, Nanded, Part XII. A & B, 2001.

**Conclusion:**

In the study region there are 19 daily 68 weekly market centers. The highest number of market centers are fifteen in Kinwat tahsil, whereas the lowest number of market centers are only one in Bhokar tahsil. It seen that the daily markets are concentrated in eastern and southern and some central part of the study region the area. Because it is a plain, fertile, and well developed part of the study region. The weekly market centers are dominant in the north central part of the region. It is seen that the region has cluster to regular distributional pattern of market centers.

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## **Soil Resource and Sustainable Agricultural Development: Latur District**

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### **Abstract:**

*The coverage of earth surface with soil varies from place to place. There are several different classes of soil depending on how the soil is formed and where it is located. An understanding of which class of soil is found in a particular location is an important foundation to obtaining successful crop yields. Soil resources need conserving as much as water resources do. Soil is as important as water as a resource. It provides nutrients and an anchor to the roots of plants and is therefore essential to their healthy growth and yield of food. It is a complex mixture of organic and mineral content which is constantly being formed by the weathering of rocks. The aims of the present paper are to study the soil resources in the present study region, the impact of physical factors on distribution and regional variation in the soil resource and study the sustainable agricultural development and its management in Latur district of Maharashtra. The entire study is based on secondary sources of data. The data has obtained from soil survey department of the district office. It is also observed that to conserve the soil and keep constant the productivity of soil for sustainable agricultural development in the study region.*

**Keywords:** Sustainable development, Physical characteristics, Soil resources, Soil erosion, Agricultural development, Soil management, etc.

### **Introduction:**

Soil is an important basic natural resource and plays a crucial role in maintaining environmental balance. Soil has an important as a medium of vegetation growth. The fertility of land depends on specific use of soil. Soil is the top most layer of the earth surface. Though it forms a thin layer only, a few inches to a few feet thick, it is of almost importance for all living beings plants and animals. It is the layer in which plants grow. If this thin veneer should disappear, food plants could not grow and all the animals including man would starve to death. There would be no cotton, wood, rayon or leather for clothing, no lumber for houses and no wood pulp for newspapers. In fact soil is the most important natural resource for satisfying the needs of man, most of the economic activities of than in are related to soil only. Soil is a renewable resource. It is constantly being formed and destroyed mainly by erosion process. Although erosion can spread rich soil by wearing down mountains, it can also lead to removal of top soil from agricultural areas. When erosion removes too much soil, the farmer will need to apply more fertilizer, which can cause pollution problem through runoff. There is important relationship between soil structure and agricultural development. To prevent the erosion of soil to maintain its fertility and productivity it is necessary to conserve the soil. But use of more chemical fertilisers, unbalanced irrigation one type of crop pattern for many years, shifting farming, overgrazing, deforestation and sunlight, wind, rain flowing water, etc. causes more soil erosion and it reduces soil strength. To prevent the erosion of soil to maintain its fertility and productivity, it is necessary to conserve the soil.

### **Study Area:**

Latur district has been selected for the present investigation. The study region is situated in the south-east part of the Maharashtra and it lies between 17° 52' north latitude to 18° 50' north latitudes and 76° 12' east longitudes to 77° 18' east longitudes. It is bounded on the north by Beed and Parbhani districts, on the north-east by Nanded district, on the south-east and south by the Karnataka state and on the north-west, west and south by Osmanabad district. For administrative purpose the district in divided into two revenue divisions i.e. Latur and Udgir division and in 10 tahsils Viz. Latur, Ausa, Renapur, Udgir, Ahmadpur, Chakur, Nilanga, Deoni, Jalkot and Shirur-Anantpal. Deoni, Jalkot and Shirur-Anantpal tahsils are newly created tahsils. The total geographical area of Latur district is 7157 sq.km. and it covers 2.39 per cent of the total geographical area of Maharashtra.

### **Aims and objectives of the present study:**

- 1 To study the soil resources in Latur district.
- 2 To study the impact of physical factors on distribution of soil resources in Latur district.
- 3 To study the socio-economic factors this affects on the soil resources in the study region
- 4 To study the regional variation in the soil resources.
- 5 To study the sustainable agricultural development and its management.

### **Methodology and Databases:**

The present study is based on secondary data source. In order to meet these objectives the relevant information and data collected from the book, socio-economic review, statistical abstract of Latur district

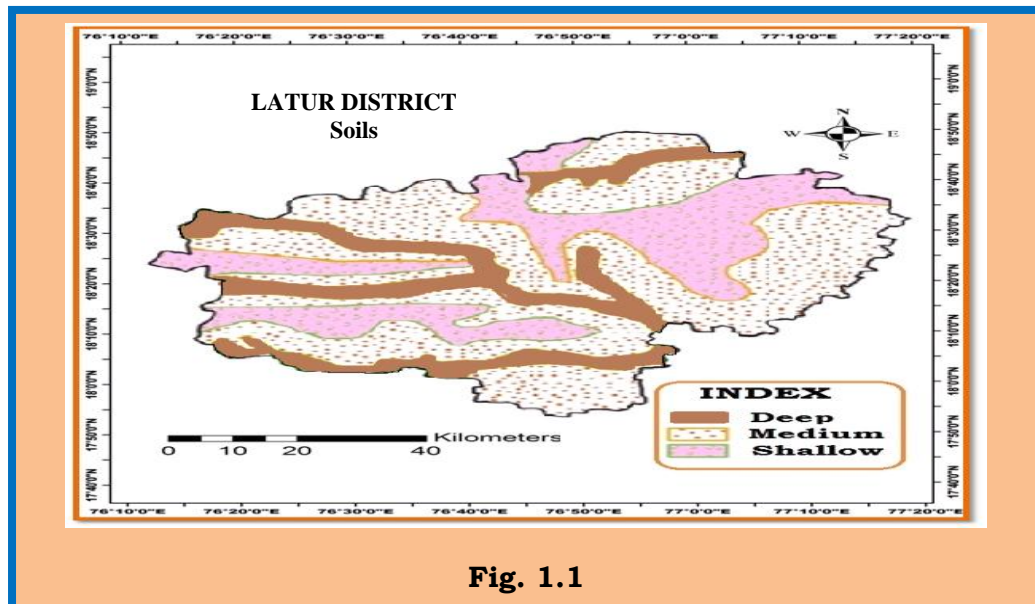
and reports published by different agricultural and irrigation departments. Finally the data was analysed by statistical as well as cartographic techniques.

### **Soil resources in Latur District:**

Soil constitutes the physical basic of agricultural enterprises and plays a very important role in the agricultural economy of a region. Differences in the soil texture, drainage and fertility are of major importance in explaining constructs in agriculture. Unlike climate, soil should not be regarded as part of the natural endowment of an area. In fact it is agriculture that modifies soil, expecting certain Virgin soil which can retain their original characteristics. On the whole soils constitute the physical base for any agricultural enterprises. Farming is a business and good soil is part of the famers' stock in trades. Good soils are good to the extent that man makes judicious use of them our standard of living which predominantly depends on agricultural often determined by a combination of the physical, chemical and biological characteristics of the soil and crops and livestock raised on. The crop growth is determined to considerable extent by the amount of the nutrients in the soil. The micronutrients of soil play an important role in maintaining soil health and productivity of crops for sustainable agricultural production. The main factor that has influenced the development of soil in Latur district is the undulating and hilly topography. The soils are varying are to be found through the district.

Soils of the study region are mainly derived from trap rock. Basaltic rock structure is the main parent material for the formation of soils. The economy of the region has a agrarian base. The development of agro based industries largely depends on availability of raw material from agricultural sectors. The soils of the region are classified on the basis of depth and structure of the soil.

1. Shallow soils with depth below 9 inches.
  2. Medium soils with depth between 9 to 36 inches.
  3. Deep soils with depth above 36 inches.
- 1 **Shallow soils:** Shallow soils are mainly located in the North- eastern part of the district. They are light brown to dark grey brown in colour, loamy to clay loam in texture with granular to sub angular blocky in structure. These soils tend to be alkaline in reaction. They are deficient in nitrogen and organic matter and will give better yields on the application of the same with provision of adequate water.
  - 2 **Medium soils:** Medium soils occur mainly near Nilanga and central portions and northern part of the district. They are dark brown to dark grey brown in color, clay loam to clay is texture sub angular blocky to blocky in structure. These soils are alkaline in reaction and have a fair amount of phosphate but need the application of nitrogen and organic matter for better yields. In the eastern part of district comprises of Ahmedpur, Udgir and other parts of Latur and Ausa tahsils consists of light and light medium soil of inferior type. They are not rentetive moisture and are therefore suitable for the cultivation of Karif crops only.
  - 3 **Deep soil:** Deep soils are generally found in south and in Tirna and Manjra river valleys. They are clayey in texture and vary from dark grey brown to very dark grey in colour. The structure of these soils are sub angular blocky to blocky. The lower zones of profile show compact to massive structure.



**Fig. 1.1**

They are alkaline in reaction and the total soluble salts are fairly high. This soil responds to nitrogen and phosphate fertilizers. The soil in some parts of Nilanga tahsil is of lateritic type which occurs in western part of the district comprising parts of Latur and AUSA Tahsils. They are heavy deep black cotton soil. Owing to the peculiarity of the soil, both Karif and Rubbi crops are cultivated in these areas. Black deep soils covers 65% and shallow soils covers the 24% portion of district (Fig. 1.1).

**Significance of the study:**

The soil resource and soil management study of the region is very important for the sustainable agricultural development and farming professions. Now a day, the people who belong to professional farming are less, but it is not profession of earning the livings. The importance of professional crops like cotton, tobacco, tuber, tag, sugarcane is increasing, and with the crops like wheat which until recently are in the category of grains are now taken as professional crops. As the goal behind the farming profession changed, the farming technology also developed. The nature of farming is becoming more and more scientific.

More than 78% people of the Latur district are directly engaged in agricultural activity. Soil plays an important role in the Mans economic activity. So, if becomes necessary for many to conserve this soil. As the soil play active role in economic activities of man, it is important to conserve this soil and keep constant the productivity of soil.

**Soil Managements and Suggestions:**

Soil management is the application of operations, practises and treatments to protect soil and enhance it performance. It includes soil conservation, soil amendment and optimal soil health. Hence, according to definition or discussion of soil management some suggestions are given below for the sustainable agricultural development in the study region.

1 In Latur district, the traditional methods of irrigation are used. It is because of this reason that soil is becoming salty. Its productivity is decreasing day by day. So, it is necessary to use modern irrigation methods such as drip, spray, etc. for irrigation.

2 in Latur district, because of the use of more chemical fertilizers the strength of the soil is decreasing day by day. So, it becomes necessary for the farmers in Latur district must be inspired use bio fertilizer instead of chemical fertilizers.

3 In Latur district, farmers take only one crop for longer time. If has reduced the strength of the soil. To prevent the erosion of soil caused by this it is necessary to take crops by cyclic method.

4 In Latur district, farming is done according to the traditional method. So, soil is becoming infertile. To reduce this infertility it is necessary to use modern farming methods.

5 In Latur district, there is a lot of hilly mountainous. The soil is not suitable for farming. So , it is necessary to do step farming in mountainous area and in this way mountain soil can be used for farming.

6 In Latur district, because of deforestation soil erosion is taking place in large number. So, it is necessary to prevent the deforestation.

7 In Latur district, soil must be protected and developed because soil is absolutely necessary for good and healthy products. Soil should be enriched with natural fertiliser such as organic and green manure and compost. Natural fertilisers are healthier for soil plants, water, air and people than chemical fertilisers.

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## **Sustainable Development goals of India**

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### **Abstract:**

*This paper is an efficient review of doable advancement exercises in India. During this proficient review, forty articles related with viable advancement in India (2014-2019) had been looked into from the source of varied sources. This think around found that there are because it were few composing with reference to doable advancement exercises in India and various of the SDG's were unexplored by the examiners. This ask approximately is concluded by recognizing the SDGs of sex consistency, diminishment in disparity, peace and value, and tried and true utilization and era because the first promising specialties for future ask around inside the extend of viable headway exercises in India.*

**Key Words:** Development, India, Sustainable.

### **Introduction:**

Attainable enhancement is that the key for by and massive victory of the earth . The word viable advancement has various definitions and thus the preeminent predominant definition had been coined by report of "Brandt and", which characterizes financial progression as "development that meets the necessities of show without compromising the capacity of future periods to satisfy their have needs". To accomplish doable headway of victory and for guaranteeing planet by 2030, SDG, i. e Doable Advancement Destinations had been made. There are 17 SDGs and have particular targets for each .the aim by point list of attainable change destinations had been given inside the taking after list. this text has the target of joining together the composing on viable progression works out in India of last 20 years and to coordinate them concurring to distinctive SDGs.

### **Objectives of the Study:**

1. To Study Sustainable Development Goals.
2. To review Sustainable development goals of India.
3. To give suggestions for sustainable development.

### **Research Methodology:**

This study is mostly depended on secondary data. Secondary data for the study has been collected from various sources like journals, magazines and books published on sustainable development of India.

### **Literature Review:**

With regard to SDG of "Sustainable cities", a comparative consider on progress of the concept of viable cities in India and Germany was considered by (Koch and Ahmad 2018). The think around considered the parameters of adaptability, security and comprehensiveness. With regards to SDG of "decent work and monetary growth", System is that the key figure improvement of any economy. The subsidizing issue due for huge infra wanders are by and by executed through PPP illustrate, and therefore the progression, premise, benefits and challenges of PPP appear of tremendous infra wanders like discuss terminals in India was considered by (Kaur and Prashanthi 2015). the problems and prospects of mining in India and potential of doable mining works call at India was inspected by (Gupta and Raghuwanshi 2015).

### **Goals of Sustainable Development:**

The Attainable Enhancement Destinations (SDGs) which came into effect on 1 January, 2016 is a progression on the thousand an extended time Headway Destinations (MDGs) 1. In India, as removed as MDGs are concerned, critical progress has been made inside the sector of crucial all comprehensive instruction, sexual orientation balance in instruction, and round the world budgetary advancement. Be that because it's going to there was direct development within the advancement of prosperity pointers associated with mortality, horribleness, and diverse normal variables contributing to down and out prosperity conditions 2. With SDGs in put the Indian government is directly endeavoring to coordinated the endeavors taken towards finishing MDGs with SDGs. SDGs are more broad in scope.

### **Challenges for sustainable Development Goals :**

One of the main challenges for India is concocting fitting markers to reasonably screen the advance of SDGs. India's past records reveal that it's not been outstandingly productive in setting pertinent markers to degree comes about. The definition for "safe" beverage has been misinterpreted with the supply of hand pumps and tube wells and therefore the official data suggested that 86% of Indians had get to secure beverage then were "on track" for the MDG objective on beverage . But the amount of waterborne contaminations and passing's thanks to free bowels are exceptionally tall in India.

### **Findings of the study:**

The challenge of financing SDGs are often settled to variety of degree by strengthening the prevailing scholastic system inside the country. India could also be a territorial center for higher instruction and brags itself for being the household town of some popular teach like IIT and IIM. These educate have well-made system for ask almost. These resources are often pooled and viably utilized in arranging, making and measuring markers implied for feasible improvement. In making countries like India, there was variety of faltering in reducing carbon emanations for 2 reasons, to start out with their per capita outpourings were lower, minute, and it might pitiless compromising with the progression of the country. Along these lines a carbon trading system was progressed among the nations of the planet where firms were permitted to exude carbon interior the embraced limit and were apportioned carbon credits for this reason just in case any firm should outperform the control it can purchase the unused credit from another firm. During this way the buying firm is penalized for outperforming its carbon standard and therefore the advertising firm is compensated for reducing its surges. Governments can consider the thought of penalizing firms with higher carbon impressions by making them finance the viable objective program inside the making and scarcest made countries.

#### **Goals of Social welfare:**

With regards to the SDG of “ Clean water and sanitation”, The successfulness of utilizing development for studying water potential, Geo informatics in ground water potential mapping in Littler scale watershed in Tirunelveli was conducted by (Narmada, Gobinath, and Bhaskarana 2015)and comparative consider on Amravati Stream bowl was conducted by (Anbazhagan and Jothibasau 2016). The ground water potential of Ganga Alluvial Plain was considered by (Patra, Mishra, and Mahapatra 2018)by utilizing more distantidentifying, GIS and informative chain of command plan. The think almost had made a ground water potential diagram by classifying locales as incredible, coordinate and down and out. At the same time the require for prioritizing the require for water sheds for financialadvancement in Swan Catchment zone of Himachal Pradesh was considered by (Batar, Singh, and Kumar 2016)by utilizing the parameters of soil, squander thickness, watered zone, forestlocalearrive cover etc.

#### **Financing for sustainable development goals:**

In makingcountries like India, there was some vacillating in diminishing carbon emanations for two reasons, to start with their per capita outpourings were lower, minute, it would pitiless compromising with the progression of the nation.<sup>19</sup> In this way a carbon tradingsystem was progressed among the nations of the world where firms were permitted to exude carbon interior the endorsed control and were consigned carbon credits for this reason Within theoccasion that any firm has toooutperform the limit it can buy the unused credit from another firm. In this way the buying firm is penalized for outperforming its carbon standard and the advertising firm is compensated for reducing its spreads.

#### **Conclusion:**

India might be a nation with the minutegreatestmassesinside the world. The steps taken by India for the achievement of SDGs matter a portion to the world. Within theoccasion that India succeeds in accomplishing the SDGs it would brutal a greatersection of the world has fulfilled it. Hence it is essential for India to createreasonableprocedures for executing, watching and measuring the progress of SDGs. The greatest challenge for India shows up to be the headway of sensible markers.

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## **Necessity Of Irrigation In Indian Agricultural Development**

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### **Abstract**

*India's already large population is expected to become the world's largest in the next 20 years, while its economy will soon overtake Japan's to become the demand for food will need to be met through higher agricultural productivity or by increasing food imports. This article discusses the key development in the agricultural sector in India including the role of irrigation in Indian agriculture.*

**Keywords:** *Agricultural Development, Necessity of Irrigation, Need of Irrigation and Importance of Irrigation*

### **Introduction**

India has a particularly large agricultural sector while the sector's share of GDP has halved in the past 30 years to around 15 percent, it still employs around half of India's workforce and accounts for much of the volatility in India GDP. India has the second largest area of arable land in the world and is a major producer of a number of agriculture products.

Irrigation is the most important input for agricultural development as it facilitates multiple cropping and increases crop productivity irrigation refers to supplying of water by artificial means to an area where there is shortage, usually for the purpose of growing crops. According to Trevelyan, "Irrigation is everything in India, water is more valuable than land because when water is applied to land, it increases its productivity at least six fold and renders it productive which otherwise would produce nothing or next to nothing."

### **Objective**

- 1) To study agricultural development in India.
- 2) To study the necessity of irrigation in India

### **Database and Methodology**

The present study has been carried out with the help of data collection tabulation, computer analysis and interprets basic data regarding for agricultural development and irrigation in India. Various relevant aspects have been collected from secondary source of the information by agricultural government report, various published reports and the present work is done with the help of secondary sources.

### **Agricultural Development in India**

This brought real and substantial increases in production. The green revolution era not only highlighted by an extension of high-yielding varieties (HYV) but also considered multiple cropping programs, integrated development of dry areas, plant protection measures, increased use of heavy fertilizers and new irrigation concept etc. The multiple cropping systems within a short period diminished the soil productivity to support plant growth in its healthy environment. The food needs based on population growth and always the matter of social issues in pre-independent India. The rate of agriculture growth was recorded the fifty years before the independence was about one percent per annum in India or even a negative growth was recorded in the entire first half of the 20<sup>th</sup> century. After independence, the growth of the food sector in India highly influenced by the policies of various governments time to time and its nature of implementation through five year plans.

Their results revealed that the agricultural productivity of these four countries experienced sustained growth. There have also been some studies focusing on the agricultural productivity of individual countries, such as Bangladesh, India and Nepal in South Asia and Indonesia and Vietnam in South West Asia.

Maintaining the stability of the agriculture sector is an important part of India's overall economic progress. Besides providing food, agricultural development represents 17-18% of total national income and >50% of the workforce is engaged in agricultural production. In turn, growth in other sectors and economic stability overall depend to a considerable extent, on the performance of India's agriculture sector.

The agriculture sector continuous to be the backbone of Indian economy contributing approximately 27.4% to the gross domestic product and accounts for about 18% share of total value of country's export. The agricultural production has kept pace with the popular growth rate of 21% per annum.

### **Necessity of Irrigation in India**

India is primarily an agricultural country where different crops are grown throughout the year. The crops require regular supply of water for their successful growth incidentally most of the rainfall received in India is by the south west monsoon winds during the summer season. This rainfall is purely seasonal, insufficient, uncertain, irregular and undependable. Therefore there is urgent need to develop irrigation facilities. Already lot of progress has been made but a lot is yet to be done. The following points will clearly bring home the necessity of irrigation in India.

**1. Seasonal Rainfall**

Rainfall in India is brought by the south west summer monsoons. This is purely seasonal in nature. It occurs for only 3-4 months in a year and the remaining part of the year remains dry. The duration of dry season is different in different parts of the country. It is 5 months in Kerala and about 9.5 months, in north-western parts of India. Irrigation facilities are a necessity during this period where there are no rains.

**2. Insufficient Rainfall**

Most parts of the country receive insufficient rainfall. Not only that, the distribution of rainfall is uneven. On one hand Cherrapunji receives over one thousand centimeters of rainfall and on the other hand Jaisalmer in Rajasthan has to content with only 10 cm. of annual rainfall. Only one-third the cultivated land of India receives rainfall which is just sufficient for its crops. Such areas have over 100 cm. of annual rainfall. The remaining two-third area depends upon irrigation for successful agriculture.

**3. Uncertain Rainfall**

The rainfall does not keep its time schedule even in areas of sufficient rainfall. Sometimes it starts before its scheduled time and also ends before time. At other occasions, it may be considerably delayed and may continue even after its scheduled retreat. This hampers regular growth of Kharif crops and irrigation has to be provided to these crops.

**4. Irregular Rainfall**

Even the amount of rainfall occurring in a particular area may not be same every year. The actual amount of rainfall occurring in a particular year may either be more or less than the expected amount of rainfall. This leads to the situation of either floods or droughts. Both are rainfall for crops. In the event of a drought we can save the situation to a great extent with the help of irrigation.

**1. Need of Irrigation**

Irrigation is necessary for the maximum production of most farm crops, especially in the arid and semi-arid regions. Even in the areas of high rainfall irrigation is required for second and third crop or for multiple cropping. According to a report of the production of irrigated crops is on an average 50 to 100 percent higher than that of the unirrigated crops in the same locality. To overcome the problems of rainfall deficiency and short supply of water to crops, irrigation provisions in the form of canals, wells, tube wells and tanks are made. The crops and areas irrigated also differ from region to region and from year to year. The total area in the country under crops is 118 million hectares. There are 50-60million hectares in Indo-Gangetic Plain (i.e. six states of Punjab, Harayana, Rajasthan, U.P., Bihar and West Bengal). In central India (i.e. Gujarat, M.P., Maharashtra and Orrisa) the sown area for food grains is 38.4 million hectares, while in Peninsular India (Kerala, Karnataka, Andhra Pradesh and Tamilnadu), the food crops are grown on 22.6 million hectares. The productivity differs from zone to zone and from state to state. While in Punjab and Tamilnadu a hectare yields as much as 800 to 1000 kg. in M.P. or in Karnataka the average yield of food crops is 500 kg. per hectare. This disparity in food production is entirely due to differences in availability of water for the land either through rain of or artificial supplies of water.

**2. Supplementing Lack of Moisture**

The need for irrigation also arises due to its certain advantages to the soil, sunshine and climate sandy soils require frequent water than the alluvial or black soils. In dry season, enough residual moisture is not available in the soil to support multiple cropping.

**3. Irrigation as a supplement**

In good rain areas (like Assam) West Bengal, Orissa, Andhra Pradesh, Tamilnadu and Kerala irrigation is required mostly as supplemental need to protect their single crop agriculture from occasional drought. In Karnataka, Gujarat, Maharashtra and Bihar two the predominant crops receiving irrigation benefits are that of peddy and to a lesser degree as that of sugarcane, percentage of other irrigated crops being comparatively small. It is only Punjab, Harayana, Rajasthan, Madhya Pradesh, Gujarat and North-western Uttar Pradesh where irrigation is used extensively for other seasonal crops as well.

**Importance of Irrigation**

The importance of irrigation in India can hardly be over-exaggerated in view of the peculiar nature of rainfall in the country. The need for irrigation in agriculture stems from a number of factors including : (i) uncertainty of rainfall (ii) irregularity of rainfall, (iii) variability of rainfall (iv) monsoon gaps (v)

concentration of rainfall in a few days, (vi) unequal distribution of rainfall (viii) torrential nature for certain crops like rice, jute, sugarcane etc. (x) need for more and frequent watering for high yielding variety seeds etc.

### **Conclusion**

India's agricultural sector is still very important to the Indian economy, although its share of the economy has decreased over the past 50 years. India has made significant advances in agricultural production in recent decades, including the introduction of high-yield seed varieties, increased use of fertilizers and improved water management systems. Reforms to and distribution, water management and food distribution systems will further enhance productivity and help India meet its growing demand for food.

Irrigation is the process of supplying water to agricultural fields through artificial means in the face inadequate rainfall. India has a vast network of canals, wells, tube-wells and tanks for irrigation. The soft soils structure in the northern plain facilitates the digging of canals, wells and tube-wells. In the southern peninsular plateau the surface is made up of hard old rocks where digging is a difficult job. In such area tanks are the main source of irrigation. Irrigation facilities in India have rapidly increased after independence with the completion of several major multipurpose projects. Minor projects are contribute a lot for providing irrigation to our crops.

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**A Biographical Sketch of Adv. António Xavier Gomes Pereira  
Dr. Xavier M. Martins**

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**Abstract**

*Adv. Antonio Xavier Gomes Pereira was a lawyer by profession and fiery journalist. He edited and published two Publications namely Pracasha and O Comércio. He was elected to Legislative Council which was granted to Goa under the Colonial Act of 1930. As member of the Legislative Council he pressed the case of Goa for decentralization of administration and financial autonomy for Goa.*

**Key Words:** *Journalist, Legislative Council, Portugal, Republic*

**Introduction**

In the nineteenth century, the people of Goa were exposed to the liberal political ideas of the west through western modelled education in Goa. The establishment of the Republic in Portugal brought changes in its overseas colonies. The new regime granted freedom to all Goans and treated both Hindus and Christians as the citizens of Portugal with equal rights. A government Council was constituted in 1920 which had 11 elected members in the House of 18. People of eminence from various professions were elected to the Legislative Council to represent the people. One such luminary was Adv. Antonio Xavier Gomes Pereira, a Lawyer, Journalist and a Legislator.

Antonio Xavier Gomes Pereira, was born on 9<sup>th</sup> July, 1880, at Divar, in north Goa to Analetica Quadros from Loutulim and Bras Caetano Gomes Pereira. Bras Caetano Pereira died leaving behind his wife and seven minor children. Antonio Xavier was just four years old. With scanty income, the family of seven children had a difficult time to manage. On account of the financial difficulties, Custodio Vicente Gomes Pereira, elder brother of Antonio Xavier, who was pursuing a course in theology, had to give up his studies, to shoulder the family responsibilities. (António Xavier, p.5)

After completing his studies, Adv. António Xavier Gomes Pereira joined the Lyceum, where he qualified himself to practice Law. It is said that he was rendering legal advice to people much before he could obtain degree in law. On completion of his law degree, he worked as the Civil Registrar at Bicholim. It was here that he got a thorough knowledge of the socio- economic conditions of the New Conquest. As a principled lawyer and a seeker of justice, he always sought to protect the rights and interest of both the parties, wherever it was possible. Many times, both the litigants used to refer the dispute to him for settlement, relying on his professional honesty. He took special interest in preparing the defense of political prisoners, who were tried by the special Military Tribunal. His knowledge of law was not only sound but his legal views on issue were accurate and precise. His opinions were often termed as tablets by his colleagues. His opinion was sought at different forums including at the Provincial Congress.

Although he was not a distinguished orator, his speeches made in the Legislative Council, in public meetings, and in the Provincial Congresses always attracted the public attention (Ibid., p.76)

**Journalist:** The Republican period witnessed a growth of press in Goa. Many periodicals and dailies came to published in Portuguese and in local languages in Goa. The Press fearlessly echoed the views of the people on government policies. As a journalist, Adv. Antonio Xavier Gomes Pereira was known for his eloquent views and sharp intellect. His writings were the shadow of the republican ideals. He started a newspaper *O Pracasha* which upheld the freedom of thought, freedom of expression and freedom from oppression-social, economic and political. His writings in the press, first in his daily *O Commercio* and his weekly, *Pracasha*, of which he was the director, manifest his brilliant and liberal views. He criticized the government on different issues in his articles he wrote in *Pracasha*. (Ibid.,p.77) He disapproved the unjust government expenditure and called for more judicious budget. His writings also had a bearing on the rural economy. He urged the government to initiate measures to bring more land under cultivation in order to increase the rice production.

In *Pracasha*, he wrote sarcastic comments on certain political and economic issues under the title *Picadas* with a sobriquet *Escorpiao*. In the *Gazeta de Relação de Nova Goa*, of which he was one of the founders and assiduous collaborator, he broached various judicial issues specially relating to the Code of Hindu Usage and Customs.

**Political Activist**

In 1910, when Portugal became a democratic Republic, he got an opportunity to serve his country. He became a Counsellor of the government and proved that Goans, given an opportunity, are quite capable to look after their country's interest. He was elected to the Governing Council along with Luis de Menezes, Cipriano da Cunha Gomes and Narana Anantan X Bandocar. (*Pracasha* 7<sup>th</sup> Jan 1931.) He distinguished himself in the Legislative Council wherein, he demanded more and effective powers for the elected

representatives. He was one of the architects of the autonomy which Goa enjoyed in some measure during the Republican period.

In 1930, the Colonial Act (*Acto Colonial*) enacted by Dr. Antonio Oliveira de Salazar, the Dictator of Portugal, made Goa an overseas province of Portugal with no right of self-determination and autonomy. Salazarist dictatorship muzzled the freedom of the press and curbed individual civil liberties. Gomes Pereira protested against the Act. He declared that Goa does not renounce the right which the people have of attaining the fullness of their individuality, until they came to constitute units, capable of directing their own destinies, since it is a right originating from its organic essence. (António Xavier pp.112-113).

When in 1955 a new political statute was granted to Goa, giving only a shadow of autonomy, Gomes Pereira organized a boycott of the elections for the Legislative Council. It was so successful that the legislative seats had to be occupied by political non-entities and retired government servants. (Ibid.p.114).

Deeply devoted to the cause of his mother land, he fought indefatigably against the government policy of imposing undue heavy taxes and the irrational use of the public funds by the government. He advocated progressive economic and administrative autonomy. (De Noronha, p. 91) He explained his views in one of his letters to the Governor, Paulo Bénard Guedes. He wrote "I want a progressive economic and financial autonomy, with gradual increase in power, each time close to the local legislature, till complete Independence" (António Xavier. Op.cit, p.3) He said that the autocratic rule has gagged the voice of the people. For him decentralization could be divided in two categories: bureaucratic decentralization and democratic decentralization. The first one was an emanation from the autocracy, wherein the submissive and the captive people were burdened with state authority. Democratic decentralization called for people's participation in governance. He stated that the bureaucratic centralization offers only shackles of slavery to hands. (*O Comércio* 1st April 1910 p.2)

He demanded that the elected members of the Administrative Board (*Junta Geral de Province*) should have the right of interpellation in all the matters of public administration. The reconstruction of the *Junta Geral* according to him should be broad and effective. (Ibid.p.3) All rules and regulations relating to the *comunidades*, *confrarias*, charitable institutions, public health, primary and secondary education, organization of administrative Council, forests and minerals should be discussed and voted in the *Junta Geral de Province* (Ibid.p.2)

#### **Financial Autonomy:**

He called for a judicious utilization of public funds. He was of the opinion that the Provincial Budget should be discussed in the *Junta Geral Da Provincia*, before it is submitted to the Central Government for approval with necessary changes. Issues relating to the introduction of new taxes need to be discussed at the local level, giving an opportunity to the local representatives to express their views. Writing on the State Budget Adv. Gomes Pereira, said that it was not a secret document to discuss and decide on it confidentially. He demanded a good deal of discussion on it by the members of the Council. He also questioned the wisdom of the Governor exercising the veto power on the issues which were deliberated threadbare and approved by the members in the Legislative Council.

Adv. Antonio Xavier Gomes Pereira urged the government to devise a good Economic Plan with more emphasis on agriculture to improve the economic condition of the areas in the New Conquest. He also tried to draw the attention of the Government in the field of education, highlighting the need to have adequate number of qualified teachers to teach in the rural areas (*O Comércio*. 21<sup>st</sup> March 1911).

In 1911, when the government issued an order to demolish the dwellings of the poor coolly community in Mormugão as a measure to control the pest, Adv. Gomes Pereira suggested that government should provide an alternate accommodation for these poor people. Advocate Antonio Xavier Gomes Pereira died in 1958 at the age of 78 years.

#### **Conclusion**

Adv. Antonio Xavier Gomes Pereira was an eminent lawyer, journalist and ardent nationalist who silently toiled for the cause of Goa. He was acknowledged as a voice of the voiceless. Gifted with a brilliant pen, he brought to light the glaring shortcomings of the governance and offered constructive measures to remove the anomalies. He always stood for harmony among all the religious communities of Goa. In his view, all the communities had to conjure their efforts to seek solutions collectively for the problems affecting the general interest.

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## Role of irrigation project in sustainable agriculture development

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### Abstract:-

Current planning and strategies of sustainable rural development is to increase the agricultural productivity in last decades, Indian government plans to increasing rural agricultural land more sustainable. rural physiographic condition, soil structure and availability of water make rural area more sustainable this paper shows that irrigation is more useful for agriculture and rural development, agriculture is backbone of Indian economy and today more than 60% of the population depends on agriculture, in drought prone region agriculture is bet with uncertainly in rain fall and it effects agricultural production so irrigation is essential for successful agriculture.

**Key word** :- Irrigation project, agriculture , economic activity

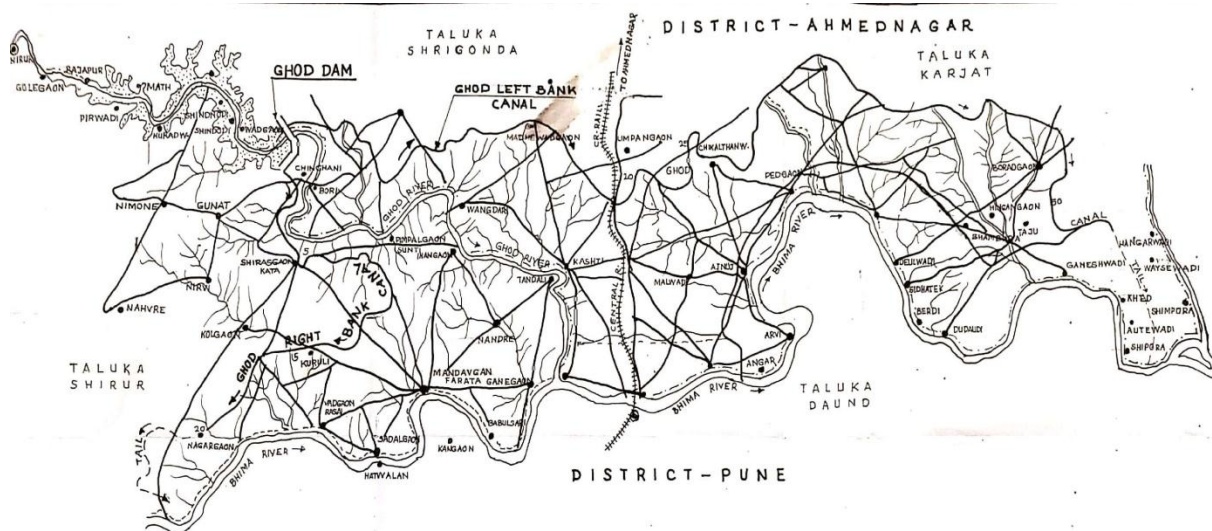
### Introduction :-

Irrigation play vital role to increasing agriculture production .land ,water, soil fertility are basic need of agriculture development according to international water management institute 1/3 of the world population will face water scarcity problem in 2025, agriculture consume 80% of water resource .agriculture is science of cultivating soil ,growing crop and harvesting .during 1972-82 canal irrigation area the major states ,the percentage increase was the highest in case of Gujarat (82.7%) and Maharashtra (34.4%)and it result economic benefit in this area. Growth of economy depends on agricultural production when the country becomes accustomed to food production surplus income can be used to develop necessary infrastructure (Vasudevrao D.1978) Rural development depends on water availability . In India five years plan develop irrigation project .irrigation is the process of artificially applying water to the soil for rising crop .(Sinha U. P. )

### Rational of the study:-

More D.M.(2000)studied that irrigation increasing from productivity and income increased Solunke R.S.(2000)studied impact of fund supply on irrigation area of parbhani district Palaskar M.S.(2000)studied nature of cropping pattern change under irrigation project Lele M.N.(2001)presented a report on co-operative irrigation management on maharashtra

### Study area :-



Shrigonda taluka Ahamadnagar district in Maharashtra has been selected for study area . it extend between 18° 40' 41" to 18° 67' 80"north and longitude 74° 29' 33" to 74° 49' 24"East The ghod river which flows through the northern part of Krishna valley ,it is the south eastern tributary of the Bhima .The river originates near Arupe valley in ambegaon taluka and joins the river Bhima near sangvi,SKM northwest of daund .the length of river is 145 km kukdi and meena are its major tributaries . This dam was build on the ghod river in 1965 and two canals run through shrigonda and karjat taluka of Ahmednagar district .The length of this cannel is 85 km and water carrying capacity is 3.25 cubic meters / second .

**Objectives:-**

- 1) present study objective is to study importance of the irrigation project on Agriculture.
- 2) Impact of dam on industrialization

**Hypothesis:-**

To study the effect of Ghod Dam on the agricultural sector  
To study the participation of Ghod Dam in economic development

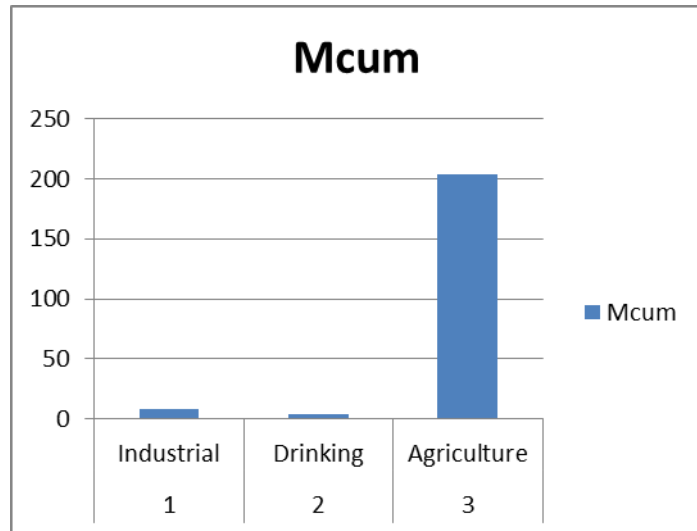
**Methodology:-**

The present study is based on secondary data sources. The data of water uses and various crops obtained from ghod irrigation office of shirur the correlation technique is use for understand the correlation between irrigation and crop production

**Analysis and data Analysis :-**

Use of water for Industrial, Drinking, Agriculture (Mcum)

Sr.no	reservoir	Mcum
1	Industrial	8.340
2	Drinking	4.285
3	Agriculture	203.675



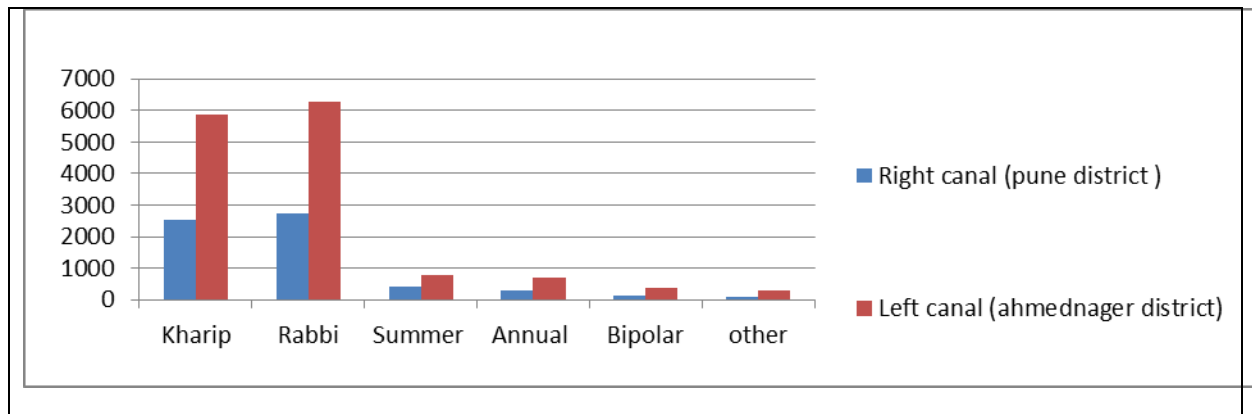
ghod dam gross storage capacity is 216.30 Mcum out of this industrial use is 8.340 Mcum and use for drinking is 4.285 Mcum so most of the water uses in agriculture is 203.675Mcum.irrigation is main axis around which agriculture activity revolves. in drought prone regions agriculture is the main work force and source of income. the choice of cropping pattern, method of cultivation, variety crop and rotation of crop depend on availability of irrigation

The proportion of irrigated area is higher during Kharif and Rabi period which is 84% of total area Only 4.8% of the area is under annual irrigation. However, high ground water levels in the canal area have led to an increase in agricultural income.the study region is under the rain shadow or drought prone area of Maharashtra. The amount of average rain fall was 985.8 mm in year 2018. the study region received low to moderate rain fall.so irrigation facilities is important for agriculture development. irrigation system is used to increase production, 60 to 65% water is saved and production is increased by one and a half to two times. Farmers should make efficient use of modern technology in disaster situations. The use of drip irrigation, sprinkler irrigation, etc. to meet the water requirement for agriculture increases productivity and water saving. This increases the productivity of agriculture. Importance and contribution of irrigation in agricultural productivity: The population is increasing day by day. The area available to the growing population for food is not enough. So you want maximum production in less area. There is a difference in productivity as there is not even rain in all places. In such cases, there is no alternative but irrigation to increase the productivity of agriculture. , it is indicated that when the irrigation system develops. Then the employment opportunities also increase. Because with the help of irrigation we can get 2 or 3 crops in 12 months. Irrigation also improves the soil surface and hence the production capacity also starts increasing. And we will reduce the suicide rate of farmers which is increasing everywhere. Water supply to the area available in short time due to lack of electricity: In rural areas the load shedding of electricity is 12 to 14 hours so the farmer gets only 10 to 12 hours for water supply. It is not possible to supply water to the gold field during that period. So if we use sprinkler or drip irrigation at such a time, we can overcome the problem of electricity. Water can be supplied to agriculture in less time and with less water. Therefore, soil moisture is not lost. Her quality remains good. Will remain in the safe. Farmers should use irrigation to meet their water needs. Farmers who have wells. They should buy irrigation kits not only to save the



crop in drought conditions. So in the next 10 to 12 years it will be to increase the area under irrigation. Due to the reduction of soil erosion, the cycle of nature as well as the use of mulch can evaporate the moisture in the soil and the distance between two layers of water can be reduced by 80 to 90%. 20 to 29% water saving for mulching. Nearly soybean husk. Or use plastic film. Covering the remaining part of the crop increases the amount of organic carbon in the soil. It also creates a nutritious environment. The following is the division of canal wise area on Ghod

Sr.no	Season	Right canal (pune district )	Left canal (ahmednager district)	Total area in Heactor
1	Kharip	2540	5860	8400
2	Rabbi	2740	6260	9000
3	Summer	400	800	1200
4	Annual	280	720	1000
5	Bipolar	140	360	500
6	other	90	310	400
	Total area	6190	14310	20500



### Conclusion:-

Irrigation is important aspect in agriculture. Irrigation facilities able to grow cash crops for more benefits which change cropping pattern of the region. irrigation respond which shift from seasonal cultivation to permanent cultivation this irrigation project are benefitted to the agriculture and groundwater development. the transformation in pattern of agriculture that is change from extensive to intensive the area under canal irrigation develop in1965 to 1990 and after 2000 develop lift irrigation high elevated area. Than change cropping patter in left side of the dam. This area facing rain fall variability of rain fall from last few decades. High valu cash crop like sugar cane are grown as annual crop with the help of ground water irrigation .

### Recommendation:-

- 1)To develop new irrigation project for agriculture development and industrialization.Increase water capacity of old dam and change
- 2)change in crop rotation to make the best use of available water .
- 3)adjust sowing dates according to climatic condition

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## **The role of literature in social development**

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### **Abstract:-**

*Literature has played an important role in social development. By reading literature we can make a radical change in our daily life, because literature is the philosophy of our life. So we always discuss our life connects with literature. Our first serious encounter with literature comes from school and college. It influences us, and make us understand the every walk of life. Literature is really a medium one to another it makes us unique contribution to general education which aims at the development of an informed and adjusted citizen. It set up modern society, shows mirror of society, rebels against injustice and inspiration to revolution, more information about different kinds of regions, nations, boundaries etc. Really literature has significant role in social development, literature gives more values in cultural and traditional role, it helps learning new languages, thoughts, awaking rights and rights to freedom etc..... The term social development is frequently used in the literature, since the 1970s. In 1973 Gore conceptualised social development and discussed its implications for social welfare and for social work. Gore, "Social development is inclusive of economic development but differs from it in the sense that it emphasis the development of the totality of in its economic, political and cultural aspects. Dasgupta says about development " No poverty society" It means development in a variety of senses in different forum but always viewed it in negatively, In short, he told the Gandhian vision of an altogether different types of society.*

### **Introduction:-**

The relationship of literature to society is not an external one but an internal one. Literature provides insights into human life and social realities. Literature presents the same situation in the society. In the 19th century, modern consciousness and perspective began to create a new meaning for literature. This led to social transformation through literature and the production of literature through social transformation. Literature and The sociological study of society was greatly encouraged by the interconnectedness of society. Therefore, in Sociology, the discipline of 'Sociology of Literature' emerged. In this context, it is important to know the views of Western sociologists. The Hungarian sociologist George Lucas was the first to use the term 'sociology' in literature. August Compton studied literature from a 'scientific' point of view. Wilfred Parota proposed the remnant theory for the perception of literature, preferring the 'logical irrational' element. Max Weber analyzed the literature 'by ideal model'. Emil Darkheim, on the other hand, argued that literature is a 'social reality'. Literature is not an individual phenomenon but the culmination of 'collective consciousness'.

### **Literature is the mirror of society:-**

As we know that our life connects with literature, literary works serve as a good food for everyone's thought and encourage our imagination power as well as develops creativity. Once C. S. Lewis a British Scholar and novelist quotes, "Literature adds to reality it does not simply describe it, It reaches the necessary competencies that daily life requires and provides in this respect, it irrigates the deserts that lives have already become". By reading literature in which poetry and prose we can make a radical change in our daily life, because literature is the philosophy of our life. So most important fact of life is to read literature and so that our living of standard will be raised. It gives us a glimpse of the culture and life of different provinces its all we got because of literature is the mirror of society. With all this knowledge we know that our heading is in right direction, and that is why we need to know what we have to do to move towards our progress, so literature is said to be a mirror of society.

### **Set up modern society:-**

Literature influences us and makes us understand the every walk of life. We all people around the world our first serious encounter with literature comes from school and college. L S R W have been drilled from early age and this is set in modern society. In this way we can say that education is the first most important part of modern society. It happened only because of literature in education. Millions and more than millions books which have been published around the world are guides for the reader and generate a bridge for them to learn something new, something modern something unique which is teach to another way of thinking. From the reading of Indian literature and African as well as Afro American literature we find that slavery, racism high and low discrimination were rampant in the past, but today they are trivial, and we have taken equality, fraternity and brotherhood as a lesson, this is the beginning of a new modern age. its all because of education. Education is an important foundation of modern society so the most important thing to take this education is that we get experience from literature.

### **Literature is medium one to another:**

Literature makes a unique contribution to general education which aims at the development of an informed and adjusted citizen. Above the point our literature is a medium talks from one to others (for example) like a writer or a poet speaks from his writing he conveys some message from his experience so that social cohesion can be created and social cohesion can be achieved. Literature acts as a form of expression for each individual another, in which some books mirror of life and so allow us to understand better the world we live in. The best example is E. Scott Fitzgerald's novel "The Great Gatsby" was a reflection of his experiences and opinions of America during the 1920s. We all readers easily connects to the psyche of authors through their stories, so literature also reiterates the need to understand modern day issues like human conflict.

### **Exhibited cultural and traditional Values:-**

Culture's values are its ideas about what is good bad, right -wrong, fair -unfair and just. Sociologists disagree however how to conceptualise values. Conflict theory focuses on how values differ between groups within culture. tradition is the complex and elaborate system of meaning and behavior that defines the way of life for a group or society. If we read this kind of literature we get to know the culture of the country of different provinces so that we can learn something good from it, so that we can get values, as well as if we want to take some good things we can take it and cultivate it in our life, so that some benefit will be enhanced.

### **Provoke rights of Freedom:-**

Literature has played important role in provoking our rights of freedom, this is still being used as a tool of propaganda. Revolution was necessary to get the right to freedom. The American revolution was heavily influenced by pamphlets written by Jonathan Mathew, John Dickenson and Tom Paine Specially Tom Paine's "Common sense" and "American Crisis" were very popular read by more than million people, which is credited with instigating the Declaration of Independence America. Similarly Voltaire, Montesquieu and Rousseau were instrumental in sowing the seeds of the French Revolution. Abraham Lincoln's "Injustice of Slavery" gave a message to think that slavery is wrong, that is more difficult to sustain self-respect. The speech of Lincoln's about injustice of slavery showed us with an argument for political equality, that is rights of freedom in India no exception, we celebrate 74 year of independence it would behave us to remember the role of pre - Independence literature in our freedom struggle. Lots of newspaper took a strong role to revoke the rights of freedom from British rule. Specially Jugantar Patrika founded by Barindra Kumar Ghosh, Abhinash Bhattacharya and Bhupendranath Dutt 1906. Those days news papers and pamphlets written and distributed across India. Provided critical information and served as propaganda against the British. Bankimchandra Chattopadhyay was one author who used literature to spread the message of patriotism, specially the work "Anandamath" (1882) so in this way we can say that literature has an important role for provoking our rights of freedom.

### **Help learning languages:-**

When we study different regions and cultures through literature, we become familiar with the language and we develop curiosity and interest in learning that language. Specially when we studying literature, we can improve not only language such as vocabulary, but also the language that can be used for the specific purposes too, In English Literature makes us learn about creativity, imagination, interacting with the text themselves and playing different literary roles. According to a great linguistic Noam Chomsky "Language is the inherent capability of the native speakers to understand and form grammatical sentences. A language a set of finite or infinite sentences, each finite length and constructed out of a finite set of elements". So we can say that different kinds of languages if we have to learn we must go through to literature, its necessary and significant. Language is the medium of literature, it can be conveyed in different channels. It may be drawings, sculpture, sounds, words and other related channels also be there described that's why we can say that literature and language depend on each other, its inseparable. Teaching literature in foreign languages is not easy task its not a simple task but with the help of above tools it happens possible nowadays, so literature is a medium to learn new languages.

### **Conclusion:-**

After reading above the points, we must accept the role of literature is significant in social development Literature connects with life it has played important role to inspire us. It is not an external one but an internal one. So we can say that it provides insights into human life and social realities. Just as human beings need food to survive, so human beings need literature for their progress so that we can be connected to this world. So we can say that literature has played a huge role in our social progress. Through literature, we also learn the difference between the past and present social system in different regions as well as in the country and the present day social system and its progress. It happened only cause

of education so taking education is also a huge role in the social development. Literature helps us to connect with world, help learning languages, provokes rights of freedom etc....So we can say that literature has an important role for social development.

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## **Green Banking Initiative and Challenges in India**

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### **Abstract:**

*Green finance plays a pivotal role in achieving an inclusive, resilient, and cleaner monetary boom by developing environmental benefits. The banking quarter performs a decisive position in encouraging environmentally sustainable and socially responsible ventures. To support the discount of carbon emissions, banking enterprises need to finance green applied sciences projects. Electronic banking is no longer solely responsible for financial intensification but it additionally plays a vital position in environmental protection. The main emphasis has been made on the notion and scope of green banking in India so as to make our surroundings human pleasant and enrich our financial productivity. The current study, therefore, more often than not explore the green revolution and traits that took vicinity in the banking zone in India and websites worldwide tendencies and showcases quite a number of challenges in the location of green financing in India and additionally recommends measures to face those challenges. The learn about is descriptive in nature and is primarily based on secondary information taken from various government reports published through the Government of India and different published reports of public and non-public zone enterprises and banks in India.*

**Keywords:** *Green Finance, Green Banking, Sustainable Development, Green initiatives, green banking challenges.*

### **INTRODUCTION:**

Environment sustainability is the sketch and provision of products and offerings that include and promote waste minimization, fantastic use, and reuse of resources. Its purpose is to protect the environment for the benefit of modern and future generations. It is all about meeting desires and in search of a stability between people, the environment and the economy. According to the United Nations, sustainable development meets the wants of the present besides compromising the capability of future generations to meet their personal needs. Sustainable development and maintenance of environment are now diagnosed globally as overriding imperatives to guard our planet from the ravages inflicted on it by mankind. Various international initiatives are underway to counter the ill-effects of improvement that we come across nowadays such as carbon foot print, world warming, climate change, fickle weather, floods, droughts, pollution, excessive greenhouse gasoline emissions, etc., whilst nonetheless there is no consensus among the countries on sharing the burden of ecological footprint, most of the international locations have been taking aggressive measures to handle global warming and local weather change.

The banking industry influences each monetary growth and development, each in phrases of high-quality and quantity, leading to a alternate in the nature of economic growth. Therefore, banking region plays a vital role in promotion environmentally sustainable and socially responsible investment. Banks may additionally not be the polluters themselves but they typically have a banking relationship with some companies/investment initiatives that are polluters or may want to be in future. Banks additionally make a contribution to ecological footprint directly and circuitously via investment/lending in their patron enterprises. As such they want to play a key function in optimizing /reducing the carbon footprint. It is said that what is now not measured, is not managed. Sustainable development has emerged as a new paradigm of development in response to the current discourse of development that over-exploits herbal environment for monetary prosperity. The reasonable improvement can best be carried out by way of allowing markets to work inner a becoming machine of cost knowledgeable hints and monetary instruments. One of the principal financial specialists affecting generally speak me current motion and economic improvement is the budgetary organizations, for example, banking division. Monetary companies are worried about the popular effect of consumption of condition; the principal effect of environmental change on banks is in truth now not instant i.e., banking area are affected to the extent that their clients' things to do and economic activities in widespread are constrained, IDRBT (2013). Banks adopted different digital channels so as to deliver offerings to differing types of customers. Banks themselves can embody green practices and due to this fact lead the path in this worldwide exercise and particularly emphasized on the implementation of 3R's i.e., Reduce, Reuse and Recycle IDRBT (2013). Banks are considered surroundings pleasant and do not have an impact on the environment appreciably via their very own 'internal' operations however the 'external' impact on the environment thru their customers activities is substantial. Internal natural effect of the economic area, for example, utilization of vitality, paper furthermore, water is reasonably low and clean. Environmental impact of banks isn't truly identified with their financial exercises yet with the client's exercises. Therefore, environmental have an effect on of bank's exterior undertaking is massive although challenging to estimate. Besides, situation the board in the

monetary commercial enterprise resembles hazard the executives. It will increase the enterprise fee and lowers loss ratio as higher great loan portfolio outcomes in higher earnings. Thus, encouraging environmentally in charge investments and prudent lending need to be one of the responsibilities of the banking sector. The time period inexperienced banking skill creating inclusive banking techniques which will make certain sustainable financial development. Green Banking refers to the banking commercial enterprise carried out in selected area and this method helps in typical reduction of carbon footprint. Green Banking entails banks to inspire environment friendly investments and give lending precedence to these industries which have already turned green or are attempting to go inexperienced and, thereby, assist to repair the natural environment. Green banking potential combining operational improvements, science and altering patron habits in banking business. It means merchandising environmentally friendly practices.[1] The idea of inexperienced banking will be at the same time beneficial to the banks, industries and society. Not solely inexperienced banking is associated to greening only it will additionally enhance the belongings satisfactory of the financial institution in future. IPCC, 2018, investment of USD 1.6-3.8 trillion electricity structures will be required to hold warming within a 1.5 diploma Celsius. In order to reach its 2030 climate targets, European Union will be required to make investments additional €180 billion per year in power effectivity and renewable energy. In order to construct sustainable infrastructure, Asia also requires investments of US\$1.7tm per year. Therefore, the function of financial region will grow to be crucial in the sustainable improvement in the coming years.[4] Green Banking typically use a device i.e., Green Finance, in securing balanced and sustainable growth. Green Finance basically consists of all kinds of financial instruments, for example, inexperienced bonds and devices alongside monetary establishments, for example, inexperienced banks and inexperienced helps that are related with the undertaking of ecologically feasible gadgets and tasks. Example: an interest in an industrial facility that contaminates intensely (and gives the prices to the conventional public everywhere) will with the aid of and massive have a greater financial pace of return than a manufacturing line that places resources into luxurious contamination manage innovation, consequently indicating a slower tempo of return. In what ability will banks evaluate the two and which one of the two will be concept about first for loaning, in spite of the fact that every person realizes that the subsequent case will needless to say be an ultimate challenge choice in the considering pretty a whilst ago run?[1]

### **Concepts of Green Banking:**

Green banking skill promotion surroundings pleasant practices and lowering carbon footprint from banking activities. This comes in many types viz., the use of on-line banking as an alternative of branch banking, paying payments on line instead of mailing them, opening of business deposits and money market bills in online banks etc.,

Green banking refers to the environment friendly and fantastic use of computers, printers and servers to optimize the use of strength and waste-less paper. One of the necessary ways in which banks can enforce inexperienced banking is by way of advertising the use of on-line banking among customers. Online banking helps decrease paperwork and the want to tour to financial institution branches. This positively influences the environment. This facility is advisable for banks, as it reduces operational expenses and increases efficiency.

This thinking of “Green Banking” would be jointly beneficial to the banks, industries and the economy. Green banking will also ensure the greening of the industries however it will also facilitate in enhancing the asset fine of the banks in future.

Carbon footprint is a measure of an organizations or entity’s influence on the environment in terms of the amount of greenhouse gases produced, measured in units of carbon dioxide equivalent. Global warming is a measure of rising common temperature of Earth’s environment and oceans and its projected continuation. In the final 100 years, the Earth’s average surface temperature increased via about 0.80C (1.4 F) with about two-thirds of the amplify going on over in the ultimate three decades. Most world warming is triggered by way of increasing concentrations of greenhouse gases produced by means of human activities such as deforestation and burning fossil fuels. Climate alternate is the trade in temperature and climate patterns due to positive human recreation like burning fossil fuels. The adjustments encompass world average air and ocean temperature, enormous melting of snow and ice and rising global sea levels. Therefore, a frequent thread strolling throughout all these initiatives is the focus on reducing the demand for fossil fuels by imposing the 3R’s viz. Reduce, Reuse and Recycle.

### **1. Evolution of Green Bank:**

First Green Banking was headquartered in 2009 in the kingdom of Florida. Based in Eustis and Clermont, Florida, USA, First Green Banking is a customer-driven neighbourhood financial institution providing

personalised service, localized decision- making and confirmed science by using merchandising a positive environment that is suited to the community.

State Bank of India, India's largest industrial bank, took the lead in placing high sustainability requirements and finished the first step in its 'Green Banking' initiative with Shri O.P. Bhatt, Chairman, SBI inaugurating the bank's first Wind farm venture in Coimbatore. Recent Green Banking initiatives encompass a push for photo voltaic powered ATM'S, paper less banking for customers, easy energy projects and the building of Wind mills in rural India. SBI is a leader in Green Banking.

## **2. Green Banking Financial Products:**

Green banking helps to create fine and far-reaching market-based options to tackle a range of environmental problems, along with local weather change, deforestation, air first-rate problems and biodiversity loss, whilst at the same time figuring out and securing that benefit customers. Some of Green banking financial products includes: green mortgages, online banking, remote credit score capture, green car loans and green savings cards.

**Green Mortgages:** In regularly occurring green mortgages additionally recognised as Energy Efficient Mortgages (EEM'S), supply retail clients with considerably low hobby quotes compare market charges for consumers who buy new strength environment friendly residences or make investments in retrofits, electricity efficient home equipment or inexperienced power. Banks can additionally choose to supply inexperienced mortgages by masking the fee of switching a residence from traditional to green power, as well as consist of this patron advantage when marketing the product.

**Online Banking:** Online banking, additionally regarded as internet banking, e-banking or digital banking, is an electronic payment system that permits customers of a financial institution or other financial group to behavior a vary of financial transactions through the monetary institution's website.

**Remote Deposit Capture:** Remote savings seize (RDC) is a gadget that allows a patron to scan cheques remotely and transmit the cheques snap shots to a economic organization for a deposit, generally with the aid of an encrypted Internet connection.

## **REVIEW OF LITERATURE:**

The essence of Green Banking is broadly discussed in research literature. In this Context many writers expressed they're on previous and recent development, Initiatives, challenges and measure in banking region related to green banking. Dr. K. C. Chakrabarty, Deputy Governor, Reserve Bank of India at the Yes Bank-GIZ-UNEP Sustainability Series event on Environment and Social Risk Management, on April 23, 2013, at Mumbai, He emphasis on the thought of green banking and burdened inexperienced banking has emerged and is recognized as a essential method to tackle sustainable enhancement worries and growing awareness amongst human beings about environmental responsibility. Green banking has two dimensions. First, the way the banking enterprise is being performed – is it paperless or not. There is often a doubt that what large impact a monthly paper announcement can have. It ought to be enormous. Estimates for US propose if every family have been able to switch to paperless bank billing, this would save an estimated 16,500,000 bushes per year or about a 46,000-acre forest, 396,000 tonnes of CO<sub>2</sub> a year, 495,000 tonnes of air pollution per year and reap almost 2,145,000 tonnes of oxygen per year. The 2d dimension of inexperienced banking relates to where the financial institution places its money. Green Banking entails banks to encourage surroundings pleasant investments and give lending precedence to these industries which have already grew to become inexperienced or are making an attempt to go inexperienced and, thereby, assist to repair the herbal environment.

According to Indian Bank Association 2014, "Green banking is like a everyday bank, which considers all the social and environmental / ecological factors with an purpose to defend the environment and preserve herbal resources." It is also acknowledged as ethical bank. The cause of the financial institution is to function banking recreation with taking care of earth's ecology and environment. Bahl & Sarita (2012) in their paper entitled Role of Green Banking in Sustainable Growth, conducted an empirical study on public area banks and collected manger's perspectives on inexperienced banking monetary items, carbon impression limit with the aid of paperless banking, carbon affect minimize by means of vitality cognizance, green structure and social duty administrations. They determined that carbon footprint discount by way of green constructing had been given top priority in green banking strategies. Meena, R. (2013) in their paper entitled Green Banking: As Initiative for Sustainable Development, found that banking is never viewed as a contaminating industry but the current measurement of banking activities has appreciably multiplied the carbon effect of banks due to their considerable utilization of vitality, (lighting, air conditioning, electronic/electrical equipment's, IT devices, etc) high paper wastage, absence of green structures, and so forth. Accordingly, banks ought to acquire innovation, cycle and gadgets which convey about great minimize of their carbon impression just as construct up a sensible business. To assist the



decrease of outdoor carbon outflow, banks fund inexperienced innovation and infection diminishing ventures. Mehta, & Ranjeet (2009) propounded that due to elements like highly educated and traumatic customers, shorter product life-cycles and growing competition, position of science has increased in decreasing environmental problems. Bhanagade, B. D., (2011), in their paper titled Globalization and Indian Banking: Issues, Challenges & Strategies, Economic Challenge propounded some of the aggressive challenges for banking as profitability, science in banking, hazard management, rural and social banking issues, human sources management, company governance, transparency and disclosures, etc. 'Think world and act local' is the way ahead according to him. RBI (IRDBT, 2014), Green banking is to make interior bank measures, physical framework and IT framework as plausible and knowledgeable as ought to fairly be expected, with zero or negligible impact on nature. They had brought inexperienced rating requirements for Indian banks, which are termed as 'Green Coin ratings' Under this ranking framework, banks are determined primarily based on carbon discharges from their activities and on the measure of reusing, renovation and reuse material being utilized in their constructing decorations and in the frameworks utilized by them like workers, PCs, printers, organizations, etc. They are too being determined on the positive of green undertakings account with the aid of them and prizes or acknowledgments given to borrowers for turning their companies greener. Dharwal, M., & Agarwal, A. (2013) In their paper entitled Green Banking: An Innovative Initiative for Sustainable Development found 4 key findings: (a) banks are steadily speak me about environmental trade enterprise openings in their every year reports, (b) 28 of the forty banks have decided and published their ozone depleting substance emanations from activities, (c) developing interest for atmosphere benevolent financial gadgets and administrations is driving banks into new commercial enterprise sectors, and (d) hypothesis banks have played a predominant section in supporting outflows exchanging factors and providing new danger the executives items. Singhal, Singhal & Arya (June 2014) entitled Green Banking: An Overview studied, how financial institution can go greener. According to find out about banking industries and monetary group performs a very necessary function in the boom of an earth. Green banking saves the strength and surroundings both. Nowadays many banks are providing inexperienced product like ATM, Green credit score cards, inexperienced CDs, digital fund transfer, use of solar and wind electricity etc. but it is nonetheless not completed. We have to make more efforts so we can retailer surroundings and inexperienced banking is one of the satisfactory ways to begin this. Tejinder Pal, (2017) In their paper entitled Green Banking Initiatives: A find out about on Bankers' Consciousness, observed that foremost goal in the back of green banking is to improve the strength and carbon effectivity of financial institution and merchandise efficiency for the clients in relation to it have an impact on on environment. It was once discovered that overseas region banks had been beforehand in terms of presenting on line services and the usage of on-line mediums for presenting consciousness to customers. On the other hand, public area banks had been much less influenced in phrases of the use of and motivating clients about inexperienced technologies. After adopting inexperienced banking, it was once observed that banks nevertheless rely upon paper based totally mediums for advertising their products and services. Turk et al. (2003), The Financial Development Report (2008) growing the electricity effectivity can be considered as widespread enchantment possibility and should have a prominent role in the environmental management system. But safety and have faith has emerged as largest obstacles in the adoption and utilization of E-banking.

#### **CHALLENGES:**

Following are the key challenges faced by the banks while implementing green financial strategies:

#### **Challenges of Green Banking**

While adopting green banking practices, the banks would face the following challenges:

1. Defying Challenges to Going Green: Green banks uphold terrific causes; they do confront a ton of difficulties regarding benefit elements. Much the equal as those socially cognizant and ecological shared assets, they are relied upon to trip a large quantity of impediments than frequent regular bank.
2. Need suitable legislation: The present-day market rehearses, tips checking the market and money associated motivating forces are turning into a fantastic obstacle in the accomplishment of money associated instruments. Government needs to sketch desirable legislation of environmental rules for banks and make sure enforcement.
3. Environmental audits: Absence of herbal opinions is needed to figure out the herbal popularity of an office, property, and pastime and to recognize administrative consistence status, past present problems and potential natural dangers and liabilities associated with the venture.
4. Environmental danger management: Less interest is given for the environmental chance administration after the post transaction period.

5. Diversification: Green banks will be screening their customers and naturally, they'll be limiting and restricting their business to these entities that qualify. With a smaller pool of customers, they'll automatically have a smaller income base to aid them. If they focal point their loans on certain industries, they open themselves up to being plenty greater vulnerable to economic shifts.

6. Reputation Risk: In all likelihood, due to growing recognition about surroundings safety, banking establishments are more susceptible to unfastened their reputations if they are worried in big projects, which are seen as socially and environmentally damaging.

There are also few instances the place environmental management system has resulted in value savings, amplify in bond value etc. In barely any cases the herbal administration framework introduced about lower hazard, extra distinguished ecological stewardship and increment in working benefit. Reputational chance associated with the financing of biologically and morally sketchy tasks.

7. Start-up face: Many banks in inexperienced commercial enterprise are very new and are in start-up face. Generally, it takes 3 to 4 years for a financial institution to begin making money. Thus, it does not help banks throughout recession.

8. Credit Risk: Credit hazard arises due to lending to these clients whose businesses are affected through the cost of pollution, exchange in environmental legislation and new requirements of emission level.

9. High operating cost: green bank requires gifted and skilled staff to furnish applicable services to customers. Experienced mortgage officers are needed, they provide additional experience in dealing with inexperienced business and customers.

### **GREEN BANKING STRATEGIES:**

**1. Green Banking via inner operations:** Its capability all bank should adopt inexperienced banking activities in their day-to-day operations. These consist of adopting gorgeous approaches to use renewable energy, automation and minimizing their carbon footprint. In the past few years, all the banks have integrated paperless technologies in their inner operations to help the surroundings as nicely as furnish their clients efficient and better services. In their daily business operations, banks more often than not generate carbon emissions thru the utilization of paper, electricity, stationary, lighting, air conditioning and electronic equipment. Green banking interior operations include on line account opening, on line banking, mobile banking, internet banking, electronic fund switch as well as the use of ATM, cash and cheque credit score machines, credit score and debit cards, e-statement SMS alert, mini photo announcement etc.

**2. Green Finance:** Green Finance refers to banks that furnish monetary help to environmentally responsible projects. The purpose is to grant monetary help to inexperienced technology and pollution discount tasks to reduce external carbon emissions. The bank guide industries that are aid environment friendly and emit low carbon footprint. Priority is given to financing eco-friendly business things to do and energy efficient industries such as waste water remedy plant, waste disposal plants, bio-gas plants, renewable electricity projects, hybrid car initiatives and so on.

### **3. Environmental Management by way of Banking Institutions**

Now a days, most of the business lending process in specific components of the world scrutinizes tasks with a set of equipment by using incorporating environmental issues in their everyday business. The economic institutions need to motivate initiatives which take care of the following aspects while financing them.

There be an Environmental Impact Assessment (EIA) of each challenge recommending the measures wished to prevent, reduce and mitigate the environmental bad impact before financing the projects.

While investing or funding the projects, the monetary establishments have to check the sensitive troubles like susceptible groups; involuntary displacement and so forth and projects ought to be evaluated in terms of environmentally important areas which include wetlands, forests, grasslands and different herbal habitats.

Banking establishments want to evaluate the cost of actual property and the workable environmental legal responsibility related with the real property. Therefore, the banks must have proper to look into the property or to have an environmental audit carried out thru the life of the loan.

Banks additionally want to monitor put up transaction for the perfect environmental risk administration program all through the undertaking implementation and operation. There need to be physical inspections of production, resources, training and support, environmental liability, audit applications etc.

The subsequent spherical of comparison consists of mortgage structuring, credit score approval, and credit score review and loan management. Further banks have annual audits, quarterly environmental compliance certificates from the unbiased third celebration and additionally from the government.

Further the banks can introduce inexperienced financial institution loans and merchandise like:

Investing in initiatives related to recycling, farming, waste disposal through decreased hobby quotes on loans to home proprietors for putting in a photo voltaic strength system. Providing option for clients to invest in environmentally pleasant banking products. Investing in resources that combine ecological worries and social concerns.

#### **4. Measures to encouraging Green Banking:**

Banks are accountable company citizens. Banks agree with that each small “GREEN” step taken today would go a lengthy way in constructing a greener future and that each one of them can work toward higher global environment. The purpose is to provide fee efficient automatic channels and to build consciousness and awareness of environment, country and society. Green banking is honestly an excellent way for humans to get greater recognition about international warming; each businessman will make contributions a lot to the environment and make this earth a better location to live. Until a few years ago, most common banks did not practice inexperienced banking or actively are searching for investment possibilities in environmentally-friendly sectors or businesses. Only recently have these strategies come to be more prevalent, no longer solely amongst smaller alternative and cooperative banks, however additionally among diversified economic provider providers, asset administration companies and insurance plan companies.

#### **CONCLUSION:**

Possible coverage measures and initiative to promote inexperienced banking in India has become the want of the hour. In a rapidly altering market economy where globalization of markets has intensified the competition, banks need to play a pro-active function to take environmental and ecological initiatives. The banking and financial area must be made to work for sustainable development. As some distance as green banking is concerned, Indian banks are walking in the back of time and it is the want of the hour to assume it significantly for the sustainable growth of the nation. Green Banking thinking will be really useful for each the banking industries and the economy. Not solely “Green Banking” will make sure the greening of the industries but it will additionally facilitate in improving the asset great of the banks in future.

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## **A Study on the Role of NGOs in Creating Sustainable Development:**

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### **Abstract:**

*Sustainable development (SD) has become a popular catchphrase in contemporary development discourse. However, in spite of its pervasiveness and the massive popularity it has garnered over the years, the concept still seems unclear as many people continue to ask questions about its meaning and history, as well as what it entails and implies for development theory and practice. The purpose of this paper is to contribute to the discourse on SD by further explaining the paradigm and its implications for along with government and private sector, non-governmental organizations (NGOs) constitute the third pillar of sustainable development. Enhancement of sustainable development is not possible unless government, private sector, and NGOs work in conjunction with one another. Nowadays in many countries, NGOs work powerfully and efficiently. Sustainability is defined in terms of four overlapping positions, ranging from very weak to very strong sustainability. The core idea is of a non-declining capital stock over generational time. A lot of social support functions such as helping victims of natural disasters and wars, supporting human rights, protecting the environment, and attempting to implement goals of sustainable development cannot be achieved without active cooperation of the aforementioned pillars.*

**Keywords:** *on-governmental organizations (NGOs) sustainable development.*

### **Introduction:**

NGOs with the support given by the government has been accelerating its development activities by taking up specific issues like poverty alleviation, child rights, casts stigma and discriminations, women rights, child labor, rural development, water and sanitation, environmental issues etc. This paper will introduce the reader to non-governmental organizations, especially how they have become one of the forerunners in helping make this world a more sustainable place. The global definition of sustainable development considers that humanity can “meet the needs of the present without compromising the ability of future generations to meet their own needs”, as the driving force for programmers of environment or development, across government, civil society, business and industry. It seeks a harmony across economic growth, social inclusion and environmental protection while attempting to eradicate poverty and better standards of living. A non-governmental organization (NGOs) is any non-profit, voluntary citizens, group which is organized on a local, national or international level. Task –oriented and driven by people with a common interest, NGOs perform variety of service and humanitarian function, bring citizen concerns to Governments, advocate and monitor policies and encourage political participation through provision of information. It is important to note that organizations which are not kept under government direct control are non-governmental organizations. The time when human realized the importance and benefits of cooperative work, the basis of early community-based organizations was formed. Therefore concerning the above mentioned definition, it is not possible to create a specific date range for the formation of early community-based organizations.

### **Statement of the problem:**

Planners and decision makers hold a view on development which is different from reality. This causes people, who are mostly the target audience of development process to have a distinct and inconsistent perception of the term ‘development’. In a real sense, development means participation of people and organizations in all stages of it, only in which case people and community-based or non-governmental organizations can directly or indirectly benefit from their involvement.

### **Objectives of this study:**

The objectives of the present study are as follows.

1. Reviewing the concepts of the structures of NGOs
2. Reviewing the role of NGOs in creating sustainable development
3. Offering executive solution for making NGOs activities role in creating sustainable development more effective.

### **Research questions:**

The present study seeks answers to the following questions.

### **Main questions:**

1. What are the role nongovernmental organizations in enhancing industrial and financial economic development and solving socio-political and managerial?
2. What is the role of nongovernmental organizations in creating sustainable?

3. Do existing laws and regulations in the legal system of the Islamic Republic of Iran can be the right platform for non-governmental organizations to reach their goals?

**Subsidiary questions:**

1. what is a non-governmental organization?
2. what are possible ways to strengthen the role of NGOs?
3. Does the structure of the government in Iran have the capacity to enhance the formation of non – governmental organizations?

**Significance of the study:**

The present study offers new concepts of the structure of NGOs with the aim of understanding the functional structure of these organizations, further studying the participatory status of NGOs in a country's economic and industrial development.

**Research method:**

This study has utilized library and documentary research methods. Using documents and field research, the study investigates international and domestic NGOs and also explains the necessary variables.

**Data Collection:**

The method of data collection is library based. Also field research is used to collect and analyze the documents of international and domestic NGOs.

**Instruments:**

Data collection instruments in this study include related books, governmental documents, sample international and domestic articles of association, and web based materials.

**Data Analysis:**

In this study, the method of data analysis is adopted based on the answers given to the questions raised. After collecting the data, a comprehensive definition of non-governmental organizations is given and their role in social, economic, and managerial activities is examined.

**NGOs and sustainable development:**

The term sustainable development was coined around the mid-1980s, although the concept has been constantly evolving since its inception. More dynamic and ever-changing governance structures in the domestic and international arenas have encouraged increased participation of non state actors in policy design and implementation. Highly touted as “the new governance style”, participation. Directly or indirectly, NGOs play an important role in awakening the people and enhancing human development in a society. However, in underdeveloped or developing countries, there are serious obstacles to performing the activities of non-governmental organizations and group activities in general.

**Conclusion:**

In an era where notions of citizen participation and democracy are inextricably interwoven with the concept of sustainable development, the need to make the voices of concerned stakeholders heard is urgent. The rise of the concept “civil society” as a way of strengthening democracy has led to an increased interest in serious academic research on the subject. The functions of big governments can be explained by analogy with the movement of crippled giant creatures whose efforts yield no satisfactory results. One of the most fundamental mechanisms of sustainable development is to strengthen non-governmental organizations, there by underpinning the prospects of achieving goals, such as shrinking the government, empowering people and enhancing social capital among all classes of society, developing an efficient economy system, optimizing the process of planning and creating well operationalized programs, dealing with the expenses, corruptions and inefficiency resulting from the big government. It should also be noted that deploying a reasonable and cost- effective approach and seeking participation of the wider group of people are key to the attainment of the aforementioned goals.

That is why international organizations involved in development process have recommended strengthening of NGOs in developing countries as an effective treatment over the last two decades.

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## **A Comparative Study Of Mental Depression Among Hostel and Non Hostel College Students**

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### **Abstract :**

*Background: College age is a transitional stage marked by rapid changes in physical, cognitive and emotional development. It is important to look at the state of depression of boys and girls who live and do not live in hostels.*

*Aims : "A Comparative Study Of Mental Depression Among Hostel and Non Hostel College Students."*

*Method and material : A cross sectional study was conducted in the senior college for a total of 200 students in the age group of 18 to 24 years. out of which 100 students were locals and 100 students were hostels. questionnaires were used to assess mental depression among students. statistical analysis was pre found using SPSS. Result: Scores within the domain e.g. Depression can be significant. Scores can be found to be as high as hostels. Conclusions: Educational institutions need to identify the prevalence of mental depression among students, especially high-risk students, and take preventive measures to reduce mental depression. In this, it is important to address the mental depression of students living and not living in hostels.*

**Key Words :** *College Hostel Student, Non Hostel Student, Mental Depression.*

### **Introduction :**

The hostel is an integral part of the college. Life in a college hostel is different from the home environment. The hostel is usually on the college campus. Hostel facilities are provided to the students. Students whose parents live in remote areas or where higher education is not available have no choice but to stay in hostels. Hostel life is the most important time in a student's life that can turn their career around. It plays an important role in the development of the student's personality. The students in the hostel come from different levels. Living together has an effect on the personality of the students and can have an effect on later life.

The administration in the hostel provides many facilities for the students. Each hostel has a reading room, gym, dining hall. Similarly, each hostel has a large common room, where students come together every evening and participate in various sports. But there are also questions that some hostels do not have facilities, they have no choice but to face the children. In some cities, hostel facilities are not good, which affects their mentality. The purpose of this research is to find out whether the quality of food, physical facilities, physical and mental abuse, poor behavior cause mental depression in students. And they are compared to students who do not live in hostels.

When we live far away from home where we have no one, it is important to see what effect our mindset has on hope. Mental depression is a common and serious medical illness that negatively affects how you feel, the way you think, the way you behave, the relationships you have with others. This can lead to a variety of emotional and physical problems and reduce a person's ability to function at work and at home. If a person does not get out of depression, he can injure himself physically.

### **Statement of the problem :**

A Comparative Study Of Mental Depression among Hostel and Non Hostel College Students.

### **Objectives :**

1. To study the Mental Depression among Hostel and Non Hostel college student.
2. To study the Mental Depression among male Hostel college student and female Hostel college student.
3. To study the Mental Depression among male non Hostel college student and female non Hostel college student.

### **Hypotheses :**

1. There would be no significant difference on Mental Depression among Hostel and Non Hostel college students.
2. There would be no significant difference on Mental Depression among male Hostel college student and female Hostel college student.
3. There would be no significant difference on Mental Depression among male non Hostel college student and female non Hostel college student.

### **Variables :**

Independent Variables : Types of Subjects : Hostel College Students, 2 Non Hostel College Students.

Gender : Male ,Female

Dependent Variables : Mental Depression

### **Sample :**

There Age Group will be 18-24 years .The sample comprised 200 subjects; 100 subjects of Hostel College Student (50 Boys and 50 Girls) and 100 subjects of Non Hostel College Student (50 Boys and 50 Girls). The sample will be collected from Kolhapur District under 10 collegies and Hostel colleges. data collection method will be the Startifaied Random sampling method.

**Research Design :**

In the present study a balanced 2X2 factorial design will be used. This research will be including independent variable as types of Subjects and gender. The Mental Depression are dependent variables.

**Tools :**

Mental Depression : The scale was developed by L.N.Dubey. There are 50 statement in the scale. Every statement has two answer 'yes' and 'no'. 'yes' indicates mental depression and indicates no depression. The reliability coefficient by Test-retest method and Half-Split method was found 0.64 and 0.69 respectively. The validity coefficient was found 0.41 and 0.39.

**Result, Data Analysis, and Discussion :**

**Table : 1**

Types of college	Sample	Mean	SD	't' Value
Non Hostel college Student	100	14.63	7.72	The result is - - 1.16 not significant at .05
Hostel college Student	100	15.86	7.22	

The 't' value is -1.16 . The result is not significant at p .05

**Table : 2**

Types of college	Gender	Sample	Mean	SD	't' Value
Non Hostel college Student	Male	50	15.62	8.45	1.28 Not. Significant.
	Female	50	13.63	6.85	
Hostel	Male	50	17.66	6.79	2.25

<b>college</b>	Female	50	14.06	7.25	Significant
<b>Student</b>					

The two groups of studies according to Table No. 1 here are not significant in terms of mental depression and type of students. It should be noted here that according to the scoring pattern, mental depression shows the same qualities. That is, it can be said that the level of mental depression of students living in hostels and non-students living in hostels show the same qualities. The table No. 1 is accepted here as there is no difference between the two groups. One of them mentioned that the mean score of the students living in the hostel is higher than the mean score of the students living in the hostel. This leads to more mental depression among students living in hostels.

Table 2 shows the gender difference between students living in hostels and non-students living in hostels. Table: 2 is the first gender difference between students living in hostels. The boys living in the hostel have a mean of 17.63 and the girls have a mean of 14.06 with a 't' of 2.25. table No. 2 is not acceptable here. This shows that the rate of depression is higher among boys living in hostels than among girls. This can be due to a number of reasons, such as living away from home, lack of amenities, environment, time to move to another city, personal difficulties, which makes boys more prone to depression than girls. Girls are more likely than boys to cope with the environment and situations, so girls are less likely to be depressed than boys.

Table 2 shows the gender difference between students living in non-hostel. Boys who do not live in hostels have a mean of 15.62 and girls have a mean of 13.63 with a t-1.28. Table No. 3 is acceptable here. It appears that the rate of depression is similar for boys and girls who do not live in hostels. The main reasons for this are different from those of children living in hostels. Parents' expectations, personal difficulties, financial poverty, learning disabilities, getting a job, completing college education, etc. can be factors. The incidence of depression is similar in girls and boys. Girls are more capable of coping with the environment and situations, so girls are less likely to be depressed than boys.

**Conclusions :**

1. There is no significant difference in the average scores of mental depression between students living in hostels and those who do not.
2. There is a significant difference in the average score of mental depression between male and female living in hostels.
3. There is no significant difference in the average score of mental depression between male non Hostel college student and female non Hostel college student.

**Recommendations :**

College students as well as boys and girls living in college hostels need guidance and counseling to reduce depression. Research has shown that boys are more likely to be depressed than girls in hostels, so it is time to have a counseling room in a hostel.

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## **Climate Change: Ecological Phenomenon in *The Hungry Tide* of Amitav Ghosh and in *The Coffey Dams* of Kamala Markandaya**

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### **Abstract**

*This paper deals with the climate change that is caused due to a number of reasons that are presented in the novels of Amitav Ghosh and Kamala Markandaya. The novels *The Hungry Tide* and *The Coffey Dams* unveil the divergent irrational and unethical actions, modernized thoughts and indifferent attitude of the people towards nature. This brought about hazardous changes in the benevolent aspects of the nature and in some way converted the nature from preserver to the destroyer. The novels present the nature both as preserver and the destroyer for which the human beings are responsible. However, an analytical method is used to deal with this study. The focus of study is to find out the attitude and thinking of the people, which are presented in these two novels that contribute to have the change in the climate and the adverse effects of this climate change on the human beings and non-human beings and other parts of nature. *The Hungry Tide* (2004) of Amitav Ghosh and *The Coffey Dams* (1969) of Kamala Markandaya presented the inhuman act of people of killing the animals, non-vegetarian diet, cutting the trees for the development, trespassing the reserved area of the wild animals, use of high load bearer machineries, destroying countryside area and construction of the dams and the buildings.*

**Keywords:** *Climate Change, Ecology, Devastation, Modernization.*

### **Introduction**

Amitav Ghosh and Kamala Markandaya love the nature and express their thoughts about the preservation, conservation and protection of the nature in their novels. *The Hungry Tide* (2004) and *The Coffey Dams* (1969) touch the globalized and a very significant issue of climate change and destruction of the nature. The attempt is made to find out in these novels the causes that brought about a vast catastrophic change in the climate and also cast their perilous aftermath upon distinct parts of the nature. To prepare this research work analytical method is used. The principal settings of the novel *The Hungry Tide* (2004) are Lusibari and Garjontola, the Sundarbans. The area of the Sundarbans, its natural beauty fascinates each and every one, but along with this, it has another side as this place is dangerous to live where the assaults by the tigers, biting by the snakes, and nature's furious nature in the form of the cyclone and the storm which devastated the life of a number of people, the life of a number of animals and birds, the trees, and the plants are destroyed. But the question is who is responsible for this devastation? As Amitav Ghosh and Kamala Markandaya both presented nature as preserver and the destroyer. Who made nature the destroyer? *The Hungry Tide* shows that how the area of Sundarbans is trespassed by a number of people and disturbed the life of the animals, aquatic animals, and destructed the green area. However, the poor inhabitants of the Sundarbans area are closely attached with the nature and their conduct and attitude towards animals, river, birds and mangroves tress help to maintain the balance in the nature. Only there are some of the incidents where some inhabitants become aggressive and behave unethically by killing the tiger, but overall their culture and bond with the nature contribute immensely to the preservation of the nature. The novel *The Coffey Dams* (1969) portrays the materialistic, machine oriented minds and industrialized notions of the westerns who come to build the dams in the village neglecting the agrarian culture, the forestation and the temperament of the poor residents of the village.

According to Cheryl Glotfelty the literature and its relationship with the environment, particularly with the physical environment is studied in Eco-criticism. Many of the fictional works portray the relations between the human beings and the non-human beings. However, William H. Rueckert makes use of the term "Eco-criticism" first time in 1978 with the intention to emphasize on "the application of ecology and ecological concepts to the study of literature" (Mehta, p. 20). Eco-criticism also views the effect of modern science upon the nature and on the life of the human and non-human beings. The modernization, industrialization, materialistic life style, the concrete based structure, these all massively contribute to deteriorate the clean, graceful, hygienic and healthy environment of the world. The Eco-criticism studies the literature to find out the environmental and ecological concerns in it. However, Vineet Mehta writes that:

"Both environmentalism and ecocriticism share an umbilical relationship with science of ecology, Ecocriticism's relationship with modern science has been ambivalent." (Mehta, p.21)

However, in the early literature during Romantic age the poets appreciated the nature's beauty. But in modern era it has become need of the day to discuss upon the people's harmful conduct and attitude towards nature which devastated the nature and brought about the change in the climate.

**Climate Change: Ecological phenomenon in *The Hungry Tide* of Amitav Ghosh**

*The Hungry Tide*, the novel has been considered to be the best work of Amitav Ghosh which presents the ecological system, nature's power, nature's beauty and the divergent consequences that are caused due to climate change. Piyali Roy, cetologist, the chief character of the novel arrives in Sundarbans for the completion of her research on the dolphin Orcaella. She expresses her deep love of the nature as the river, the mangroves, the wild animals, birds, aquatic animals and also her affection towards poor inhabitants of the Sundarbans. Kanai Dutt, the business man from Delhi helps her as translator in her research work. He comes in Sundarbans to read the journal that his uncle Nirmal wrote. The journal consists the narrative of the past history which is compared with the present. Fokir, the marginalized and the poor possesses the knowledge of marine life and the surroundings of Sundarbans. He assists Piyali Roy in her research and makes her acquainted with a lot of knowledge of the marine life. The area of Sundarbans contains the two different sides as it is beautiful and it is jeopardous and parlous to live. The attacking tigers, crocodiles, the dolphins of Irawaddy, the biting of the snakes make the life in Sundarbans precarious. Along with this the awesome fury of the nature in the form of the cyclone annihilate the life on the earth, life in the sky and life in the water. The change in the climate brought with it huge devastation. The cyclone in Sundarbans twisted the trunks of the trees, whirled the coconut palms, When Piyali Roy sees the bushes of the mangroves interlocked in the branches of the trees, she feels that as if the whole island is hung in the sky. Fokir and Piyali Roy experienced nightmare moments when they hear the noise of the storm as if falling of the waterfall, the rising of the water and the massive flood to the river. The effects of the gale and the flood are seen in the novel as:

“ . . . Piya glimpsed something that looked like a wall, hurtling towards them, from downriver. It was as if a city block had suddenly begun to move; the river was like pavement lying at its feet, while its crest reared high above, dwarfing the tallest trees. It was a tidal wave sweeping in from the sea . . .”(Ghosh, p. 383)

The modern scientific culture acts as the destroyer of the nature, and the nature acts as the destroyer of the life on the earth, in the sky and in the water. The mangroves bushes are too dense and thick to walk and crawl. Nothing can be seen easily in the plants of the mangrove, the river flows through this area. But the effect of the force of the nature is terrible that easily hang heavy things. The effects of the climate are discussed in this novel. The poor inhabitants follow the forest culture and preserve the nature, but the politics starts creating hurdles in the close bond of the inhabitants and the nature by bordering the land of Morichjhapi as reserve area. Some of the incidents of killing the tiger and perishing the life of some of the animals pave the way for imbalance in nature.

**Climate Change: Ecological phenomenon in *The Coffey Dams* of Kamala Markandaya**

*The Coffey Dams* deals with the significant global issue of the climate change that is being experienced in the whole globe. The big change is found in the seasons, atmosphere, the proportion of the rain falling. In this novel Kamala Markandaya discusses the minds of the commercialized western people who value more to the construction of the dams and the bungalows in the countryside village, for which they cut the trees, and demolish the huts and houses of the rural people. The concrete based structure obsessed the minds of the modern people and the structure made with the soils, roofs, natural resources became antiquated and unfashionable for them. When the British people arrive in India to construct the dams on the river they start chopping the trees and demolishing the huts of the rural people. It means the British people played casually and carelessly with the villagers considering them to be unintellectual and backward people. They deceive the countrymen in the name of the development and the act of luring these people to the everyday wages denote the greediness and indifference of the British people. The villagers truly enjoyed the life in the nature with full of enthusiasm but the arrival of the British people creates a big gap in the relationship of the nature and the rural people. Construction of the Dams comes first for the British and the lives of the poor people are worthless and vain for them. The hypocrisy and inhuman minds of the British officers are also seen when during the time of the working there occurs a catastrophic accident and many Indian poor workers died in that accident, their bodies are left there by British officers without completing the rituals of cremation. But two British workers died in that accident they are given cremation as per their rituals. The modern technocrat and unethical business minds of British officers deteriorated and devastated the nature. The chopping of the trees, using concrete and chemical material, destroying the huts built with natural resources, the use of thousand tons of equipment as bulldozers,

dumping trucks, excavators, high load capacity crane, pumps, tyres etc. are use in the green forest and hilly area which disrupt the atmosphere of the forest and started destruction. As Kamal Markandaya writes:

“Most of the Equipment came up under its own steam, the rest by road transporter. They drove the lorry-mounted crane to the foothills and towed it from there, the head section of its jib folded back neatly alongside the heel . . .” (Markandaya, p. 88)

Helen, the wife of Clinton loves the nature, the native poor people, she is entirely different from other British officers. She feels pity for those poor whose huts are collapsed and the bungalows are built on that place. She first thinks of the poor people and the forest then about the dam. Bashiam, de-tribalized , though he is outsider but he is brought up with the tribal so he has immense knowledge about that area and about the tribal. The tribal chief possesses the knowledge of the seasons. He foretells the arrival of the heavy rain which may damage the dam. The irrational behaviour of the people started to show their disastrous effect upon the nature in the form of heavy rain. The dam was in danger. The British technician, officers, and Clinton were frightened, their intellectual minds stopped to work, but the Indian tribal chief with his deep knowledge of the season and the area saved the dam. This shows that the knowledge tribal chief proved the incompleteness of the modern scientific knowledge of Clinton.

However, the cultural divergence between British and Indian is seen in Maidan and Malnad to be converted into a small amount with respect to the technological and machinery development. Bashiam, Krishnan, rural people feel the need of the dam and appreciate the construction of the dam when the dam is constructed fully. However, Bashiam and Krishnan had attracted towards modern development initially. The construction of dam increased their fascination towards modern science. This altering harmful thinking of the people becomes the larger cause of disturbing the balance of the nature.

### **Conclusion**

This enticement of the people towards modern technological development taking the nature towards destruction and bringing about a massive change in the climate. The culture of rural area is replacing gradually with the culture of urban area in the name of the development which is gradually leading to the destruction of the nature. The modern developing science paving its roots into the making of the nature as destroyer. The novel *The Coffey Dams* discusses the construction of the dams in the forest, in the green countryside area on the river, demolishing of the huts of the poor inhabitants of Malnad, using a very heavy machinery, the blasting, using of chemicals and the captivation of this machinery world all together wreck the nature and change the climate. *The Hungry Tide* portrays the nature as preserver and the destroyer. The ill-treatment by the people to the nature, over use of the natural resource make the nature destroyer. Nature's awesome fury is depicted in this novel by Amitav Ghosh which is beyond the thinking of the people. Both the novels show the reasons and the effects of the climate change which make the world know the need of changing the attitude, lifestyle, and to become preserver and the protector of the nature.

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## **A Study of Major Environmental Movements in India**

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### **Introduction:**

Environment is one of the major focus of geographical studies. Environment has always been in the backdrop throughout methodological debates in geography and its study in one way of the other. India is a land of Philosophy of nature and its conservation Gandhi Preached, plain living high thinking Gandhi's model of economic growth is the sustainable growth the present day environmentalists profess, where as our leaders, policy makers profess to western model of economic growth. Mrs. Indira Gandhi's speech on the 1970's conference on Human Environment was highly acclaimed. She established a National Committee for Environment Planning and co-operation. Soon after a series of enactment of Environmental laws for environmental protection—were passed in the parliament, the U.N Conference in the world wide life protection Act -1972 was enacted and Gandhi was a great environmental activist of the world and for which she was awarded the prestigious International Union of conservation of Nature Award. In recent years so may gross root environmental movements launched against the developmental activities that have threatened the ecological balance.

### **Objectives of Study:**

- 1) To study of major environmental movement in India.
- 2) To study the control over natural resources in India.

### **Methodology:**

The present research paper is based on the secondary sources. The secondary sources used for this article are various research journals, the reports of the Government of Indian etc.

### **Major Environmental Movement in India:-**

#### **Chipko Movement:**

It was started by noted a environmentalist and chipko movement leader Sunderlal Bahuguna (9 January 1927-21 May 2021) in 1970 to safe guard the rich forest of Western trans-Himalaya Range in Uttar Pradesh. This movement was basically a people movement to resist the cutting of trees. There were frequent floods in the Alaknanda River catchment area due to cutting trees for developmental world like the construction of roads, river dam project etc. The people of village Gopeswar formed and association called Dasholi Gram Saraja Mandal in 1970 mainly to provide relief to flood affected people in that area. Than they diverted their attention to the importance of forest cover and under the leadership of Bahuguna a made movement to protect environmental and ecology and the movement drawas the attention of the Govt. and World Bank. Chipko's popular slogan was " Ecology is permanent economy."

#### **Sound of Nature (Save Silent Valley Movement):**

An NGO of Kerala called Kerala Sahitya Parishad (KSSP) Raised their voice to stop The Silent Valley Project in 1978. Silent valley is tropical forest with enormous bio- reserve. The state Govt. Of Kerala wanted to hydroelectric for the power hungry state inside a deep tropical forest in silent valley. This tropical forest was the only remaining one in the country. The environmentalist object to the project and filed a case in High Court, which they lost project was cancelled by the help of Mrs. Indira Gandhi.

#### **Narmada Bachao Andholan (NBA):**

In the state Madhya Pradesh, it was started to protest the construction of mainly Sardar Sarovar dam but around thirty in numbers of large dams being built on the river Narmada to produce hydroelectricity and irrigation facility to the drought prone area of Kutch, Gujarat social activist Baba Amte, Adivasis, Farmers and Environmentalist human rights activists. Medha Patkar is the two leaders to fight against the Govt. and judiciary for the benefits of tribal of that affected region. Noted writer Arundhati Roy also joined the movement. It was estimated that two big dam's construction on the river Narmada costs Rs. 30,923 loss. Besides this the project will submerge about 130482 Hectors of which 55681 hectors are prime agricultural land arid 56066 hectors are forests. The two dams na,ely Sardar Sarovar project and Narmada Sagar Project have enormous utilities to the people for supply of electricity and irrigation but the estimated Environmental cost is too much to ignore according to report by environment scientists.

#### **Bishnoi Movement:**

Years of 1700s place of Khejarli, Marwar region, Rajasthan state is a leaders of Amrita Devi along with Bishnoi villagers in Khejarli and surrounding villages. Save sacred trees from being cut down by the kings soldiers for a new place. Amrita Devi, a female villager could not bear to witness the distruction

of both her faith and the village's sacred trees. She hugged the trees and encouraged others to do the same. 363 Bishnoi villagers were killed in this movement. The Bishnoi tree martyrs were influenced by the teaching of Guru Maharaj Jambaji, who founded the Bishnoi faith in 1485 and set forth principals forbidding harm to trees and animals. The king who came to know about these events rushed to the village and apologized, ordering the soldiers to cease logging operations. Soon afterwards, the maharaja designated the Bishnoi state as a protected area, forbidding harm to trees and animals. This legislation still exists today in the region.

#### **Appiko Movement:**

It was started in 1983 by the people of village Balegadde district Uttara Kannada, Shimoga of Karnataka State. The Appiko movement was locally known as "Appiko Chaluvali" the trees which were to be cut by contractors of the forest department. This district is a part rich forest of western Ghats. The people of this village protested the cutting of teak trees by Chipko way of embracing the trees. The activist spread the movement throughout the region by Padayatras, meetings, folk dance etc. The movement mainly focused on the conserve to grow trees. This movement has played the most crucial role to preserve the environment and ecosystem of Western Ghats. The movement became a success and current status of the project is stopped.

#### **Control Over Natural Resources:**

Control over natural resources is an important reason for emergence of environmental movement in India, Some good examples of these kinds of movements are like Chipko and N.B.A In the first case, the reason for conflict was control over forest; whereas, in the second the reason was control over water. Let's have a look on the reasons behind the emergence of Chipko Movement in the Garwhal Himalayas.

One important factor is that those poor people dependent upon those natural resources for their survival hood. So the changes in control of resources directly hamper their subsistence economy due to which their survival hood came in danger. Therefore, the protest of people rise against those outsiders, which had ultimately taken the shape of environmental movement instances.

#### **Conclusion:**

Environment can be saved by the planting more trees, recycling, reusing, reducing pollution, creating awareness through environmental programme, and etc. if we want to save the environment then, we should stop the exploitation of natural resources. Our natural environment makes human life possible, and our cultural and social environment helps define who we are. It is therefore essential that our population and economic growth are environmentally sustainable.

Now on the above arguments the conclusion could be drawn that the nature based conflicts the false development policies of the government, the marginalization of the tribal and other under privileged groups and the environment degradation are the root causes of emergence of environmental movements in India. The lopsided iniquitous and environmentally destructive processes of development have propelled the people to go against the state in many cases and this leads to the environmental movement in the country. The risk on the survival hood of the marginal people due to the above mentioned factors had resulted in the movements. Therefore the point comes that the environmental movements in different parts of the country grows out of the distribution conflict over the ecological resources needed for livelihood. So we can conclude that environmental movements in India are the resistances by the people for their livelihood and their survival.

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## **Impact Of Climate Change On Health Care System: A geographical Study**

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### **Abstract:**

*Climate change has an adverse effect on human and environmental health. A changing climate impacts our health and Wellbeing. Potential effects of climate change on human health include higher rates of respiratory and heat related illness, increased prevalence of vector borne and waterborne diseases, food and water insecurity, and malnutrition. Persons who are elderly, sick, or poor are especially vulnerable to these potential consequences. Climate change is a critical public health problem. Climate change makes many existing diseases and conditions worse but it may also help introduce new pests and pathogens into new regions or communities. As the planet warms, oceans expand and the sea level rises, floods and droughts become more frequent and intense, and heat waves and hurricanes become more severe. The most vulnerable people children the elderly climate change also stresses our health care infrastructure and delivery systems.*

**Keywords:** Health Care System.

### **Introduction:**

As we all know that climate change affecting human health day by day. Mortality rate is also increasing along with that the diseases like water bron diseases, respiratory diseases, cardiovascular diseases.

The U.S. Environmental protection Agency (EPA) defines climate change as “any substantial change in measures of climate (such as temperature or precipitation) lasting for an extended period (decades or longer). Climate change may result from natural factors and processes or from human activities (10). An important driver of climate change is the increased accumulation of carbon dioxide and other greenhouse gases the trap heat in Earth’s atmosphere, causing warming of the troposphere (the layer of the atmosphere closest to Earth).

Steps can be taken to lessen climate change (“mitigation”) and reduce its impact on our health and the health of future generations (“adaptation”).

### **Impact of Climate Change in Physical Environment:**

The work done by the American college of Physicians (ACP) and Intergovernmental Panel on climate change (IPCC) is very important as the climate change is affecting human and environmental health drastically and it is the need of hour to take action to restore the health of human being along with the natural resources.

### **Result:**

1. The American college of physicians (ACP) recommends that physicians and the broader health care community throughout the world engage in environmentally sustainable practices that reduce carbon emissions; support efforts to mitigate and adapt to the effects of climate change, and educate the public, their colleagues, their community, and lawmakers. About the health risks posed by climate change. Tackling climate change is an opportunity to dramatically improve human health and avert dire environmental outcomes and ACP believes that physicians can play a role in achieving this goal climate change is largely the result of human activity.
2. Intergovernmental panel on climate change (IPCC) the burning of fossils fuels, Deforestation, other landuse change, agricultural and food production, and power plants emission all release carbon dioxide and other greenhouse gases into the atmosphere, trapping heat with then elevates global temperature and causes other changes to the climate system possible direct and indirect health effects include higher rates of respiratory and heat-related illness, elevated prevalence of vector-borne diseases, increased food insecurity and malnutrition, and behavioral health problems. Although all nations will fact the negative health effects of climate change, developing countries as vulnerable pulsations throughout the world-such as well as elderly persons, children, and persons with chronic illness- will be disproportionately affected.

Climate change is happening now, and its effects are expected to worsen over the next century. Anthropogenic (human-caused) greenhouse gas emissions must be substantially curbed to hold the global average temperature increase to “well below” 2° C (3.6°F) (and the more ambitious target of 1.5° C (2.7°F) above preindustrial levels, as established in the paris agreement under the United Nations Framework Convention on climate change, which was adopted by the representatives of 195 nations is December 2015. Efforts to adapt to a changing planet and mitigate future harmful emissions could bring about major health and environment co benefits.

A sense of urgency is warranted. Under one scenario, cumulative carbon dioxide emissions could cause the global average temperature to reach the threshold of 2°C (3.6°F) above preindustrial levels by 2045 (5). Although cautiously optimistic, the lancet commission on Health and climate change warns that “The effects of climate change are being felt today, and future projections represent an unacceptably high and potentially catastrophic risk to human health.” The ACP is concerned about the effect that climate change could have on individual persons and populations in the United States and throughout the world.

#### **Discussion:**

There should be disaster form preparedness plan for natural climate change emergencies. Some remedial actions should be taken to cope up with climate change emergencies.

These are:

#### **1. Preparedness of Health Care Facilities :**

Continuous SWAT analysis and training

#### **2. Partnership with other agencies**

##### **i) Health Care without Harm :**

It an international condition that guide the health care sector to make environmentally preferred purchasing practices polices without compromising patient care or safety. It will restore public health and environment. HCWH provides technical assistance, product research, support, advocacy and education. Its aim is safety product materials and chemicals, alternation to incarnation green building & operations, sustainable foods & food system, safe & health work place for everyone so the health care sector can become a true healing environment.

##### **ii) Practice green health :**

Formed out of hospitals for a Health Environment, the Health care to provide fools, education, recognition on environmental sustainability in Health care Sector. HCEE developed the energy impact calculator for measurement of health impacts and costs of a hospitals energy use and to enable energy purchase to make business decisions on energy efficiency projects and renewable energy purchase based on a fuller understanding of energy & environmental commodities reserve auction platform to help health care facilities contain or reduce their energy cost, lock in more stable pricing and good environmental stewards.

##### **1. Physicians for social Responsibilities (PSR) :**

These will provides technical assistance and organizing support for health impacts of climate change.

##### **2. California Climate Action Registry :**

It is a private nonprofit organization. Serve as a voluntary greenhouse gas registry to protected and promote early action to reduce greenhouse gas emission by organization.

##### **3. Intergovernmental Panel on Climate Change (IPCC) :**

Is the premier scientific body reporting information on climate change.

##### **4. EPA Energy Star for Health Care :**

It will provide tool for measuring hospital energy use and calculate financial benefits to improve energy efficiency.

##### **5. EPA Waste wise :**

It will provide technical support in reducing municipal solid water and selected Industrial waste.

##### **6. EPA Waste Reduction Modle (WARM):**

It is a waste calculator that helps facilities assesses their greenhouse gas emission from alternative waste disposal strategies, source reduction, recycling, composting Along with conversational landfill disposal and incineration strategies.

#### **Conclusion:**

Climate change giving hazardous effects on natural resources, human health along with physical environment. To control the water borne diseases, vector borne diseases, cardiovascular diseases, respiratory diseases, cardiovascular diseases pollution control, implementation of proper waste management practices, plantation, should be best practiced. Human resource continuous training along with environment safety in Health care should be practiced.

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## **Variation of secondary gamma radiation flux with humidity at Udaipur, India**

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### **Abstract**

We conducted an experimental study to observe variation of secondary gamma radiation flux with humidity at Udaipur ( $27^{\circ} 43' 12.00''$  N,  $75^{\circ} 28' 48.01''$  E), India on dates March 5, 8, 9, 10, 11 and 13, 2021. Data files were stored in the computer for half an hour between times 17.30 IST to 18.00 IST using ground based NaI (Tl) Scintillation detector. The analyzed data pointed the variation of secondary gamma radiation flux (SGR) with the presence of humidity in the atmosphere of the earth.

**Key Words:** Cosmic radiation, solar radiation, secondary gamma radiation, presence of humidity in atmosphere of Earth.

### **Introduction**

About 89% nuclei are protons, 10% nuclei of helium, and 1% of others heavier elements (Lithium, Beryllium and Boron) [1, 2, 3] having energy range between radiation between  $10^9$ -  $10^{20}$  eV or more [4] such radiation is called cosmic radiation. Simpson (1983) [5] gave information of chemical abundances of cosmic radiation in different energy range. From surface of Earth about 20 km primary cosmic radiation produces secondary radiation. Due to collisions with atoms of the upper atmosphere primary cosmic radiation produces cascade of lighter particles known as secondary radiation [6]. When these particles move towards surface of the Earth then, increase rapidly in the atmosphere [7, 8]. In this way secondary particles shower down through the atmosphere to the surface of Earth [9]. Secondary radiation has electromagnetic component [10], [11], [12]. Therefore, penetrating cosmic radiation produced shower of secondary particles [13]. Produced secondary radiation flux can be detected using appropriate detector on ground [14], [15].

### **Experimental Set-up and Observations**

We used scintillation detector in this experimental study to observe secondary gamma radiation flux. The counter optically coupled with photo multiplier tube. This integral line was connected to 1k multi-channel analyzer has 1024 channels with usb interface built in high voltage and shaping amplifier. Secondary gamma radiations are collected in computer using Anuspect software.

This Scintillation counter system kept open to collect the counts as a function of time on the roof of Astronomy Laboratory of Department of Physics, Bhupal Nobles' University Udaipur (Rajasthan) India on dates March 5, 8, 9, 10, 11 and 13, 2021 for half an hour between time 17.30 IST to 18.00 IST

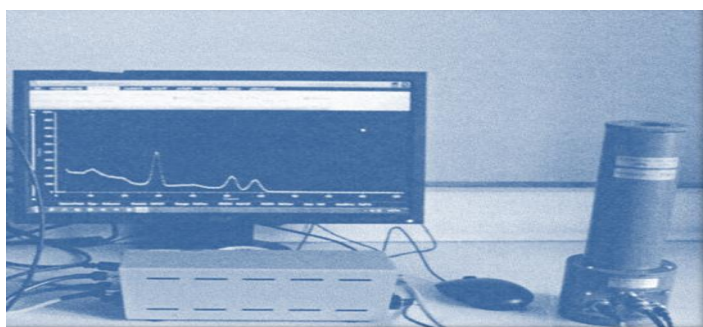


Figure 1 (Scintillation Counter System)

### **Analysis and Results**

As depicted in table 1 the integrated counts of SGR flux, date and humidity in the month of March, 2021.

March, 2021

Date	Integrated Counts	Humidity in %
<b>March</b>		
<b>5</b>	<b>237673</b>	<b>12</b>
<b>8</b>	<b>236737</b>	<b>17</b>
<b>9</b>	<b>240633</b>	<b>15</b>
<b>10</b>	<b>235363</b>	<b>19</b>
<b>11</b>	<b>240896</b>	<b>26</b>
<b>13</b>	<b>238876</b>	<b>19</b>

Table 1

Using table 1 we made figure 2 between date and integrated counts

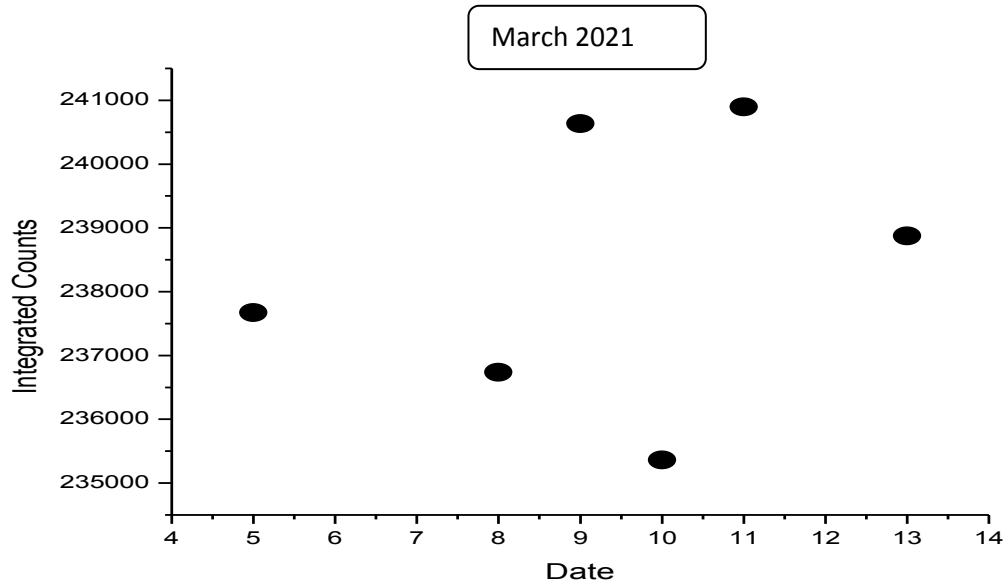


Figure 2

Table 1 and figure 2 showed that on the dates March 5, 8, 9, 10, 11 and 13 the integrated counts were 237673, 236737, 240633, 235363, 240896 and 238876 respectively for half hour duration between times 17.30 IST to 18.00 IST

#### Discussions

Table 1 and figure 2 showed that integrated counts of secondary gamma radiation flux vary with the presence of humidity in the atmosphere of the Earth.

#### Conclusion

This experimental study gave information about variation of integrated counts of secondary gamma radiation flux with presence of humidity in the atmosphere of the Earth at the surface of the Earth.

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## **Effectiveness Of Sustainability In Private Sector Banks In Madurai City**

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### **Abstract:**

Banking Sustainability is umbrella term referring to the practices and guidelines that make banks sustainable in economic, environmental, and social dimensions. It aims to perform banking practices using technology and physical infrastructure as efficient and effective as possible, with zero or minimal impact on the environment. Technological development has played a major role in the current business world. The advancement in the Technology has changed the entire process of the private banking practices. The study aims to identify the effectiveness of sustainability in private sector banks. This empirical study is based on primary data collected from the customers of private sector banks.

**Keywords:** Effectiveness, Sustainability, Private Banks

### **Introduction**

Banking industries are influence the economic development of the nation both in terms of quality and quantity. As environmental problems gain more attention, pressure is being placed on all type of manufacturing industries, including banking industries to implement sustainable Initiatives. Banking industries plays a vital role in promoting sustainable environment friendly process. The sustainability initiatives taken by banking sector means promoting environmental-friendly practices and reducing carbon footprint from the banking activities. It is an umbrella term referring to practices that make banks sustainable in economic, environmental, and social dimensions. This research paper discusses the objectives, methodology, Customers profile, and effectiveness of sustainability in private sector banks in Madurai City.

### **Objective Of Study**

- ❖ To identify the effectiveness of sustainability in private sector banks

### **Research Methodology**

This paper is based on primary data has been used for this study. It was collected through the interview schedule method using 200 samples selected conveniently. The survey is people living in Madurai City that have been customers of private sector banks.

### **Analysis And Discussion**

During the survey four important profile variables, namely, (1) Gender, (2) Age, (3) Education, (4) Occupation and (5) Types of accounts. Analysis of demographic portion of the questionnaire for the study is shown below:

**Table - 1**  
**Profile**

S. No	Profile	Categories	Frequencies	Percentage
1.	Gender	Male	126	63
		Female	74	37
		<b>Total</b>	<b>200</b>	<b>100</b>
2.	Age	Below 20	26	13
		20 – 30	49	24.5
		30 – 40	51	25.5
		40 – 50	31	15.5
		Above 50	43	21.5
		<b>Total</b>	<b>200</b>	<b>100</b>
3.	Education	SSLC	18	09
		HSC	32	16
		UG	98	49
		PG	40	20
		Others	12	06
		<b>Total</b>	<b>200</b>	<b>100</b>
4.	Occupation	Private employees	102	51
		Government employees	58	29
		Business man	12	06

		Agriculture	20	10
		Others	08	04
		<b>Total</b>	<b>200</b>	<b>100</b>
5.	Type of account	Saving account	142	71
		Current account	48	24
		Fixed account	10	05
		<b>Total</b>	<b>200</b>	<b>100</b>

**Source:** Primary data

Table 1 reveals the profile of the bank customers in majority of 126 respondents (63%) are men, 72 respondents (36%) of the bank customers come under the age group of 35 to 45 years, 98 respondents (49%) of the customers completed undergraduate, 102 respondents (51%) of the customers are private employees and 142 respondents (71%) of the bank customers had a savings account.

**Table - 2**

**Effectiveness Of Banking Sustainability**

S. No	Factors	Very High	High	Normal	Low	Very Low	Mean
1	Providing ATM services	94	76	22	7	1	<b>4.27</b>
2	Providing Debit card services	86	67	29	8	10	<b>4.06</b>
3	Providing Credit card services	75	46	44	30	5	<b>3.78</b>
4	Providing effective Internet banking services	96	50	26	13	15	<b>4.00</b>
5	Providing effective Mobile banking services	81	67	20	10	22	<b>3.87</b>
6	Other technological based services	62	68	47	4	19	<b>3.75</b>

**Source:** Primary data

Table 2 clearly shows that the effectiveness of sustainability are 'Providing ATM services' (4.27), 'Providing Debit card services' (4.06) and 'Providing effective Internet banking services' (4.00), are also the customers are effectively use the banking sustainability provided by the private sector banks.

**Table - 3**

**Influencing Factors For Using Banking Sustainability**

S. No	Factors	Very High	High	Normal	Low	Very Low	Mean
1	Providing Reward points	75	70	26	14	15	<b>3.88</b>
2	Providing more number of Free transaction	50	87	34	14	15	<b>3.72</b>
3	Providing Simple and clear services	75	63	29	18	15	<b>3.82</b>
4	Adopting Higher security	65	72	24	17	22	<b>3.70</b>
5	Personal training to customers by using E-banking services	58	72	21	24	25	<b>3.62</b>

**Source:** Primary data

Table 3 upshots that the highest influencing factors to use banking sustainability are 'Providing Reward points' (3.88), 'Providing Simple and clear services' (3.82), 'Providing more number of free transaction' (3.72), are also considered as the major influencing factors for the customers using banking sustainability.

**Table - 4**

**Problems For Customers Not Using Banking Sustainability**

S. No	Factors	Very High	High	Normal	Low	Very Low	Mean
1	Lack of Knowledge on sustainability	75	73	27	6	19	<b>3.89</b>
2	Lack of internet connection	60	71	31	22	16	<b>3.68</b>

3	Lack of awareness on E-transaction services	91	44	27	23	15	<b>3.86</b>
4	Security fears	51	57	15	37	40	<b>3.21</b>
5	Difficulties in process	70	58	21	23	28	<b>3.60</b>

**Source:** Primary data

Table 4 brings to notice that major problems for the customer's not using banking sustainability are 'Lack of Knowledge on sustainability' (3.89), 'Lack of awareness on E- transaction services' (3.86), 'Lack of internet connection' (3.68), are the major problems for the customer's not using banking sustainability.

### 1. Relationship Between Atm Services And Free Transactions

**Table – 5 Correlations**

Variables		ATM Services	Free Transactions
Providing ATM Services	Pearson Correlation	1	.237**
	Sig. (2-tailed)		.001
	N	200	200
Providing more number of Free Transactions	Pearson Correlation	.237**	1
	Sig. (2-tailed)	.001	
	N	200	200

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 5 shows that there is a strong and positive relationship between providing ATM services and providing more number of free transactions as  $r=0.237$ .

### 2. Relationship Between Internet Banking Services And Higher Securities

**Table – 6 Correlations**

Variables		Internet Banking Services	Higher Securities
Providing Internet Banking Services	Pearson Correlation	1	.711**
	Sig. (2-tailed)		.000
	N	200	200
Adopting Higher Securities	Pearson Correlation	.711**	1
	Sig. (2-tailed)	.000	
	N	200	200

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 6 shows that there is a strong and positive relationship between providing internet banking services and adopting higher securities as  $r=0.711$ .

### Conclusion

The Private sector Bank of India becomes extremely conscious of the need to go sustainability and taking efforts to make paperless banking process. The sustainability efforts of private bank have been fully supported by technology in terms of electronic fund transfer, ATM, internet and mobile banking. The private sector banks has plan to implement more and more environmental friendly practices and initiatives in their day to day banking operations through ATM, debit card, credit card, online banking and mobile banking. These sustainability initiatives enable the private banks to be a role model for many other banks to contribute much towards maintaining ecological balance. ***Thus, the sustainability banking efforts of the Private Sector Banks through reengineering their task performance has not only protected environment and maintain eco balance, but also enhance the operational sustainability of many other banks in India and thereby the image of Private sector banks.***

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## **A Study on Role of E-Commerce in Sustainable Development of Business**

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### **Abstract**

*Electronic commerce is a only hope among entrepreneurs to make trade during pandemic period where traditional trade is impossible with out risk, electronic commerce is one of the prescribed and preferred method among retailers, in this study an attempt has been made to know the role of ecommerce in sustainable development of business among retailers, among 177 respondents in Madurai city has been selected for this study. SPSS Package has been used for statistical inference.*

**Key Words: Electronic commerce, preference, Entrepreneur, Retailers, Sustainable development.**

### **Introduction**

In India E-commerce is booming every business and brands started their websites, applications and starts selling their products and services online, it is expected that retail through electronic commerce will be 17.8% from 2019- 2023, India will become rank first of Business to customer globally. India is being considered as a largest consumer market in last few years interest among e-commerce has been increased during this pandemic period ecommerce is a sustainable platform for retailers and entrepreneurs to market their goods and services in this study an attempt has been made to know the opinion of retailers and entrepreneurs regarding role of e-commerce in sustainable development of business.

### **Objective**

- To analyse the respondent's opinion towards role of E-commerce in development of business.
- To know the Socio-economic profile of the sample respondents

### **Need Of The Study**

The study was conducted to know the role of e-commerce in development of business customer. The study totally revolves around the opinions and feedback from the users. An opinion survey with the help of questionnaire was conducted to collect data from the respondents.

### **Limitations Of The Study**

- There may be a bias in collecting the primary data from the customers.
- The study is limited to 177 respondents.
- The study is conducted only in Madurai city.

### **Research Methodology**

Reliability and Validity: The validity of a research depends on systematic method of collecting the data and analysing the same in a sequential order. Methodology presents International Journal of Multidisciplinary Research and Modern Education the Sampling design, Data sources, Tools for data collection, Construction of questionnaire, Pilot study and the Frame work of analysis.

### **Socio Economic Profile Of The Respondents**

**Table – 1**

Age	Frequency (%)
20-30	38 (21.5%)
30-40	107(60.5%)
40-50	21 (11.9%)
above 50	11 (6.2%)
<b>Total</b>	<b>177 (100%)</b>

Table 1 shows majority 60.5% of the sample respondents using E-commerce in their business is between the age group of 30 to 40 years.

**Table - 2**

### **Educational Qualification**



<b>Educational Qualification</b>	<b>Frequency (%)</b>
SSLC	26 (14.7%)
HSC	52 (29.4%)
Graduate	88 (49.7%)
Diploma/ Post-Graduation/other	11(6.2%)
<b>Total</b>	<b>177 (100%)</b>

Table 2 indicates that majority 49.7% of the sample respondents are graduates.

**Table - 3**  
**Marital Status Wise Classification Of The Respondents**

<b>Marital status</b>	<b>Frequency (%)</b>
Married	156 (88.1%)
Single	21(11.9%)
<b>Total</b>	<b>177 (100%)</b>

Table 3 indicates that majority 88% of the sample respondents are married.

**Table - 4**  
**Usage Level Of E-Commerce In Business**

<b>Family Type</b>	<b>Frequency (%)</b>
less than 50 %	66(37.3%)
More than 50%	111(62.7%)
<b>Total</b>	<b>177 (100%)</b>

Table 4 indicates that levels of usage among respondents are more than 50%

**Table - 5**  
**E-Commerce Helps In Development Of Business**

<b>Options</b>	<b>Frequency (%)</b>
Highly agree	131 (74%)
Agree	76 (26 %)
<b>Total</b>	<b>177 (100%)</b>

Table 5 observes that majority 74% of them highly agree that e-commerce helps in development of business

**Table - 6**  
**Impact Of E-Commerce In Profile (Approximately)**

<b>Options</b>	<b>Frequency (%)</b>
below 20%	42 (23.7%)
20-30%	111(62.7%)
30-40%	10(5.6%)

above 50%	14 (7.9%)
<b>Total</b>	<b>177 (100%)</b>

Table 6 indicates that majority of the respondents earned 20-30% increased profit after adaptation of e-commerce in their business.

**Table - 7  
Business Experience Of The Respondents**

Options	Frequency (%)
Below 2 Years	46(26.0%)
2-3years	22(12.4%)
3-4years	42(23.7%)
above 4 years	67(37.9%)
<b>Total</b>	<b>177 (100%)</b>

Table 7 indicates that majority of the sample respondents has business experience above 4 years.

**Table - 8  
Usage Experience Of E-Commerce**

Business Experience	Rural
6 months to 1 year	77(43.5%)
1 year to 2 years	67(37.9%)
3 years to 4 years	20(11.3%)
More than 4 years	13(7.3%)
<b>Total</b>	<b>177 (100%)</b>

Table 8 indicates that majority 43.5% of the sample respondents using e-commerce for the past 6-1 year.

**Table - 9  
Kmo And Bartlett's Test  
(Opinion towards Role of e-commerce in development of business)**

<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</b>		<b>0.647</b>
Bartlett's Test of Sphericity	Approx. Chi-Square	427.794
	significance	0.000

Table 5.1 indicates that in the present test The Kaiser-Meyer-Olkin (KMO) measure was 0.647. Bartlett's sphericity test indicating Chi-Square =427.794 with a significance of 0.000.it is concluded that the result given above indicates the value of KMO statistics in all the Opinion is 0.05, hence all the opinion has no equal importance for measuring the role of e-commerce , null hypothesis rejected bartlett's Test of Sphericity shows the value of chi-square which is significant at 0.000 test of Sphericity shows the value of chi square which is significant at 0.000 level in all the role of e-commerce these two test shows that the data is fit for consulting the Opinion analysis.

#### **Correlation**

There is no significant correlation between variable regarding opinions towards role of e-commerce in development of business.

**Table - 10**  
**Correlation Between Variables**

Correlation	1	2	3	4	5	6	7	8	9
<b>Opinion 1</b>	1.000	.240	.183	-.225	-.078	-.264	-.068	.104	-.066
<b>Opinion 2</b>	.240	1.000	.015	-.007	.104	.106	.071	.103	-.053
<b>Opinion 3</b>	.183	.015	1.000	-.142	.040	-.211	.079	.128	.052
<b>Opinion 4</b>	-.225	-.007	-.142	1.000	.430	.340	.401	-.043	.131
<b>Opinion 5</b>	-.078	.104	.040	.430	1.000	.273	.465	-.014	-.056
<b>Opinion 6</b>	-.264	.106	-.211	.340	.273	1.000	.187	-.111	-.040
<b>Opinion 7</b>	-.068	.071	.079	.401	.465	.187	1.000	.092	.008
<b>Opinion 8</b>	.104	.103	.128	-.043	-.014	-.111	.092	1.000	.146
<b>Opinion 9</b>	-.066	-.053	.052	.131	-.056	-.040	.008	.146	1.000

Table indicates that there is a significant correlation between variable regarding opinions towards role of e-commerce in development of business.

**Table - 11**  
**Communalities**

	Initial	Extraction
Convenient	1.000	.592
Profitable	1.000	.786
Cost Effective	1.000	.658
Easy Marketing	1.000	.635
Mass Reach	1.000	.679
Simple Process	1.000	.584
Safe and Secure	1.000	.658
Future Scope	1.000	.565
Un Compatible	1.000	.721

Communalities indicates level of variance that is the communality value should be more than 0.5 and which is considered for future analysis, if it is less than 0.05 it is to be removed from the next step and the variables has been used in extracted factors

**Table - 12**  
**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Convenient	2.177	24.191	24.191	2.177	24.191	24.191	1.994	22.160	22.160
Profitable	1.481	16.460	40.651	1.481	16.460	40.651	1.427	15.857	38.016
Cost Effective	1.206	13.395	54.046	1.206	13.395	54.046	1.288	14.306	52.322
Easy Marketing	1.014	11.265	65.311	1.014	11.265	65.311	1.169	12.989	65.311
Mass Reach	.808	8.975	74.286						
Simple Process	.735	8.169	82.455						
Safe and Secure	.577	6.415	88.870						
Future Scope	.516	5.738	94.608						
Adoptable	.485	5.392	100.000						

Table 12 shows that there are four variables resulting from the analysis explaining a total of about 65.3% of the variations in the entire data set the percentage of variation explained by 4 variables is 22.160, 15.857, 14.306, and 12.898 respectively after varimax rotation is performed. Table 5.4 gives rotated components matrix.

**Table - 13**  
**Rotated Component Matrixes**

	Component			
	Marketability	Economic Feasibility	Acceptability	Sustainable
Opinion 5	.813			
Opinion 7	.801			
Opinion 4	.686	-.336		
Opinion 3		.791		
Opinion 6	.397	-.645		
Opinion 2			.860	
Opinion 1		.426	.619	
Opinion 9				.823
Opinion 8				.658

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Whereas value of components should not be less than 0.05 Hence the Opinion is dropped and considered as in appropriate. Opinion 5,7,4,6 loaded on Opinion component 1. It is observed from the study is that mass reach, safe and secure, easy marketing, simple process is marketability of ecommerce. Opinion3 loaded and 2<sup>nd</sup> component. Indicate that ecommerce are cost effective loaded in the component economic feasibility, Opinion 1 and 2 that is Convenient and profitability is loaded on component 3 that is acceptability and development. Opinion 9 and 8 that is future scope and adoptable loaded on the component 4 that is sustainable.

**Table - 14**  
**Socio Economic Profile of the Sample Respondents and Opinion towards Role of E-Commerce**

Profile	F	Sig
Age	2.210	0.097
Educational Qualification	3.259	0.012
Business Experience	2.890	0.089
Usage Experience of E-Commerce	100.136	0.028

There is no significant relationship between age, business experience and the opinion towards role of Ecommerce in development of business. Since the level of significance is more than 0.05 null hypothesis accepted, there is a significant relationship between educational qualification, usage experience of the sample respondents and the opinion towards role of ecommerce in sustainable development of Business. Since the p value is less than 0.05 null hypothesis rejected and there is a significant relationship between educational qualification, usage experience of the sample respondents and the opinion towards role of ecommerce in sustainable development of Business.

#### **Findings**

- Majority 60.5% of the sample respondents using E-commerce in their business is between the age group of 30 to 40 years.
- Majority 49.7% of the sample respondents are graduates.
- Majority 88% of the sample respondents are married.
- Majority 62.7% of usage level among respondents are more than 50%.

- Majority 74% of them highly agrees that e-commerce helps in development of business
- Majority of the respondents earned 20-30% increased profit after adaptation of e-commerce in their business.
- Majority 43.5% of the sample respondents using e-commerce for the past 6-1 year.
- There is a significant correlation between variable regarding opinions towards role of e-commerce in development of business.
- Whereas value of components should not be less than 0.05. Hence the Opinion is dropped and considered as in appropriate. Opinion 5,7,4,6 loaded on Opinion component 1. It is observed from the study is that mass reach, safe and secure, easy marketing, simple process is marketability of ecommerce. Opinion 3 loaded and 2<sup>nd</sup> components. Indicate that ecommerce are cost effective loaded in the component economic feasibility, Opinion 1 and 2 that is Convenient and profitability is loaded on component 3 that is acceptability and development. Opinion 9 and 8 that is future scope and adoptable loaded on the component 4 that is sustainable.
- There is no significant relationship between age, business experience and the opinion towards role of Ecommerce in development of business. Since the level of significance is more than 0.05 null hypothesis accepted, there is a significant relationship between educational qualification, usage experience of the sample respondents and the opinion towards role of ecommerce in sustainable development of Business. Since the p value is less than 0.05 null hypothesis rejected and there is a significant relationship between educational qualification, usage experience of the sample respondents and the opinion towards role of ecommerce in sustainable development of Business.

### **Conclusion**

Ecommerce is a only scope among retailers where as they don't have any other source than this to sell their product in this pandemic period even after pandemic customers are will comfortable in buying online and sellers has cost advantage in ecommerce business. From this study it is understood that using ecommerce retailers selling more than 50% of their products and they feel that ecommerce is only future for better retailing. Educational qualification and e-commerce usage experience has an significant relationship between the opinion of role of ecommerce in development of business.E-commerce increases profit and reduces cost,E-commerce has created an potential opportunity among retailers to market globally in future.

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## **Bio-Medical Waste Generation and Disposal Practices in Malshiras Tahsil**

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### **Abstract:-**

*Hospital is one of the complex institutions which are frequented by people from every walk of life in the society without any distinction between age, sex, race and religion. This is over and above then or malign habitants of hospital i.e. patients and staff. All of them produce waste which is increasing in its amount and type due to advances in scientific knowledge and is creating its impact. The hospital waste, in addition to the risk for patients and personal who handle these wastes poses a threat to public health and environment keeping in view inappropriate biomedical waste management, the Ministry of Environment and Forests notified the "Biomedical Waste (management and handling) Rules, 1998" in July 1998. In accordance with these rules it is the duty of every "occupier" i.e. a person who has the control over the institution and or its premises, to take all steps to ensure that waste generated is handled without any adverse effect to human health and environment.*

**Key word:** - Bio-Medical Waste (BMW)

### **Introduction:-**

The hospitals, nursing homes, clinic, dispensary, animal house, pathological lab etc., are required to set in place the biological waste treatment facilities. It is however not incumbent that every institution has to have its own waste treatment facility. The rules also envisage that common facility or any other facilities can be used for waste treatment. However it is incumbent on the occupier to ensure that the waste is treated within a period of 48 hours. General waste like garbage, garden refuse etc. should join the stream of domestic refuse. Sharps should be collected in puncture proof containers. Bags and containers for infectious waste should be marked with Biohazard symbol. Highly infectious waste should be sterilized by autoclaving. Cytotoxic wastes are to be collected in leak proof containers clearly labeled as cytotoxic waste. Needles and syringes should be destroyed with the help of needle destroyer and syringe cutters provided at the point of generation. Infusion sets, bottles and gloves should be cut with curved scissors.

### **Objective:-**

The main objective of the present study is to Measure the BMW in Malshiras tahsil.

### **Data Base and Methodology:-**

The present study is entirely based on primary and secondary data. To fulfill the objective the secondary data has been collected from various Hospital, Clinic, Pathological lab, Blood Bank and Medicals in Malshiras tahsil. The primary data has been collected by the Researcher from questionnaires and research.

### **Study Area:-**

The place of Malshiras tahsil in Solapur District is in between 17<sup>0</sup> 36' to 18<sup>0</sup> 1' North latitude & 74<sup>0</sup> 42' to 75<sup>0</sup> 13' East longitude. It is on the East North side. As per the Census India 2011, Malshiras tahsil has 99572 households, population of 485645 of which 251528 are males and 234117 are females. Area of Malshiras tahsil is 160801 Hecter. It's Sea level Height is 480 meter. Water is supplying to Malshiras tahsil through Nira & Bhima River. The length of Nira River in Malshiras tahsil is 180 km and it is joined to Bhima River at sangam. Average rainfall of Malshiras tahsil is 422.8 mm. Average temperature of malshiras tahsil October to February- 17<sup>0</sup> to 27<sup>0</sup> C and March to June - 33<sup>0</sup> to 35<sup>0</sup> C

### **Discussion:-**

#### **Biomedical Waste Management Process:-**

Handling, segregation, mutilation, disinfection, storage, transportation and final disposal are vital steps for safe and scientific management of biomedical waste in any establishment. The key to minimization and effective management of biomedical waste is segregation (separation) and identification of the waste. The most appropriate way of identifying the categories of biomedical waste is by sorting the waste into color coded plastic bags or containers.

**Table No. 1- Types of Content.**

Sr. No.	Type of Content	No. of Measurement
1	Clinic	137
2	Hospital	90

3	Pathological Laboratory	45
4	Blood Bank	01
5	Medical	252

**Source:** - Compiled By Researcher.

**Table No. 2- Bed Capacity in Study region.**

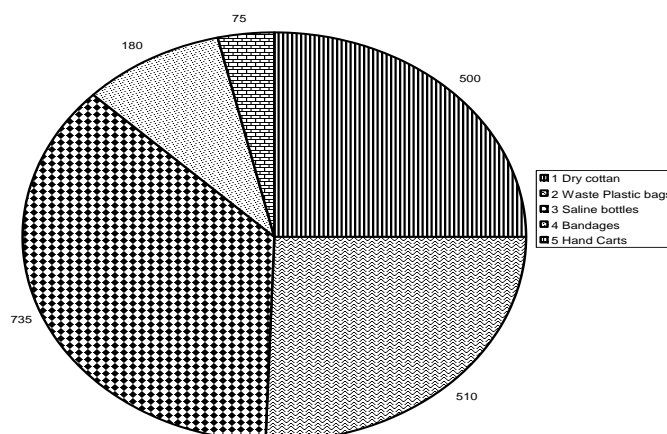
Sr. No.	Type of Content	No. of Measurement
1	0 to 5	153
2	6 to 10	47
3	11 to 15	11
4	16 to 20	07
5	20 to above	09

**Source:** - Compiled By Researcher.

**Table No. 3- Waste Material in Study region.**

Sr. No.	Type of Content	No. of Measurement
1	Dry Cotton	500 kg
2	Waste Plastic bags	510 kg
3	Saline Bottles	735 kg
4	Bandages	180 kg
5	Hand Carts	75 kg

**Source:** - Compiled By Researcher.



**Table No. 4- Satisfaction disposal Facilities of Biomedical waste in study region.**

Sr. No.	Type of Content	No. of Measurement
1	Yes	499
2	No	26

**Source:** - *Compiled By Researcher.*

**Discussion:**

In the study region it has been noticed that there are five types of contents. These are as follow 137 Clinics, 99 Hospitals, 31 Pathological Laboratories, 01 Blood Bank and 252 Medicals. Capacity of bed in the study region is divided in five ranges.153 beds are available in the range of 0 to 5. 47beds are available in the range of 6 to 10. 11 beds are available in the range of 11 to15. 07 beds are available in the range of 16 to20. 09 beds are available for 20 to above. Waste material of study region in 48 hours is Dry cotton 500kg, Waste Plastic bags 510kg, Saline Bottles 735kg, Bandages 180kg and Hand Carts 75kg. Satisfaction of disposal facility of Bio-Medical Waste in 499 content and not 26 content.

**Conclusion:-**

After analyzing the results of the study it was felt that there is an urgent need to standardize the infrastructural requirement so that hospitals following BMW handling rules meticulously donor suffer additional costs. Hospitals having defunct / defective incinerators should be made to utilize central incineration facility as efforts of Gov are towards reducing the number of incinerators teasel to prevent rise in air pollution.

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## **Tribal Empowerment and Role of the Forest labour Co-operative Society**

Dr. Vitthal Patil

### **Abstract:**

*The Bombay state has a vast stripe of forests along with the Western Ghats, rich in medical plants, Chandan, teakwood and timber. Adivasi Communities all over the world have very closely associated with forests. They are still depending on forest for a major part of their means of livelihood and have cultural links with forest. Deforestation and increasing restrictions imposed upon the uses of forest resources by the government have adversely affected the lives of tribal communities. This has led to different conflicts and has happened also in the state of Bombay.*

*In the year 1947, The Bombay State Government has established for forest labourers co-operative societies in overall districts of the state. The Chief Minister Sjt. B. G. Kher announced conference of the Adivasis held on 5<sup>th</sup> April 1947 at Mahalaxmi Hall in the Thana District, a scheme to organise co-operative societies of the Adivasis. the Forest Labourers Societies was started with a view mainly to ameliorate the conditions of the Adivasis whose labour was exploited by forest contractors for their own benefit.*

### **Introduction:**

India is considered to be an Anthropological laboratory because of its ethnic, racial, regional, religious and linguistic diversities. It has always attracted the attention of the world as being one of the oldest civilizations with kaleidoscopic variety of rich cultural heritage.

As a geographical concept, India covers an area of 32, 87,263 sq. kms. Extending from the icy and snow covered Himalayan ranges to the tropical virgin forests of south. As the seventh largest country in the world, it is well marked off from the rest of Asia by mountains and the sea which give a country a unique geographical identity. The main land comprises of four well defined regions viz. the great mountain ranges, plains of Ganges and the Indus, the desert regions and the southern peninsula.

The union of India is made up 29 states and 7 Union territories, with a population of millions, according to 1991 census, India accounts for nearly 2.4 percent of the world population. Next to Africa, India has the largest concentration of tribals in the world.

tribal communities in India known by different names such as *the original inhabitants (Adivasis), caste of forest (Vanya Jatis), the hill dwellers (Pahari), the scheduled tribes (Anusuchit Jamati), primitive people (Adim Jati), the folk people (Jana Jati), wild flowers and so on.*

Adivasi Communities all over the world have very closely associated with forests. They are still depending on forest for a major part of their means of livelihood and have cultural links with forest. Deforestation and increasing restrictions imposed upon the uses of forest resources by the government have adversely affected the lives of tribal communities. This has led to different conflicts and has happened also in the state of Maharashtra and a brief review of these events is attempted here.

Being forest as a main abode, these tribals once upon a time were called '*Jungleache Raje*' (*The Kings of Forest*). Therefore aptly the considerable proportion of tribal live in forest areas, so that the manner in which forest resources are exploited has a great deal of bearing on their welfare and matter of concern to stop their exploitation through middleman.

### **Forest Labour Co-Operative Societies: A Review**

Tribal communities provide bulk of the manpower for forestry operations. Employment of forest labourers is generally through contractors, in other word (middleman). The contractors recruit labour in groups and bring them from outside. However, forest labour is casual and largely seasonal. The relationship of forest labour and employment agencies is to a large extent exploitative, the advantage of which is taken by the middlemen or the contractor.

The arrangement, it has been suggested that the working of forests should be organized through Co-operative Societies of Forest Labour. It has also been said that to save the tribals from exploitation, in case formation of tribal co-operatives is not immediately practicable, the contractor agency may be substituted by departmental agency in the first stage to be later replaced by forest labour co-operative societies.

This channel was encouraged and evolved by the governments in some states, primarily to remove the timber contractors, and also to encourage economic upliftment of tribal people, who worked as forest labourers. The forest coupes are allotted to such Forest Labourers' Cooperative Societies, who carry out felling, conversion and transport of material to sale depots, under supervision of the Forest Department. Material would be auctioned and the net profit in the work was shared by Government and society in some agreed proportion. (Most common is 80:20 to Government and Society respectively). All expenses are

reimbursed to society at mutually agreed rates and it was decided that there will not be any role of department and societies after the auction.

#### **The Process of Establishment of Flcs:**

In the year 1947, the first ever experiment made for organization of forest labour societies the act of government has proved encouraging and the movement is being gradually extended over all districts of the state. ***The main objective of these societies is to ameliorate the conditions of the Adiwasis whose labour is exploited by forest contractors for their own gain. The aim of society was not only at giving the Adiwasis full remuneration for the labour put in by them, but also to train them in business affairs.*** The societies are sponsored by social service organizations which are engaged in improving social and economic conditions of the forest dwellers. *Steps taken to ameliorate the conditions of the Adiwasis through the organization of Forest Labourers' Societies deserve special mention.* The Adiwasis who have been working under the Forest Contractors were entitled only to a minimum wage for work in the Forests. The object underlying the scheme is to give the Adiwasis full remuneration for the work they do during the season without fear of being cheated and enable them to earn profits which have in the past been going into the pockets of the contractors, to end the interference of middlemen in the regular transactions of Forest labour co-operative societies.

The establishment of forest societies on the basis of co-operative was necessary. *As a result steps were undertaken to organize Adiwasis on a Co-operative basis, 11 forest Labourers' Societies were formed 3 in Thana, 4 in Kolaba, 3 in Nasik and 1 in Belgaum (South Division) the study region.*

***"Forest Labour Co-operative Society" means, 'A society which undertakes collection of minor forest products and other forest products, exploitation of forest coupes and other incidental operations, through its members and make arrangement for marketing of such products.'*** The introduction of the forest labour co-operative societies is a unique achievement of the Government. This system has eradicated the ruthless exploitation of the Adiwasis and other forest labourers by the forest contractors and has greatly improved their living conditions. In short, the introduction of co-operation in forestry has brought about a great social change among the most backward and uncivilized section of the society.

**An important section of the Backward Classes, viz. the Scheduled Tribes, popularly known as Adiwasis,** perform forest labour as their principal occupation in the fair season viz. formation of Charcoal, collection of Hirada, Behada, Ral, Gum, collection of Forest Fruits and most recent business of tribals in study region is the preparation eating plates to be used in various function are made up of the leaves of Palas, Phansoda or Tembhorni (Local Words). Till, date 1990's, number of tribal families in study region were depending on these forestry products for livelihood. ***The conditions of these forest labourers as depicted by Mr. Symington, a previous Backward Class Officer, in his Report on the Aboriginal and Hill Tribes of the Partially Excluded Areas in the Bombay Presidency was much too deplorable.***

The Co-operative Societies would also enable the Adiwasis to learn the management of their own affairs and could be expected, in due course, to be efficient instruments for their general social and economic advancement. In view of the ignorance and also complete illiteracy of the Adiwasis, it was realized that in the initial stage the co-operative societies of the Adiwasis forest labourers would have to be sponsored and nursed by responsible Organizations of social workers devoted to their cause. Coupes are granted at concessional terms to societies sponsored by approved Social Service Organizations.

Forest Labour Co-operative Society in the National Forest Policy Resolution adopted by the Government of India in 1952, it was stated that no forest policy, however well-intentional and meticulously drawn up, had the slightest chance of success without the willing support and co-operation of the people in the neighbourhood of the forests. It was stressed that intermediaries who exploited both the forest and the local labour for their own benefit must be suppressed gradually by forest labour co-operatives which must be formed to suit local conditions. Appreciable progress has since been made in the organization of such Forest Labour Co-operative Society particularly in Maharashtra and Gujarat.

In the concluding Part of the introductory Chapter on **"The Problem of the Scheduled Tribes"** in the recently published **Report of the Scheduled Areas and Scheduled Tribes (Dhebar) Commission**, an observation is made by the Prime Minister that "we should help the tribal people to develop along the lines of their own tradition and genius." It is relevant, therefore, to take into account, when dealing with plans for promoting the welfare of this sector of the community. As it has, however, been pointed out in the same Chapter, the tribals belong to varying and different stages of development. Hence, it is difficult to adumbrate plans, unless they are based on a consideration of those differing traditions, environments etc. Although, as mentioned above, the main occupation of the bulk of the tribal population is agriculture and complimentary work to agriculture apart from this, these tribals lead their life with minor products in

forest. Large numbers are engaged for work in the forests. Forest clearance, cutting of tree manufacture of charcoal, collection of forest products are some of the occupations in which tribal people employ themselves. Their services are engaged as labourers either by the Forest Department or by private contractors. The wages earned were pitifully low until, after Independence, administrative action was taken in states like Bombay to prescribe certain minimum standards. Even then need of the tribals for labour is exploited by forest contractors who undertake operations such as cutting trees. To enable the Adiwasi wage labourers to check this exploitation and to eliminate the middlemen **the Government of Bombay, under the late shri B.G. Kher, encouraged the formation of Forest Labour Co-operative Societies.** A programme for this purpose was drawn up shortly before the formulation of the First Five Year plan which provided for state recognition and aid. The organization of this type of Co-operative effort is now part of the national plan for co-operation.

In 1938, placed for the first time before the public a fairly exhaustive picture of the life and social-economic conditions of the Adiwasis in the Bombay Province, Government therefore decided to implement the schemes. One of such measures was to enforce the payment of a minimum daily wage rate for forest workers.

Therefore, the popular Government came into power in 1946. It reviewed the situation and came to a decision that for the upliftment of the Adiwasis. It is necessary to do away with the agency of contractors i.e. middlemen and in its place organize the forest workers into cooperative societies for working the coupes on contract basis. This could be expected to establish a direct relationship between the Government on the one hand and the Adiwasis on the other. **Shri B.G. Kher** who was then the premier of the Bombay Province, announced this policy of the Government to organize the forest workers into cooperative societies at a conference of the Adiwasis held on **5<sup>th</sup> April 1947, at Mahalaxmi hall in Thana district.**

The social service organizations, working amongst the inhabitants of the forests and sponsoring their societies are expected to play an increasingly important part in the development of this movement. No coupe is allotted to a society unless it is sponsored by such a recognized social service institution. They are responsible to see that the working of these societies is conducted on proper guide lines.

The **Sanchalak of Sarvodaya Kendras / Adivasi Seva Mandal / Industrial Co operative and Village Industrial / Dang Seva Mandal as monitoring agency**, who is sponsor of the forest labour co-operative societies within their respective areas.

#### **Conclusion:**

The Forest Labour Co-operative Society was started with mainly to ameliorate the conditions of the Adiwasis (Scheduled Tribes) whose labour was exploited by the forest contractors for their own benefit. *The purpose of this scheme is to organize Co-operative Societies of the Adiwasis with the help of social workers, as a part of a comprehensive programmed or the all round development of the Adiwasis.*

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## **Sustainable Agriculture Development in India and Issues of Zero Hunger**

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### **Abstract**

*Agriculture sector holds a very key position in many developing countries like India. Though the share of employment of working human resource is declining for agriculture sector, but still it remains the major source of employment in the country. Agriculture sector is hugely responsible for producing the all essential food grains and other edible stuff to meet the demands of the country's population. The United Nations Development Programme (UNDP) prepared 'Agenda 2030' for the sustainable development of the world. The very first sustainable goal of this agenda is 'Zero Hunger', and to achieve this goal, agricultural development is a must. This is also very important from agricultural point of view as it gives primary vocation to nearly 50% of the country's population. Therefore, from both, economic and social point of views, agricultural sustainability has become a major concern for all countries today. The present article is a study of sustainable agricultural development in India with a view of eradicating poverty and hunger.*

**Key words:** Agriculture, Sustainable Development, Poverty, Hunger

### **Introduction:**

The developing countries in the world are still largely dependent upon the primary sector of the economy. Agriculture, being the most ancient vocation to mankind, still remains the predominant factor in employment and national income. India, being a developing nation, has its roots in the agriculture sector since last so many years. It provides all essential food-grains, pulses, cattle feed, edible oil seeds, fruits, vegetables, cotton and a variety of spices to meet the daily needs of the population. The allied activities to agriculture like dairy, fishery, animal husbandry, poultry etc. provide other essential stuff like milk, eggs, meat, leather, fishes etc. for personal and commercial consumption. According to the survey made by Statista, almost 41.49% of the working population of India is engaged in agriculture and allied activities in the year 2020. Whereas, 26.18% of the working population is finding employment in Industrial sector and the remaining 32.33% are engaged in service sector (Neil, 2021). The economic survey of 2020 suggests an increase in the share of agriculture sector in GDP from 16.3% to 19.9% (Ministry of Finance, February, 2021). Agriculture sector is also very important from the view point of adequate food production for the ever increasing population of India. The problems of malnutrition and hunger are getting serious day by day. According to the Global Hunger Index, 2020, India ranks at 94<sup>th</sup> place in Global Hunger Index with a score of 27.2 which comes under serious hunger category (UNDP, March 2020). Hunger and poverty are therefore closely related with the primary sector; especially in the developing countries like India. Thus it is very important to understand the problems of agriculture sector and measures to sustain the quality of farming in the long run. Sustainability of agriculture does refer to sustaining the agricultural productivity without harming the land by excessive of chemical fertilizers, pesticides etc. to handover the productive lands to our future generations (Chahal, March 2015).

### **Objectives of the paper:**

The following are the main objectives of the paper

1. To discuss the significant place of agriculture in Indian economy.
2. To discuss the place of India in the Global Hunger Index (GHI)
3. To discuss sustainable agricultural development in India

### **Scope of the paper**

The present study is an attempt to focus light upon the issues of sustainable agriculture development. The UNDP has identified 17 sustainable development goals for Agenda 2030. The first major goal is to bring the world at zero hunger level and reduce poverty from all countries to bring harmony in the lives of people. The scope of the present research article is to discuss the sustainable agricultural development in the light of eradicating poverty and hunger in India.

### **Significance of the paper:**

In the present global pandemic situation, it is the primary focus of every economy to safeguard the lives of their citizens. Providing ample amount of food to the population is a key responsibility of every government. For this sake, every economy has to depend upon the agriculture sector. The present article

discusses about the significant role played by agriculture sector not only in food production but also in hunger and poverty eradication at global level. As the population of India is increasing year by year, it is the right time to take immediate action on agricultural sector and preserve our natural resources for our upcoming generations.

**Research methodology:**

The present research article is based on descriptive and quantitative methods of research. The researcher has tried to collect the data from secondary sources like books, journal articles, online journals, periodicals and different websites. The researcher has analyzed the data acquired from different sources and tried to draw conclusion. The collected data has been presented with the help of tables and charts.

**The place of agriculture in Indian Economy**

Agriculture is the primary vocation in India. Not only from the point of view of its cultivation and food production but also from the social aspects too. In short, *agriculture is a way of life in India* (Desai, 1986). The entire nation depends upon agriculture for the production of food grains, pulses, cotton, cattle feed, paddy, cereals, spices and many other things. It also contributes through various allied activities like dairy, fishery, piggery, goat farming, poultry, animal husbandry etc. It has a significant place in GDP of the nation and also in employment generation. Agriculture is an important part of the economy as it keeps a large number of populations engaged in active work.

**Table 1.1 Share of Agriculture in GDP**

Year	% Share of Agriculture in GDP (at 1999-00 prices)	Year	% Share of Agriculture in GDP (at 1999-00 prices)
1947-48	60	2005-06	19.55
1950-51	56.5	2009-10	14.5
1970-71	45.9	2011-12	13.9
1990-91	34.0	2019-20	16.9
2000-01	24.7	2020-21	19.9

(Datta, 2018-19)

**Table 1.2 Share of Agriculture sector in employment generation**

Year	% Share of Agriculture in employment	Year	% Share of Agriculture in employment
2010	51.52	2015	45.67
2011	48.98	2016	45.14
2012	47.00	2017	44.05
2013	46.36	2018	43.33
2014	45.84	2019	42.39

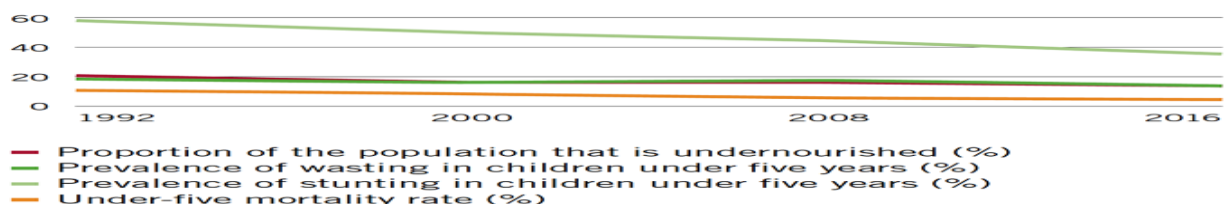
(Neil, 2021)

**The place of India in Global Hunger Index**

According to the Global Hunger Index 2020, India ranks at 94 in the world. The hunger index of India being 27.2 is in the serious category. Though the GHI score trend is reducing for India, it is still alarming one. In the year 2000, the GHI of India was 38.9 which declined up to 37.5 in 2006. In 2012 the GHI of India declined rapidly to 29.3 and further decreased to 27.2 in the year 2020. As it is a good sign but still, India’s neighboring countries like Nepal, China, Sri Lanka etc. record better global hunger index. Thus, agriculture has to play a significant role in producing more than sufficient food grains and other edibles to sustain its increasing population.

**GLOBAL HUNGER INDEX TRENDS FOR INDIA**

The four Global Hunger Index indicators for India show progress, yet this has been uneven across the country.



**Source:**

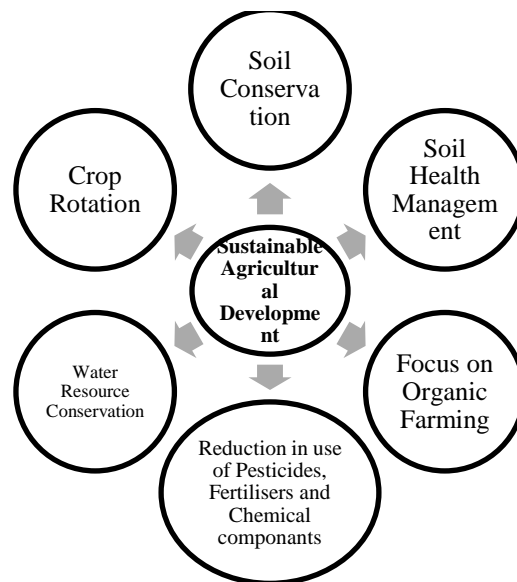
<https://www.globalhungerindex.org/india.html#:~:text=In%20the%202020%20Global%20Hunger,See%20overview%20of%20GHI%20calculation%5D.>

**Sustainable Agricultural Development in India**

In the US National Agricultural Research, Extension, and Teaching Policy Act of 1977 the term "sustainable agriculture" is defined as an integrated system of plant and animal production practices having a site-specific application that will, over the long term:

- satisfy human food and fiber needs
- enhance environmental quality and the natural resource base upon which the agriculture economy depends
- make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls
- sustain the economic viability of farm operations
- enhance the quality of life for farmers and society as a whole (Wikipedia, 2021)

Though, there are various factors affecting sustainability in agriculture but recently some of the very important factors are identified which are illustrated in the following diagram.



**Summary and Conclusion**

India is facing the challenges of increasing population and also scarcity of food for almost 25.7 % population who are under below the poverty line (Sharma, 2019). This has posed many challenges for the policy makers. The patterns of agriculture and the technologies used to develop agriculture need a major change. The question of hunger elevation and poverty control can only be sort out with sustainable agriculture. India, still being a major economy depending upon primary sector has to step up to these challenges and ensure long run solutions to the problems regarding food supply and food security. To achieve the goal of zero hunger by 2030, it is very essential to make a paradigm shift in the attitude towards agriculture. Though, there are tremendous problems in this target, but India will have to be very optimistic about achieving it sooner than later.

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## **The Role of ICT in Climate Change**

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### **Abstract:**

*We all know that information and communications technologies (ICTs) have revolutionized our world... ICTs are also very vital to confronting the problems we face as a planet: the threat of climate change...Indeed ICTs are part of the solution. Already these technologies are being used to cut emissions and help countries adapt to the effects of climate change.. Governments and industries that embrace a strategy of green growth will be environmental champions and economic leaders in the twenty-first century. Information and communication technologies (ICT) provide us with an unprecedented ability to collect and analyse environmental information that may encompass the entire terrestrial system, from the depths of the ocean to the upper reaches of the atmosphere. They enable us not only to assess the impact of humans on the environment, but also to manage our use of energy and production of greenhouse gases (in the home and in industry). Thus, ICT are an essential part of efforts to combat climate change and to mitigate its effects.*

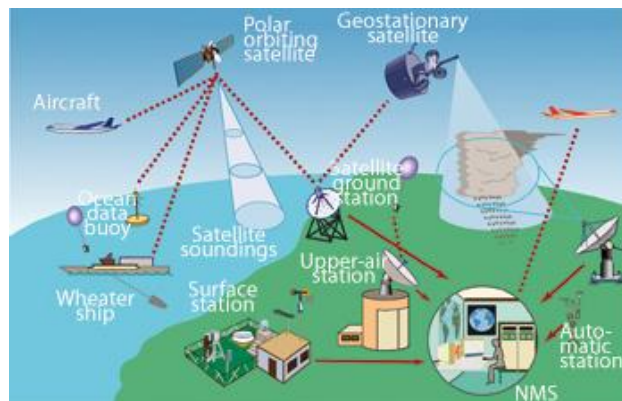
**Keywords:** Climate Change, ICT, Role of ICT in Climate Change Mitigation

### **Introduction:**

The word ‘Climate Change’ is not as simple and small in meaning as it seen. It exhibits dangerous and alarming consequences. Climate changes is continuous process from East to West, North to South, Soil to Sky, Water to Air, Forest to Desert, Ocean to Mountains, in fact everywhere. Climate change Monitoring (CCM) is the phenomena to observe and record climate changes and put forward them for decision makers or domain experts to prevent environment, avoid or at least prepare for different kinds of natural disasters, to prevent contamination of various precious natural resources including water, air and soil etc. Rapid advancement of Information and Communication Technology (ICT) is blessing for mankind and incorporation of this revolutionary technology in serving mankind in diverse domain is remarkable. By using ICT in climate monitoring specially, provide real time observation, reduce cost, decrease power consumption, lively tracking, real time data processing and analysis etc. This review study evaluates how widely ICT and ICT based applications can be used in mitigation, adoption and monitoring of climate changes in developed and developing countries.

### **ICT tools for mitigating climate change**

1. Computer-controlled systems can be used in aMultitude of ways to make home, work and Manufacturing more energy efficient.
2. Telecommunications are vital in responding to natural disasters that climate change may bring.
3. Monitoring vulnerable or dangerous Environments is possible with sensor Networks.
4. Satellite observations provide essential data on weather and vegetation patterns.
5. Ocean buoys communicate data on tsunami or sea-level changes, via satellite.
6. Data can be interpreted and illustrated by geographic information systems.
7. Increasing computational power, as well as new algorithms, make for better analysis and modeling of complex environmental and climate systems.
8. Broadband Internet access makes it easier to share large amounts of data globally.
9. Distributed (grid) computing allows researchers to explore topics in unprecedented depth.



Satellite-based sensors monitor and provide information on barometric pressure, water temperature and wave action. This is supplemented by data from land-based sensors, relayed by radio telemetry. Other platforms are also used, including commercial aircraft, specialized weather observation aircraft, weather balloons and ships.

#### **Issues related to Climate Changes:**

Developed and developing countries both are facing different kind of issues due to severe climate changes. According to the empirical analysis 3 study for developing countries heavy rainfall may be consequences of climate change and this unexpected heavy rainfall resulting in flood which damages crops and impose unbearable losses to agricultural sector while Drought is another outcome of climate change it produce water related problems , food prices, disease and health expenditures. Green House Gases (GHG) emission is the serious threat for the developing countries due to rapid expansion of industrialization. Developing countries facing two major challenges in account of climate changes, one is less opportunity for financing projects focused on a low carbon footprint and the second is lacking in adapting technologies that can help in mitigation in climate changes. ICT has the potential to help toward reduce the impacts of climate changes like emission of GHG<sup>4</sup> .

#### **Technology is everywhere:**

This is a technology revolution era. Technology is contributing in almost all fields of human life. Technologies enhance the capability and functionality of our daily routine life activities and serving mankind in its best. Technology is every where; we are using latest technology trends in our daily life activities like shopping, education, healthcare, sports, banking, stock market, public services, transportation and logistics as well as crisis or emergency management. We have same computational power<sup>5</sup> in our pockets as was to get Neil Armstrong to the moon. Varieties of technologies are available and serving mankind but Computing and telecommunication are two main, most popular and adopting technologies now a days. The technologies covered the computer system, Internet, e-mail, mobile devices, and fax machine. ICT is a revolutionary technology and becoming most popular, fastest growing and vastly adopting technology <sup>6</sup> in almost all the concerns of human life activities. Rapid development and advancement of Information and Communication Technology (ICT) and Mobile Technology (MT) cannot be underestimated. Accelerating adoption of MT is creating opportunities in providing variety of useful services through mobile devices.

#### **Material and Methods**

The role of ICT in adaptation, mitigation and monitoring climate change discussed and emphasis using ICT by developed and developing countries to reduce the impacts of climate or at least observe the current changes in environment and take appropriate decision according to situation. Information and Communication Technology can play a pivotal role in monitoring, mitigation and adaptation of Climate changes challenges. These ICT technologies includes Geographical Information System (GIS), Wireless Sensor Networks (WSN), Mobile Technology (MT), Web based applications , Satellite Technology, Remote Sensing (RS).Weather patterns are changing intensively due to change in temperature globally. ICTs are enabling tools if integrated strategically can improve efficiency and effectiveness of efforts doing in climate change mitigation and adaptation; it includes knowledge centers, community radio, mobile phones and interactive media. ICT can help vulnerable community to reduce the risk related to climate changes by education and awareness at lowest level of community, sharing practical and theoretical knowledge, empowering community to access the knowledge and relevant information applicable locally to save lives . Developing countries has seriously concerns regarding climate changes and looking for perspective technologies for monitoring, mitigating and adapting climate changes to reduce the vulnerability of the region. Developing countries are facing GHG emission problem due to rapid industrialization and transportation. ICT can be used in designing smart buildings, using ICT smart grids can be implemented in energy generation and power consumption, ICT can control transmission and distribution of energy.

#### **Conclusions:**

ICTs are becoming ubiquitous throughout society. Telecommunication networks and the Internet ensure that information is available at the touch of a keypad, and with (mobile) phones you can speak instantly to anyone in the world. The developing world is particularly vulnerable to changing climatic conditions and is not well served with Internet and voice communications. Bridging the digital divide is essential to assist the developing world to plan for adaptation and to enable a rapid and fully informed response to extreme conditions. We have shown in this paper how the risks due to climate change can be assessed, mitigated or adapted with the help of ICTs and with the cooperation of ICT experts in all sectors. Therefore we stress the importance of including the carbon reduction benefits of ICT specifically in the

negotiating text, along with the adoption of an agreed methodology for assessing the carbon impact of ICT equipment and services. The inclusion of ICTs in national adaptation and mitigation plans would provide an incentive to the ICT industry and its stakeholders to maximize the mitigation capabilities of ICTs.

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## **Geographical study of demographic factors in Gadchiroli district - 2001 to 2011**

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### **Abstract: -**

*Gadchiroli district, east of the state of Maharashtra, was formed from Chandrapur district on 26 August 1982. Gadchiroli district is mainly known as a tribal and Naxalite district. Gadchiroli district has the highest forest cover and mineral reserves in the state of Maharashtra. The total geographical area of the Gadchiroli district is 14412 square kilometres. Which male population is 5413 28, female population is 531614. In 2011, The literacy rate is 70.60 per cent, the sex ratio is 982 and the population density is 74.44. Compared to Maharashtra, it is important to study the demographic factors like sex ratio, literacy rate & population density etc. in the Gadchiroli district.*

**Keyword: -** Geographical area, Total Population, Literacy rate, Sex ratio & Population density.

### **Introduction: -**

Gadchiroli district was created on 26<sup>th</sup> August 1982 by bifurcating the Chandrapur district. Gadchiroli is the part of Vidarbha region of Maharashtra. In ancient times Gadchiroli region was ruled by Rashtrakutas, the Chalukyas, the Yadvas of Deogiri and later the Gonds of Gadchiroli. Paddy is the main agricultural produce in this district. Seven languages are spoken in the district ie, Marathi, Gondi, Madia, Hindi, Bengali, Telugu and Chhattisgadi. The district is distributed in 12 talukas.

The district is categorized as a Tribal and undeveloped district and most of the land is covered with forest and hills. Gadchiroli district is abundant in natural beauty located in the eastern region of Maharashtra. Forests cover more than 75.96% of the geographical area of the district including the main hilly region like Aheri, Bhamargarh, Tipagarh, Palasgarh, Khobramendha and Surajagarh. Vainganga, Pranhita, Indravati and Godavari these four-river flow across the border of the Gadchiroli district. In the Gadchiroli district, the temperature in summer is usually recorded 45<sup>o</sup> cg. And in autumn the rain is recorded 1400 -1500 mm.

While the area of the District accounts for 4.68 % of the total area of the State, the District population constitutes 0.95 % of the total population of the State. The density of the population is 74.44 persons per Sq. km. Among the 35 Districts of the State, the District ranks 5th in terms of area, 34th in terms of population and 35th in terms of density.

As per the 2011 Census, the District has a total population of 1,072,942 with 9,54,909 in rural and 118,033 in urban., 86.4 per cent of the District population are Hindus and Buddhists constitute about 7.7 per cent. The remaining population consists of Muslims (2 per cent), Christian (0.4 per cent) and Sikhs (0.1 per cent). The sex ratio in the District has remained higher than that of the State from 1901 to the 2011 Census. The sex ratio at the State level declined by 49 points and at the District by 41 points during the last 110 years.

### **Study Area: -**

Gadchiroli district came into existence and separated from Chandrapur district on 26 Aug 1982. A Geographically Gadchiroli district is Located in the south-east of Maharashtra state, Gondia and Bhandara Locate in the north of the district, Chhattisgarh locates in the east while Andhra Pradesh in south Chandrapur district located in the west, Gadchiroli district is situated between 18<sup>o</sup> 35' and 20<sup>o</sup> 52' north latitudes and 79<sup>o</sup> 45' and 80<sup>o</sup> 58' east longitudes. The district occupies an area of 14412 sq. km. Wainganga is the major river of the district which flow from the west direction and it is the boundary line of the district.

This district is generally considered a rural, tribal and Naxalite district. The road Tran's potation in Gadchiroli district is efficient. From 12 Talukas of Gadchiroli district, most of the tourist places are present in rural part. These places are historical fort pilgrim centre, places of natural beauties, sanctuaries but till they are not developed.

### **Objective: -**

1. To study Gadchiroli district in terms of geographical area and population ratio as compared to Maharashtra.
2. To study the sex ratio, literacy rate and population density in Gadchiroli district as compared to Maharashtra.
3. To study the comparative position of demographic factors in the Gadchiroli district from the 2001 and 2011 census.

**Methods of Study: -**

The research paper presented the sex ratio, literacy rate & population density is studied from 2001 to 2011. The secondary data material is used for research. And implementing a general sex ratio & population density formula. And the bar graph is used to represent the above data. Therefore, required data was collected from in Census Report - 2001 & 2011, Census Handbook of Gadchiroli - 2001 & 2011, Socio-Economic Survey of Gadchiroli- 2011.

Sr. No.	Sub – District /Talukas	Total Geographical Area	Male	Female	Total Population	Literacy Rate	Sex Ratio	Population Density
1	Desai. Wadsa	236.06	38744	37410	76154	73.3	966	305
2	Armori	717.90	45760	45086	90846	67.8	985	217
3	Kurkheda	839.68	39626	38310	77936	70.6	967	114
4	Korchi	680.44	20,339	20,397	40,736	59.1	1003	69
5	Dhanora	1736.92	39,148	38,198	77,346	56.5	976	56
6	Gadchiroli	867.86	63,970	62,343	126,313	70.8	975	195
7	Chamorshi	1314.18	83,886	81,628	165,514	62.6	973	205
8	Mulchera	735.81	20,231	19,380	39,611	66.9	958	180
9	Etapalli	2267.30	35,776	34,851	70,627	40.3	974	38
10	Bhamargarh	1420.58	16,228	15,451	31,679	34.0	952	24
11	Aheri	2282.70	52,402	51,357	103,759	49.8	980	107
12	Sironcha	1256.60	34,991	34,782	69,773	42.8	994	73
13	District	14412	491101	479193	970294	60.1	976	67

**Sources: census - handbook of Gadchiroli- 2001**

Sr. No.	Sub – District /Talukas	Total Geographical Area	Male	Female	Total Population	Literacy Rate	Sex Ratio	Population Density
1	Desai. Wadsa	236.06	27626	27200	54826	80.75	990	232.25
2	Armori	717.90	48887	48887	97774	76.03	986	136.19
3	Kurkheda	839.68	43582	42491	86073	78.84	975	102.50
4	Korchi	680.44	21087	21724	42811	70.08	1030	62.91
5	Dhanora	1736.92	41529	41169	82698	66.46	991	47.61
6	Gadchiroli	867.86	46705	45106	91811	79.01	965	105.79
7	Chamorshi	1314.18	90759	88361	179120	72.01	974	136.29
8	Mulchera	735.81	23438	22349	45787	75.75	954	62.22
9	Etapalli	2267.30	40959	40754	81713	58.79	995	36.03
10	Bhamargarh	1420.58	18319	18006	36325	44.16	983	25.57
11	Aheri	2282.70	58916	58076	116992	65.24	986	51.25
12	Sironcha	1256.60	37564	37192	74756	57.02	990	59.49
13	District	14412	541328	531614	1072942	70.60	982	74.44

**Sources: census - handbook of Gadchiroli- 2011**

**Sex Ratio: -** “The sex ratio is the usually defined as the no. of female per 1000 males.”

$$\text{Sex Ratio} = \frac{\text{The total Number of females}}{\text{The total Number of (Men) males}} \times 1000$$

A 2011 sex ratio study shows that there are 982 females for every 1000 males in Gadchiroli district. In 2011, the sex ratio in Maharashtra was 929. Korchi taluka in Gadchiroli district has the highest sex ratio of 1030 while Mulchera taluka has the lowest sex ratio of 954. In all the talukas of Gadchiroli district, the sex ratio is above 950 in 2011.

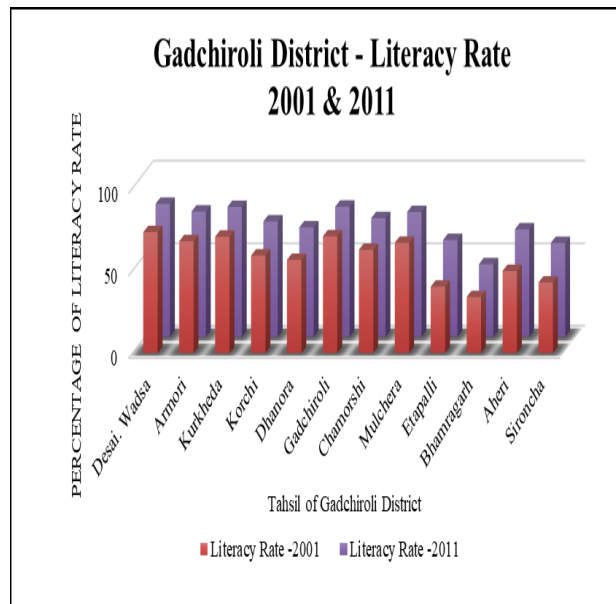
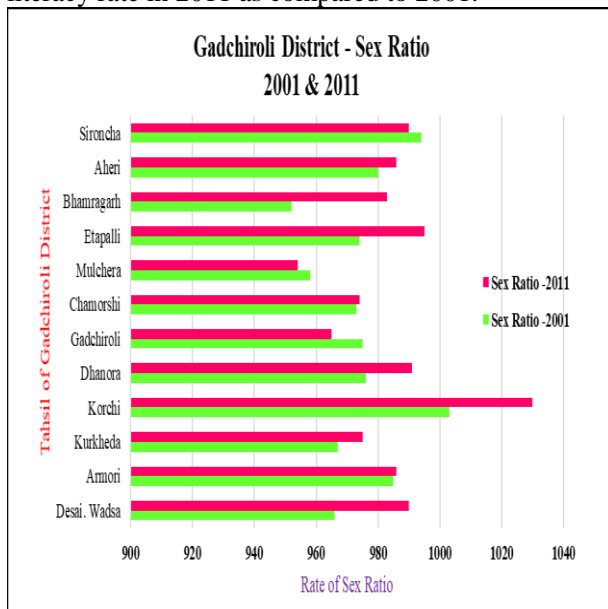
The average sex ratio of Gadchiroli district in 2001 appears to be 976, which is 976 females per 1000 males. Which shows the total average sex ratio of Maharashtra as 922. In the Gadchiroli district, Korchi taluka has the highest sex ratio of 1003 in 2001, while Bhamragad taluka has the lowest sex ratio of 952. The sex ratio in the Gadchiroli district increased in 2011 as compared to 2001.

**Literary Rate: -**

**UNESCO's** – “Literacy is the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts.”

Gadchiroli district had a literacy rate of 60.1 per cent in 2001, compared to 76.88 per cent in Maharashtra in 2001. In 2001, the Gadchiroli district had the highest literacy rate of 73.3% in Desaiganj Wadsa taluka and the lowest literacy rate of 34% in Bhamragad taluka.

In 2011, Maharashtra had an average literacy rate of 82.30 per cent, compared to 70.60 per cent in the Gadchiroli district. Gadchiroli district has the highest literacy rate of 80.75 % in Desaiganj Wadsa taluka and the lowest literacy rate of 44.16 % in Bhamragad taluka. Gadchiroli district saw a 10.90 per cent increase in literacy rate in 2011 as compared to 2001.

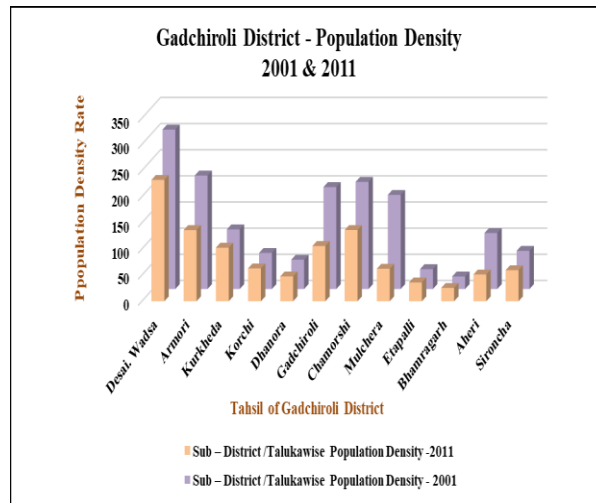


**Population Density: -**

“Population density is the number of persons inhabited per square kilometre of the area.”

In 2001, the population density in Maharashtra was 315, with Gadchiroli district having the lowest population density in Maharashtra at 67. Gadchiroli district has the highest population density of 305 Desaiganj Wadsa taluka while the lowest population density is Bhamragad-24, Etapalli-38.

The total population density of Maharashtra appears to be 365 in 2011, with the Gadchiroli district again having the lowest population density of 74.44 in Maharashtra. In 2011, Desaiganj Wadsa in the Gadchiroli district had the highest population density of 232.55 while the lowest population density was Bhamragad -25 and Etapalli -36. The population density appears to have increased by 7% in 2011 compared to 2001 but does not appear to have changed much.



Ranking of Gadchiroli district in Maharashtra - 2001 and 2011											
2001						2011					
Sex Ratio	Rank In Maha	Literacy Rate	Rank In Maha	Pop. Density	Rank In Maha	Sex Ratio	Rank In Maha	Literacy Rate	Rank In Maha	Pop. Density	Rank In Maha
976	05	60	35	67	35	982	04	74	34	74	35

According to the 2001 census, Gadchiroli district ranks 5<sup>th</sup> in Maharashtra in terms of sex ratio and 35<sup>th</sup> in literacy rate and population density.

Similarly, in 2011, Gadchiroli district ranked 4<sup>th</sup> in Maharashtra in terms of sex ratio, 34<sup>th</sup> in literacy rate and 35<sup>th</sup> in population density.

**Conclusion: -**

1. As per the 2001 & 2011 census, the Male literacy rate is higher than the female literacy rate in rural as well as in the urban area in Gadchiroli district.
2. According to the 2001 census, the percentage of the urban population in the Gadchiroli district is only 6.93 per cent which is 38.89 per cent of total Maharashtra. And according to the 2011 census, the percentage of the urban population in Gadchiroli district is 11% while in Maharashtra it is 45.23%.
3. Out of the total population in the Gadchiroli district, 38.30 per cents are tribals (S.T.) and 11.22 per cent are Scheduled Castes (S.C.).
4. Gadchiroli district is a predominantly tribal district. In Gadchiroli district, Kurkheda, Dhanora, Aheri, Etapalli, Sironcha, Bhamragad and Mulchera have the highest number of tribals in the total 8 tehsils and they constitute 77.24% of the total tribal population in the district.

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## Sawi Transform and Convolution Theorem for Initial Boundary Value Problem (Wave equation)

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### Abstract

We prove convolution theorem for Sawi transform and apply it to solve wave equation.

Key words: Sawi transform, Inverse Sawi transform, Convolution theorem, Wave equation.

### 1 Introduction

Sawi transform was introduced by Mohand Mahgoub [2] to solve the ordinary and Partial differential equations in the time domain in 2019. It is useful and good tool for solving ordinary differential equations as well as partial differential equations. like Elzaki (E), Aboodh (A) , Laplace (L) , Kamal (K) , Mohand (M) , Fourier (F) , Shehu( S) transforms , etc ...

Sawi transform is defined for function of exponential order. Sawi transform of the function  $f(t)$  ,  $t \geq 0$  is defined as

$$S[f(t)] = R(v) = \frac{1}{v^2} \int_0^{\infty} e^{-\frac{t}{v}} f(t) dt \quad (1.1)$$

where S is called the Sawi transform operator. The sawi transform of the function  $f(t)$  for  $t \geq 0$  exists if  $f(t)$  is piecewise continuous and of exponential order. Singh and Aggarwal [3 ] used Sawi transform to solve Growth Decay problem. Aggarwal and Gupta [1] studied dualities between some useful integral transforms and Sawi transform in 2019. Recently author [4] used sawi transform for Bessel function.

This paper is organized as follows. In second section we state some standard formulae of some Sawi transform and inverse Sawi transform. Third section is devoted to some useful theorems, we state and prove convolution theorem and introduced a Heaviside function in fourth section and last section is for the solution of IBVP.

### 2 Some important useful results

2.1 In this section we state formulae of Sawi transform and inverse Sawi transform of some functions.

Table 1: Sawi transform of some functions [M] Table 2 : Sawi inverse transform of functions

Sr. No.	F(t)	S[f(t)]	Sr. No.	R(v)	S <sup>-1</sup> [R(v)]
1	1	$\frac{1}{v}$	1	$\frac{1}{v}$	1
2	t	1	2	1	t
3	$t^n \ n \in N$	$n! v^{n-1}$	3	$n! v^{n-1}$	$t^n \ n \in N$
4	$e^{at}$	$\frac{1}{v(1-av)}$	4	$\frac{1}{v(1-av)}$	$e^{at}$
5	$\sin at$	$\frac{a}{1+a^2v^2}$	5	$\frac{a}{1+a^2v^2}$	$\sin at$
6	$\cos at$	$\frac{1}{v(1+a^2v^2)}$	6	$\frac{1}{v(1+a^2v^2)}$	$\cos at$
7	$\sinh at$	$\frac{a}{1-a^2v^2}$	7	$\frac{a}{1-a^2v^2}$	$\sinh at$
8	$\cosh at$	$\frac{1}{v(1-a^2v^2)}$	8	$\frac{1}{v(1-a^2v^2)}$	$\cosh at$

If  $S[F(t)] = R(v)$  then  $f(t)$  is called the inverse Sawi transform of  $R(v)$  and mathematically it is defined as  $f(t) = S^{-1}[R(v)]$  , where the operator  $S^{-1}$  is called the inverse Sawi transform.

## 2.2 Transform of derivative:

Let  $R[v]$  Sawi transform of  $f(t)$ , i.e.  $[S[f(t)]] = R[v]$  then,

$$(1) S[f'(t)] = \frac{R(v)}{v} - \frac{f(0)}{v^2} \quad (2) S[f''(t)] = \frac{R(v)}{v^2} - \frac{f'(0)}{v^2} - \frac{f(0)}{v^3} \quad (3) S[f^n(t)] = \frac{R(v)}{v^n} - \sum_{k=0}^{n-1} \frac{f^{(k)}(0)}{v^{n-k+1}}$$

## 3 Main Results

### 3.1 Convolution theorem for Sawi transforms:

If  $F(v)$  and  $G(v)$  are the Sawi transform of  $f(t)$  and  $g(t)$  respectively, then  $v^2 F(v).G(v)$  is sawi transform of  $\int_0^\infty f(t-q)g(q)dq$ . This integral is called the convolution of  $f$  and  $g$  and is denoted by symbol  $f * g$ .

$$\text{Proof: Let } F(v).G(v) = \left[ \frac{1}{v^2} \int_0^\infty e^{-\frac{p}{v}} F(p) dp \right] \left[ \frac{1}{v^2} \int_0^\infty e^{-\frac{q}{v}} G(q) dq \right]$$

$$= \frac{1}{v^4} \int_0^\infty G(q) \left[ \int_0^\infty e^{-\frac{p+q}{v}} F(p) dp \right] dq$$

put  $p+q = t \Rightarrow dp = dt$ . When  $p = 1$  then  $t = 1$ ; When  $p = 0$  then  $t = q$

$$\text{Now, } F(v).G(v) = \frac{1}{v^4} \int_0^\infty G(q) \left[ \int_0^\infty e^{-\frac{t}{v}} F(t-q) dt \right] dq = \frac{1}{v^2} S \int_0^t F(t-q).G(q) dq; t$$

$$\therefore v^2 F(v).G(v) = S \int_0^t F(t-q).G(q) dq; t \quad \therefore S^{-1}\{v^2 F(v).G(v); t\} = \int_0^t F(t-q).G(q) dq$$

**3.2 Transform of unit step function:** The unit step (or Heaviside unit) function is defined as,

$$H(t-a) = 0 \text{ if } t < a, \quad \text{and } H(t-a) = 1 \text{ if } t \geq a, \quad a \geq 0$$

Property: If  $S[f(t-a); v] = F(v)$  then  $S[f(t-a)H(t-a); v] = e^{-\frac{a}{v}} F(v)$  and

$$S^{-1} \left[ e^{-\frac{a}{v}} F(v); t \right] = f(t-a)H(t-a)$$

Proof: Let  $S[f(t-a)H(t-a); v] = \frac{1}{v^2} \int_0^\infty e^{-\frac{t}{v}} f(t-a)H(t-a) dt$

$$\therefore S[f(t-a)H(t-a); v] = \frac{1}{v^2} \int_0^a 0 dt + \frac{1}{v^2} \int_a^\infty e^{-\frac{t}{v}} .1. f(t-a) dt = \frac{1}{v^2} \int_a^\infty e^{-\frac{t}{v}} f(t-a) dt$$

Now, substitute  $t-a = p \therefore dt = dp$  and when  $t = a, p = 0$ ; when  $t = \infty, p = \infty$

$$\text{We get, } S[f(t-a)H(t-a); v] = \frac{1}{v^2} \int_0^\infty e^{-\frac{(p+a)}{v}} f(p) dp = e^{-\frac{a}{v}} \int_0^\infty e^{-\frac{p}{v}} f(p) dp = e^{-\frac{a}{v}} F(v)$$

$$\therefore S^{-1} \left[ S^{-1} \left[ e^{-\frac{a}{v}} F(v); t \right] \right] = f(t-a)H(t-a)$$

## 4. Applications

In this section we apply Sawi transform and convolution theorem to solve wave equation.

**Example:** Consider the boundary value problem  $\frac{1}{c^2} u_{tt} - \cos \omega t = u_{xx}$  subject to the boundary conditions  $u(0,t) = 0$ ,  $u$  is bounded as  $x$  tends to  $\infty$  and initial conditions  $u_t(x,0) = u(x,0) = 0$

**Solution:** Taking sawi transform of both sides of the equation,  $S\left(\frac{1}{c^2} u_{tt}\right) - S(\cos \omega t) = S(u_{xx})$

$$\therefore S \left[ \frac{\partial^2 u(x,t)}{\partial x^2} \right] = \frac{1}{c^2} S[u_{tt}] - S[\cos \omega t]$$

$$\therefore \frac{d^2 U(x,v)}{dx^2} = \frac{1}{c^2} \left[ \frac{1}{v^2} R(v) - \frac{1}{v^2} f'(0) - \frac{1}{v^3} f(0) \right] - \frac{1}{v(1+\omega^2 v^2)}$$

Since, I.C.s are  $u_t(x,0) = u(x,0) = 0$ , we get,  $\left(D^2 - \frac{1}{c^2 v^2}\right) U(x,v) = -\frac{1}{v(1+\omega^2 v^2)}$  where  $D = \frac{d}{dx}$ .

The complimentary function is  $U_{CF}(x,v) = A e^{\left(\frac{x}{cv}\right)} + B e^{\left(-\frac{x}{cv}\right)}$

The particular integral is  $U_{PI}(x, v) = \frac{1}{D^2 - \frac{1}{c^2v^2}} \left( -\frac{1}{v(1 + \omega^2v^2)} \right) = \frac{c^2v}{1 + \omega^2v^2}$

Therefore general solution is  $U = U_{CF}(x, v) + U_{PI}(x, v) = Ae^{\left(\frac{x}{cv}\right)} + Be^{\left(-\frac{x}{cv}\right)} + \frac{c^2v}{1 + \omega^2v^2}$

As  $\rightarrow \infty$ , the transform should also be bounded which is possible if  $A = 0$ ; thus

$$U(x, v) = Be^{\left(-\frac{x}{cv}\right)} + \frac{c^2v}{1 + \omega^2v^2} \quad (1)$$

BCs is,  $u(0, t) = 0$  Taking Sawi transform on  $u(0, t) = 0$ , we get  $S[u(0, t)] = U(0, v)$

$\therefore U(0, v) = S[0, t] = 0$ . Put  $x = 0$  in equation (1)  $B = -\frac{c^2v}{1 + \omega^2v^2}$

Substituting value of B in equation (1), we get

$$U(x, v) = -\left(\frac{c^2v}{1 + \omega^2v^2}\right)e^{\left(-\frac{x}{cv}\right)} + \frac{c^2v}{1 + \omega^2v^2}$$

Taking Sawi inverse transform on both side,

$$\begin{aligned} S^{-1}[U(x, v); t] &= -S^{-1}\left[\left(\frac{c^2v}{1 + \omega^2v^2}\right)e^{\left(-\frac{x}{cv}\right)}; t\right] + S^{-1}\left[\frac{c^2v}{1 + \omega^2v^2}; t\right] \\ u(x, t) &= c^2S^{-1}\left[\frac{c^2v}{1 + \omega^2v^2}; t\right] - c^2S^{-1}\left[\left(\frac{v}{1 + \omega^2v^2}\right)e^{\left(-\frac{x}{cv}\right)}; t\right] \end{aligned} \quad (2)$$

Let us consider first term in R. H. S. of equation (2)

$$S^{-1}\left[\frac{c^2v}{1 + \omega^2v^2}; t\right] = S^{-1}\left[\frac{c^2v^2}{v(1 + \omega^2v^2)}; t\right]$$

Take  $F(v) = v^2$  and  $G(v) = \frac{1}{v(1 + \omega^2v^2)}$   $S^{-1}[F(v); t] = S^{-1}[v^2; t] = t = f(t)$  and

$$S^{-1}[G(v); t] = S^{-1}\left[\frac{1}{v(1 + \omega^2v^2)}; t\right] = \cos \omega t = g(t)$$

Therefore by Convolution theorem

$$\begin{aligned} S^{-1}\left[\frac{v^2}{v(1 + \omega^2v^2)}; t\right] &= \int_0^t f(t-v).g(v)dv \\ &= \int_0^t (t-v). \cos \omega v dv = \frac{1}{\omega^2} (1 - \cos \omega t) \end{aligned} \quad (3)$$

Now consider second term in equation (2),  $S^{-1}\left[\left(\frac{v}{1 + \omega^2v^2}\right)e^{\left(-\frac{x}{cv}\right)}; t\right]$

By property of unit step function; thus we get,

$$\begin{aligned} S^{-1}\left[\left(\frac{v}{1 + \omega^2v^2}\right)e^{\left(-\frac{x}{cv}\right)}; t\right] &= S^{-1}\left[\left(\frac{v^2}{v(1 + \omega^2v^2)}\right)e^{\left(-\frac{x}{cv}\right)}; t\right] \\ &= \frac{1}{\omega^2} \left[1 - \cos\left(t - \frac{x}{c}\right).H\left(t - \frac{x}{c}\right)\right] \end{aligned} \quad (4)$$

put (3) and (4) in (2), we get

$$\begin{aligned} u(x, t) &= \frac{c^2}{\omega^2} (1 - \cos \omega t) + \frac{c^2}{\omega^2} \left[1 - \cos\left(t - \frac{x}{c}\right).H\left(t - \frac{x}{c}\right)\right] \\ \therefore u(x, t) &= \frac{c^2}{\omega^2} \left(2 - \cos \omega t - \cos\left(t - \frac{x}{c}\right).H\left(t - \frac{x}{c}\right)\right) \end{aligned}$$

It is the required solution of the wave equation.

## 5. Conclusion

Sawi transform is successfully applied to wave equation with the help of convolution theorem and step function.

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## **Quality Education**

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### **Abstract:**

*The purpose of education is not just imparting information. Quality Education is the better class of education. Quality Education means bringing education to a higher level. Education results in better learned individuals but quality education makes better educated individuals. Quality in literal sense means the measurement of something as compared to other thing of the same kind. Quality reflects completeness in all aspects. It is a wider approach than mere formal education. It is education for life. The educational quality of a nation describes and affects the success of the respective nation. The objective of this paper is to study the various aspects of Quality Education and to bring out the flaws in the same. Quality Education prevails in theory but not in practice. The concept of quality education is limited to the vocational aim and infrastructure only. Our education system can develop a competent worker but is unable to develop a human being. So the flaws in implementing quality education need to be studied and removed to ensure quality in real sense.*

**Keywords:** *Quality Education, Important & Indicators, Goals & Implications.*

**Introduction:** The 2030 Agenda for Sustainable Development is universal, holistic and indivisible, with a special imperative to leave no one behind. Education and the achievement of SDG 4 – ensure inclusive and equitable quality education and promote lifelong learning opportunities for all – plays a central role in building sustainable, inclusive and resilient societies. Much progress was made under the Millennium Development Goals toward universal primary school enrollment; SDG 4 now aims to raise the bar and make education a catalyst for broader change toward sustainable development. Education is a basic right and elementary to human dignity. SDG 4 also has reciprocal linkages across the 2030 Agenda. Access to quality education is an avenue for social mobility and reducing inequalities. Education is essential for building the knowledge base we need to tackle critical challenges like climate change. Education will help youth prepare for employment in the high-skill jobs of the fourth industrial revolution. And education is a foundation for peaceful societies and effective institutions. Education is essential for sustainable development, but investments in education that are not accompanied by concurrent progress in other aspects of human wellbeing will fall short of enabling all people to realize their full potential in life. Good child health and nutrition are essential for securing learning outcomes – not only in terms of increased class attendance, but also for improving educational achievements. Similarly, ending poverty, thereby reducing pressures to put children to work, may be essential to universal school enrolment. Such considerations may be especially relevant for vulnerable groups that tend to suffer from multiple deprivations and are therefore critical to realizing the overall objective of ‘leaving no one behind’. While education in the 2030 Agenda for Sustainable Development is most explicitly formulated as a stand-alone goal (SDG4), there are also a number of education-related targets and/or indicators in other sustainable development goals. These include health and well-being (Target 3.7), gender equality (Target 5.6), decent work (Target 8.6), responsible consumption and growth (Target 12.8), and climate change mitigation (Target 13.3).

**Meaning of QUALITY EDUCATION:** VVOBs Definition of Quality Education- "A good quality education is one that provides all learners with capabilities they require to become economically productive, develop sustainable livelihoods, contribute to peaceful and democratic societies and enhance individual well-being.

**Brief definition of quality education :** Quality depend upon characteristics of:

- A) learners (healthy, motivated students)
- B) processes (competent teachers using active methodologies)
- C) content (relevant curricula)
- D) systems (good governance and educationist)

The learning outcomes that are required vary according to context but at the end of the basic education cycle must include threshold levels of literacy and numeracy, basic scientific knowledge and life skills including awareness and prevention of disease. Capacity development to improve the quality of teachers and other education stakeholders is crucial throughout this process."

**Importance Of Quality In Education:** importance of quality in education Higher education plays an important role for the student and the society in which he lives. It represents the growth of the individual which allows him to lead a better life as there are more chances of getting a highly paid job; in turn the

society is benefited as the ideal citizens are created who will keep the society peaceful. "According to a research done by the Bureau of Labor Statistics (BLS), the average earnings become high and the level of unemployment falls, with each education level acquired" (Pavel, 2012) Uhuru Kenyatta, President of the Republic of Kenya (2015), said that provided quality education brings about a glittering future to individuals, society and whole world at large. Graduates who acquire quality skill and education from their respecting institutions are most likely to be employable. If not so the graduates may be able to use what they have learnt to start up their own business for example a graduate from an accountancy college may in the event that they do not find a job or if they so choose, start up their own accountancy consultancy agency offering accounting services and also by being able to employ their skills and start their own business, the graduates would be creating employment for other individuals in the society thus also helping in diversifying the economy of that particular nation investing in its private sector. Tertiary education also helps provide graduates with basics of understanding about economic activities that occur worldwide. A nation that possesses such people would be safe to be termed as a literate nation, a wise nation would in turn be able to prevent and run anti economic actions such as corruption. Quality education provided to the society inspires creativity and innovation, moreover improves the nation's economy. Graduates and internship students do interact with the society to share knowledge, help the nation in making the decisions and coming up with new ideas of doing things better as stated by British Council, (2014). That by its own increases the productivity of the nation thereby improving its economy. Example can be alumni from technical college during electricity down failure; they can apply knowledge acquired from their programs to make solar street lights with the help of community members. The idea of coming up with solar street lights is creativity, diversification and its amending ordinary ones to advance ones. The transition of skills and knowledge from one individual with expertise to another of less expertise would result in the increase in experts in that particular thus creating a pool of employs that organizations could recruit from. The graduates with expertise in certain fields would be in a better position to be leaders in their particular field of expertise, therefore good education produces ideal leaders.

#### **The Indicators of Quality Education;**

- 1) Learners: Healthy, Ready to participate and learn ; Supported in learning by their families and communities.
- 2) Environments: that are healthy, safe, protective and gender-sensitive, equal opportunities to use resources and facilities.
- 3) Content: that is reflected in relevant curricula and materials for the acquisition of basic skills, especially- literacy, numeracy and skills for life etc.
- 4) Processes; through which trained teachers use child-centered teaching approaches in well-managed classrooms and schools and skillful assessment to facilitate learning and reduce disparities.
- 5) Outcomes: that include knowledge, skills and attitudes, linked to national goals for education and positive participation in the society.

#### **Goal Targets:**

- 1) By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes .
- 2) By 2030, ensure that all girls and boys have access to quality early childhood development, care and preprimary education so that they are ready for primary education.
- 3) By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.
- 4) By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.
- 5) By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.
- 6) By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.
- 7) By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.
- 8) Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, nonviolent, inclusive and effective learning environments for all.

9) By 2030, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries.

10) By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states.

**Three Means of Implementation.** A) Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.

B) By 2030, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries.

C) By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small Island developing States. limited by the level of education attained by the nation's citizens. Nations with high illiteracy rates and unskilled workforces have fewer development options. Thus, education can enable sustainable development. The UNESCO GEM Report also highlights two primary ways in which education supports sustainable development. Firstly, 'education can facilitate changes in values, world views and behaviour at the level of the individual, the community and society as a whole' (UNESCO, 2016, p. 11). Secondly, 'education can facilitate reflective or critical learning, knowledge and skills acquisition and greater agency to address complex sustainability issues, for example, how to create a sustainable school or a carbon-neutral city' (UNESCO, 2016, p. 11).

**Conclusion:** Quality Education is for better future to avail the educational resources, not only helping our society in the improvement individuals, But also gives sustainable and balanced impact socially and financially. It will be called as one of the Global key Goal as a action for the SDG and thus, helpful to Protect the planet and definitely ensure peace and prosperity.

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## **Seven Basics of Human Resource Management**

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### **Abstract**

*Every Businessman is trying to the success of any business. Best human Resources essential to every business success. The performance of employees can be a liability. Good Human Resource Management (HRM) is essential for businesses of all sizes. In this article, I will discussion the fundamentals and Basics of Human Resource Management.*

**Keyword:-** *Human Resource Management (HRM), Human Resources Department (HRD), HR basics, Recruitment, selection, Performance management, Learning & development, Succession planning, Compensation and benefits, Human Resources Information Systems, HR data and analytics*

### **Introduction**

Human Resource Management (HRM) is the practice of managing people to achieve better performance. It's about optimizing Business performance through better management of human resources. Then we will understand into the seven HR basics you have to know to have a good understanding of what HR does.

The HR department provides the knowledge, tools, training, legal advice, administration, and talent management, which is crucial to sustaining and advancing a company. This is what Human Resource Management boils down to optimizing company performance through better management of human resources.

The next question is who are these Human Resources?

It may feel a bit weird to refer to people as 'human resources'. Human Resources are all the people that in one capacity or another work for or contribute to an organization. These people make up a company's workforce. They can be regular employees, for example, but also contractors. Especially with the rise of the big economy, more and more people are starting to work for an organization on a contract basis without having a traditional labor contract. These people include independent contractors, workers provided by contract firms, on-call workers, and temporary help agency workers.

An independent contractor can be under contract for years at the same organization, while an agency worker can work at 20 different companies throughout one year. Because these people are all involved in the company to a different extent, the way they are managed and involved in the organization should also be different.

Also, there are increasingly non-humans at work at the company.

In this case, we're talking about the increase in robotization. Robots are increasingly involved in day-to-day work and the interaction between man and machine is becoming increasingly essential to the success of the organization. Although these machines are not considered 'human resources', there is a case to be made that they should be included in some way as they are part of the workforce.

### **The seven HR basics**

When we talk about Human Resource Management, several elements are considered cornerstones for effective HRM policies. These cornerstones are:

1. Recruitment & selection
2. Performance management
3. Learning & development
4. Succession planning
5. Compensation and benefits
6. Human Resources Information Systems
7. HR data and analytics

In the following section, we will cover these HR basics one by one.

#### **1. Recruitment & selection**

Recruitment and selection are discussable the most visible elements of Human Resources. Recruiting candidates and selecting the best ones to come and work for the company is a key Human Resources Department (HRD) responsibility.

The request for new hires usually starts when a new job is created. The direct manager then sends the job description to HR department and HRD starts recruiting candidates. In this process, HR can use different selection instruments to find the best person to do the work. These include interviews, different assessments, reference checks, and other recruitment methods.



## **2. Performance management**

Performance management is the second HR basic. It involves helping people to become their best selves at work, boosting the company's bottom line. Usually, employees have a defined set of responsibilities that they need to take care of. Performance management is a structure that enables employees to get feedback on their performance – to reach their best performance.

## **3. Learning & development**

Learning and development helps employees to reskill and upskill. Learning & Development (L&D) is led by HR and good policies can be very helpful in advancing the organization towards its long-term goals. Many organizations have pre-defined budgets for L&D efforts. This budget is then distributed amongst employees, with trainees, future leaders, and other high potentials often receiving more training opportunities than others. Individuals may arrive at a company with vastly different knowledge and experience. L&D provides employees with a way in which to bridge skill gaps and develop into leaders

## **4. Succession planning**

Succession planning is the process of planning contingencies in case of key employees leaving (death, retirement and any other reasons) the company. If, for example, a crucial senior manager quits his job, having a replacement ready will guarantee continuity and can save the company significant money. Succession planning is often based on performance ratings and L&D efforts. This results in the creation of a talent pipeline. This is a pool of candidates who are qualified and ready to fill (senior) positions in case of someone leaving the company.

## **5. Compensation and benefits**

Another one of the HR basics is compensation and benefits. Fair compensation is key in motivating and retaining employees. One of the fundamentals of human resource management concerning pay is ensuring equity and fairness.

Making the right offer of pay is a key part of attracting the best talent. This must be balanced with the budget and profit margins of the company. HR should monitor pay increases, and set standards of merit. HR may also carry out a pay audit on occasions.

## **6. Human Resource Information System**

The last two HR basics are not HR practices but tools to do HR better. The first is the Human Resource Information System, or HRIS. An HRIS supports all the cornerstones we discussed above.

For example,

- a. For recruitment and selection, HR professionals often use an Applicant Tracking System, or ATS, to keep track of applicants and hires.
- b. For performance management, a performance management system is used to keep track of individual goals and put in performance ratings.
- c. In L&D, a Learning Management System (LMS) is used for the distribution of content internally, and other HR systems are used to keep track of budgets and training approvals.
- d. Compensation specialists often use a payroll system, and there are also digital tools that enable effective succession planning.

All these functionalities can often be done in one single system – the HRIS. Sometimes, however, the management of these functionalities is split up into different HR systems.

## **7. HR data and analytics**

The last of the HR fundamentals revolves around data and analytics. In the last half-decade, HR has made a major leap towards becoming more data-driven. The Human Resource Information Systems we just discussed is essentially a data-entry system. The data in these systems can be used to make better and more informed decisions.

## **Conclusion**

You now know the 7 Human Resource Management basics. None of these HR fundamentals are isolated. They all interact and affect each other. Think of these 7 basics as building blocks – strong management of each fundamental element contributes to the strength of the next. Collectively, these HR fundamentals enable a workforce not only to perform better but to perform at its very best.

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## **Human Resources Development in Latur Districts: A Geographical Study**

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### **Abstract**

Human resources is importance for economic development of any nation. Economic development of a region is depending on the development of human and natural resources because of Man he develops with his knowledge, skilled and good health. the economic status of any country depends on the domestic and foreign tourist as tourist are the resources of any nation. The most important criteria of human resources development are population density, literacy, occupation, sex ratio, facilities etc. there for first objective is to study how human resources development is done in Latur district. This research depends on secondary data, this data collected for Latur district census during 2011. This data classify in to four grouped in first demography characteristics, occupation pattern, and Agricultural sectors.

**Keywords:** Human resources, Demographic characteristics, occupation pattern, Agricultural

### **Introduction:**

Human resources are one of the most important national resources and base for the study of population geography. The development of any region is needs of human resources development. Indian regional imbalance is one of the problems because low level of human resources development and economical backward region. The regional development needs proper use of human resources developments. The development of any region depends on the resources among them; there is a greater emphasis on human resource. Human resource development depends on the literacy, Population Density, Sex ratio, Population Growth rate, occupation position, Agricultural facilities and Human amenities. The most importance reason why the forest area is decaling day by day is increasing population and industrialization and forest is major natural resources. The human beings are a resource, but human beings are subject to huge environmental changes. Human resources are the most important factors contribution to water pollution. woman as resources as well as participation of women is important in any factors. Because of higher the participation of others the higher the family progress. Water pollution major causes of human resources because of human beings have made huge advances in technology at the expenses of their intellect, pollution is increasing in different places. Water is important role of economic development of any area. Climate is effected factors for economic development.

### **Study Area**

The present study Latur district has been selected as a study area. It extends between Latur district is in the Marathwada region in Maharashtra in India, located between 17°52' North to 18°50' North and 76°18' East to 79°12' East in the Deccan plateau. It has an average elevation of 631 metres (2,070 ft) above mean sea level. The entire district of Latur is on the Balaghat plateau, 540 to 638 metres from the mean sea level. Latur District is bound by Nanded District to the northeast; the state border with Karnataka to the east and southeast; Osmanabad District to the south-west; Beed District to the west; and Parbhani District to the northwest. On 30 September an earthquake struck Latur. It is the 16 largest city in Maharashtra.

Average rainfall in the district is 600 to 800 mm. This is usually during the monsoon months from July to October. Moderate temperatures are mainly observed. The rainfall is unpredictable in tune with the Indian monsoon. Summers begin from early March to July. Summers are dry and hot. The temperature ranges from 25 °C to 39.6 °C, though at the peak they may reach 45 °C. November to January is the winter season. Temperatures at the peak drop to single digits but usually they hover around 12 °C to 21.8 °C sometimes lowers up to 11 °C. January to March are the months with moderate temperatures. The district lies in the Godavari river basin. Much of the water used in the district comes from the Manjara River, which suffered from environmental degradation and silting in the late 20th and early 21st centuries.<sup>[5][6]</sup> Other major rivers of the district are the Terna (Tirna), Rena, Manar, Tawarja (Tawarjo), Tiru and Gharni.<sup>[7]</sup> These rivers and a number of smaller ones are dammed to provide both irrigation and drinking water.<sup>[8]</sup> Large dams include the Devargan Dam, Gharni Dam, Masalga Dam, Sakol Dam on the Sol River, Tawarja Dam, and Tiru Dam.<sup>[8]</sup> On the northern plains of the district there are three main rivers, the Manyad, the Lendi (a tributary of the Teru), and the Teru In the 2001 Indian census, Latur had a population of 2,080,285.<sup>[11]</sup> Males constituted 52% and females 48% of the population. Latur had an average literacy rate of 72%, higher than the national average of 59.5%, with male literacy at 77%, and female literacy at 63%. In 2001 in Latur, 14% of the population was under 6 years of age. For every 1000 males age 6 and older, there were 935 females.<sup>[11]</sup>



growth of population is unsafe to the socio-economic development of the region. The great growths of population lead to generate the problems of overpopulation whereas the excessive negative growths visibly represent the shortage of resources.

**4. Main workers:** Those workers who had worked for the major part of the reference period that is six months or more are termed as main workers. The main workers classified into cultivators, labours, peoples engaged in household industry and other workers. The non-workers are classified into people occupied in due home task scholar and student, retired persons, and other non-workers not included and grouped in the main worker's categories in rural area agricultural is the most important activity. (P.H. Mhaske 2011) Land Use & economic activity change because of increasing population.

**5. Main Household workers:** The main Household occupations have no profound roots in the region. This category occupation included household industry, manufacturing, processing, servicing and repairs. All these occupations come to the secondary activities. Positive position of human resources development these economical activities.

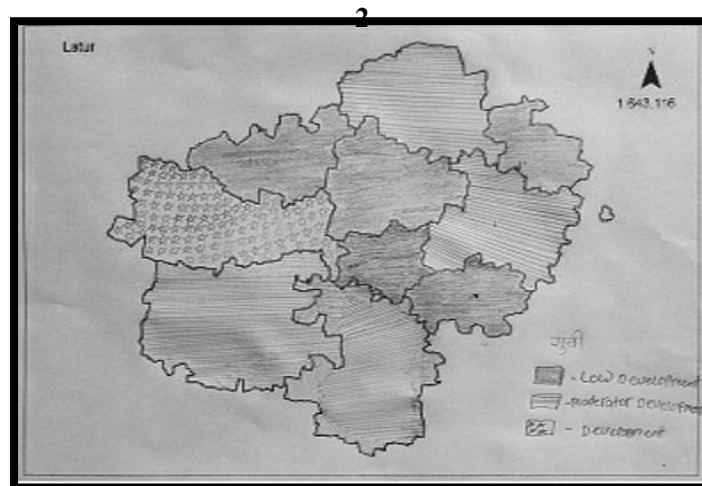
**6. Other main working population:** According to census year other main workers means trade and transport economical activities engaged. Other main worker was good indicators for economic and human resources development According to the above map it can be stated that the sex ratio is highest in Shirur Anantpal thasil and lowest in Renapur thasil. As well as the literacy rate is highest in Latur thasil and very poor in Jalkot thasil and low Deoni thasil. Chakur, Shirur Anantpal, Deoni, Jalkot, Renapur thses all thasil low development of human because of low status of literacy rate and sex ratio. The literacy is key factors affected on human resources development. Literacy therefore provides the economy status of a home where there is more literacy and in a home that has a low financial position not good literacy status. A total five thasil Latur, Nilanga, Udgir, Nilanga, Ausa are progressive human resources development because of progressive of their thirteen factors. The low and Moderated thasil for HRD effected irrigation facilities. Because of irrigation is affecting the agricultural component in area where the irrigation facility is high. There is more agricultural development as well as in area where there is less irrigation area. The city is not development so that there is a problem of employment. As well as effect of the financial situation is on the factors of the literacy and sex ratio. A human resources development has a total 10 thasil in Latur district, out of which four thasil are Low Development, those thasil are Jalkot Deoni, Renapur, and Chakur. As well as the four thasil is Moderated Development those thasil is Ausa, Udgir, Nilanga and Ahmadpur lastly Development of HRD were is one thasil, those thasil namely Latur, show detail Table and map no. 2

**Table no 01.**

No. of Tahasil	Name of the Tahasil	Level of HRD
5	Jalkot, Deoni, Renapur, Chakur, Shirur Anantpal	Low Development
4	Ausa, Nilanga, Udgir, Ahmadpur	Moderated Development
1	Latur	Development

Map

No.



### Conclusion

Natural, economic and social factors effected on human resources development. As well as topography effected on population density, occupation types and pattern with distribution of amenities.

Impact of Physical factors on Latur district as well as destruction of human resources parameters. The topography has been affected mainly in the Jalkot thasil as it the Northern part of the district. drought prone area effected on economic development. The population density and low amenities because of effected hilly area. Water is essential for agricultural development. the highest rainfall in Latur district falls in the Nilanga thasil and lowest rainfall falls in the Jalkot area. Human resources development has also resulted in uneven development due to uneven distribution rainfall. Irrigation, education is one of the factors influencing development.

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**Quality Education in Indian Higher Education in Present Senario with special reference to Latur  
District: A Study**

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**Abstract**

From generation to generation time changes poignant culture and therefore the manner individuals live and their society also. A change in time prompts new inventions and technologies, the 21st century wherever scientific inventions and the latest of technologies area unit the idea of trade. it's evident that as years pass there comes on sophistication and need for education that matches the days that we have a tendency to sleep in arises. The transition within the teaching system offered in educational establishments and therefore the introduction of technology in academic establishments area unit a transparent indication that education should be of sure quality to fulfill the sure standards within the market. so it's relevant to coach and equip people at intervals the tertiary establishments with quality skills to achieve property. By militarization university graduates with the required skills to fulfill the quality of the demand within the market, would this mean organisations they're to be recruited in would able to be at par with property setting they operate in. This analysis but is aimed toward showcasing the importance of manufacturing quality graduates by tertiary institutions that meet the market demand and conjointly with relevant qualifications therefore creating these graduates employable and best suited for the duty. what is more this analysis seeks to explore however so much University provide quality education basing on the angle of the scholars. The present study was conducted to assess the quality education in Indian higher education. The present paper based on Curriculum design and improvement; course and methodology development; promotion of social values; professional skills; knowledge and use of advance technology. To access quality education in Indian higher education, the data was collected for the study from the graduate and post-graduate students of various colleges and institution of Latur. The questionnaire includes general and specific questions related to quality Education in higher education. The total number of students who responded the questionnaire was 223, out of which 76 from HSC, 107 from graduation and 39 from post-graduation. The concepts of quality might be different from institution to institution, while sharing the experience, new views, and idea come out which they can include in their norms and strategy to achieve the target of superior quality in education.

**Introduction**

The necessity to switch the prevailing education system and increasing competition, rapidly changes in technology, falling in quality, unstable demographics, privatization and globalization. A minimum seat, insufficient faculty in course, courses isn't instructed by the practiced faculty in college etc. these are the many complaints in over current education system. due to this parents, student and general public don't seem to be glad. once independence there's a notable growth within the education system like, institution of various universities, profession and non-professional faculties, analysis and technical establishment to any or all over Asian country, intention is to extend the information and education of all Indians. Total Quality Management helps to produce higher quality of education as per demanded by the overall public is elevated quality in education. In 1950s Professor W. Edward Deming introduced Total Quality Management, which applied in every organization. The term TQM is focus on higher quality level of product and services in organization. The number of changes required in educational institution while adopting the TQM, such as the management has to change in their attitudes and activities, monitoring and organization process of education, evaluating the results, communication, environment particularly in area of interpersonal relation. Quality becomes more vital by applying these approaches are: organization, interpersonal relations, management, material and human resource, etc. In education, the quality management involves achieving the high quality as well as also influencing the above all segments of education.

**Review of Literature**

**1. Suzana Viasic, Smiljana Vale Danijela Krizman Puhar (2009) conducted study entitled, "Quality Management in Education".** They suggested that, when the awareness of education as expansion and progress in every country. The recent situation of Croatian Education system and the quality of its components came into notice, so those who are attached and utilize with the services of education directly or indirectly recognize its importance positively. By developing creativity and democratic values, as well as by knowledge, abilities and skills needed for daily and professional life it can be achieved. Planning, monitoring, assuring and

improvement these are the concepts of quality management were designed to achieve quality goals. In organization the efficient Total Quality Management can facilitate quickly challenge in world market. Concerning all members of the organization brings us nearer to total quality control (Total Quality Management, TQM). Total quality management realizes aim and job in education in this generation.

**2. DR. T. Sudha (2013), conducted study entitled, “Total Quality Management in Higher Education Institutions.”** He analyzes that, in today’s life everybody is concern about the quality of higher education. Official commission reports and related studies analyze the quality education and give suggestion for improvement. Not only the government and other constitution agencies are taking necessary action but also the institution and faculty member has to take proactive initiatives. Total Quality Management has been valued by several companies around the world and they have achieved superiority and forceful lead by applying it.

**3. Ms. Rajni Bhalla (2012,) conducted the study entitled, “Study on Indian Higher Education: A TQM Perspective”.** She concluded that, globalization, infrastructure facilities, quality management and finance are the various challenges in the growth of higher education. The rate of Total Quality Management is become important to develop the higher education. TQM is greatly successful in manufacturing and health sector, but there is a still lack of application regarding on education sector. Most of the institutions around the world realize the importance of higher education. So, if Indian higher education desire to improve quality of education then it is necessary for them to take a look on TQM. Various innovations in this field are a proof that the educational institutions are now realizing the importance of higher education.

**4. Basavraj S. Nagoba, Sarita B. Mantri (2015), conducted the study entitled, “Role of Teachers in Quality Enhancement in Higher Education”.** They conclude that, education can be futile without vision and meaningless. The overall development of higher education will take place when teachers participation with vision to make education system more knowledgeable and upgraded. The support and sum of value in education system is an hour to make all probable attempts to be value-oriented education.

**5.(Becket, 2006 as cited in Brucaj, 2014)** There is no single definition for quality in Education and there is no universal consensus on what is the appropriate strategy to assure and manage quality in higher education.

**6. (Harvey, 2005 as cited in Brucaj, 2014).** Quality can be defined in terms of excellence, perfection, value for money, fitness to purpose.

#### **Objective of Study**

1. To find out at what degree does students are satisfied by educational system and resources provided in terms of quality. 2 To find out if Quality Education and employability are inter-related. 3. To access the Quality in Research in Indian Higher Education. 4. To evaluate student perceptions regarding Indian Higher Education.

#### **Scope of the study**

The mind-set of this study is to concentrate on the evaluation of this quality education provided in Latur district collges. The ideology of many developing countries in the recent years is to be self- sufficient and to produce products in their own industries. Therefore this lay down the foundation that quality education is a must in institutions for the exploration of alumni to the local industries production and management. This may help to grow an exporting country in many fields, producing experts capable of working on higher positions. Therefore this research is to find out to what degree does tertiary institutions takes effort to provide quality education.

#### **Importance of quality in education**

Higher education plays an important role for the student and the society in which he lives. It represents the growth of the individual which allows him to lead a better life as there are more chances of getting a highly paid job; in turn the society is benefited as the ideal citizens are created who will keep the society peaceful. “According to a research done by the Bureau of Labor Statistics (BLS), the average earnings become high and the level of unemployment falls, with each education level acquired” (Pavel, 2012)

Uhuru Kenyatta, President of the Republic of Kenya (2015), said that provided quality education brings about a glittering future to individuals, society and whole world at large. Graduates who acquire quality skill and education from their respecting institutions are most likely to be employable. If not so the graduates may be able to use what they have learnt to start up their own business for example a graduate from an accountancy college may in the event that they do not find a job or if they so choose, start up their own accountancy consultancy agency offering accounting services and also by being able to employ their skills and start their own business, the graduates would be creating employment for other individuals in the society thus also helping in diversifying the economy of that particular nation investing in its private sector. Tertiary education

also helps provide graduates with basics of understanding about economic activities that occur worldwide. A nation that possesses such people would be safe to be termed as a literate nation, a wise nation would in turn be able to prevent and run anti economic actions such as corruption.

Quality education provided to the society inspires creativity and innovation, moreover improves the nation's economy. Graduates and internship students do interact with the society to share knowledge, help the nation in making the decisions and coming up with new ideas of doing things better as stated by British Council, (2014). That by its own increases the productivity of the nation thereby improving its economy. Example can be alumni from technical college during electricity down failure; they can apply knowledge acquired from their programs to make solar street lights with the help of community members. The idea of coming up with solar street lights is creativity, diversification and its amending ordinary ones to advance ones. The transition of skills and knowledge from one individual with expertise to another of less expertise would result in the increase in experts in that particular thus creating a pool of employees that organizations could recruit from. The graduates with expertise in certain fields would be in a better position to be leaders in their particular field of expertise, therefore good education produces ideal leaders.

**Methodology:** This paper seeks to discover the importance of quality in higher education. Questionnaires were used to collect the data from students in Latur district. Questionnaires were distributed to students to fill in as this was convenient and was time saving considering data collection and analysis also this gave the respondents an opportunity to answer freely and honestly knowing their identity would not be revealed. Questionnaire was divided into two sections.

**Section A:** This section consisted of the demographical questions such as gender of the participant, level & course of study.

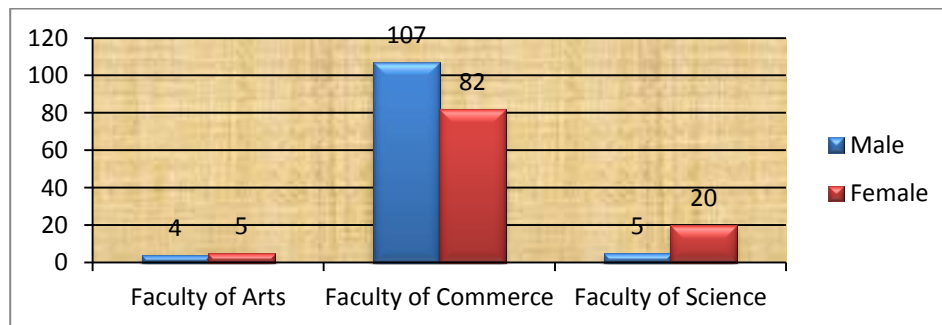
**Section B:** In this section the questions were on a Likert scales of 5 ranging from strongly agree, agree, neutral, disagree to strongly disagree.

### Results and Discussion

To appraise the accuracy of findings of quality education of Indian higher education, the researcher has combined these parameters, to find out the overall effect of quality education.

**Table No-01 shows the sample distribution and demographic data of the respondents**

Particulars	Male	Female	Total
Faculty of Arts	4	5	9
Faculty of Commerce	107	82	189
Faculty of Science	5	20	25
<b>Total</b>	<b>116</b>	<b>107</b>	<b>223</b>



**Fig. 1: Responded faculty**

As shown in above table, total male respondents are 116 and female respondents are 104. Out of 116 male participants 04 were from faculty of arts, 107 were from faculty of commerce and 05 from faculty of science. Out of 107 female participants, 5 were from faculty of arts, 82 were from faculty of commerce and 25 from faculty of science.

The data were comprised and calculate by frequency and percentage count on five point rating scale.

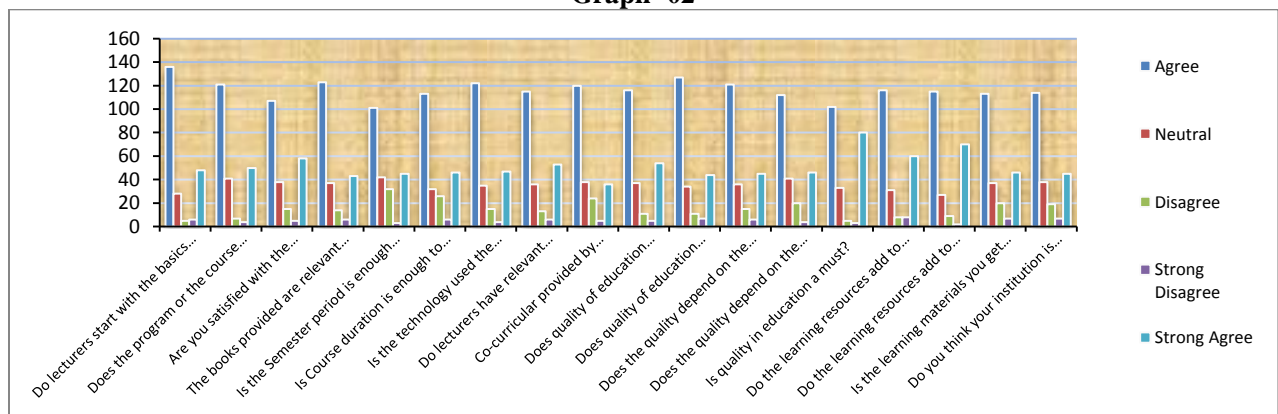
Furthermore, for the arts, commerce and science male and female students, Average Weight-age Scores were calculated by giving weight-age of 5; 4; 3; 2 and 1 to the five choices, adding all together and dividing the total number of respondents of the group.



**Table -02 Components of Quality Education**

Parameters	Agree	Neutral	Disagree	Strong Disagree	Strong Agree	Total
Do lecturers start with the basics when they start the module?	136	28	5	6	48	223
Does the program or the course have demand in the market?	121	41	7	4	50	223
Are you satisfied with the teaching methodology used by your lecturers?	107	38	15	5	58	223
The books provided are relevant to the courses description?	123	37	14	6	43	223
Is the Semester period is enough to grasp all knowledge provided?	101	42	32	3	45	223
Is Course duration is enough to have all knowledge required?	113	32	26	6	46	223
Is the technology used the institution facilitates the learning process?	122	35	15	4	47	223
Do lecturers have relevant qualifications on the modules they teach?	115	36	13	6	53	223
Co-curricular provided by institution enough for improvement in studies?	120	38	24	5	36	223
Does quality of education depend on the studentsâ€™ ability to perform well a school?	116	37	11	5	54	223
Does quality of education depends on the qualification on the tutor performance in the class?	127	34	11	7	44	223
Does the quality depend on the qualification of the lecturer/tutor?	121	36	15	6	45	223
Does the quality depend on the secondary school from where the student graduated?	112	41	20	4	46	223
Is quality in education a must?	102	33	5	3	80	223
Do the learning resources add to quality education?	116	31	8	8	60	223
Do the learning resources add to quality education?	115	27	9	2	70	223
Is the learning materials you get are of quality oriented?	113	37	20	7	46	223
Do you think your institution is providing you with the necessary skills to be an employable graduate?	114	38	19	7	45	223

**Graph -02**



**Fig. 2: Overview of Students Perspective on Quality Education**

The overall perceptions of students on quality education in higher education regarding in Latur district were “Agree”. Out of 223 students 51 students had given response “Strongly Agree”, 116 students were “Agree”, 36 students were “Neutral” and only 15 students gave response “Disagree”.

Out of total responded students on an average students gives “Agree” response. Which means Quality Education in Indian Higher Education in Present Senario are good.

### Conclusion

The study shows that the students are aware of the importance of quality in education as quality has an impact on their employment. The study has unveiled that the quality of education overall in Latur district is good, meaning the students appreciate the effort of the entity in providing quality. This however means that needs to do some improvements so as to strive for excellence. Students have shown their gratitude to the university for the material it provides to facilitate their studies such being the books and learning guides, also the technology the university has in place has made their stay even more pleasant. Lecturer’s also lay a brick in building the reputation of all the colleges in Latur district as a quality facilitator; in short the study has also come to discover the role of lecturer’s in providing quality that the qualification of lectures affects their performance. From this study it became evident that the students consider their lecturers to be an added advantage in performing well in their studies.

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## **Sustainable Development Goals: Progress and Implementation**

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### **Abstract:**

India has played a prominent role in developing the sustainable development goals. The progress and mechanism in India to monitor the achievement of SDG and the major findings of Sustainable Development index 2020-21 are discussed. The various articles, publications, websites are referred.

### **Keywords:**

Sustainable development goals, SDG India Index, Sustainable development report, environment crisis

### **Introduction**

Sustainable development can be defined as an approach to the economic development of a country without compromising with the quality of the environment for future generations. It means the development which removes environment crisis, improve the life of the people at the bottom of the pyramid.

In September 2015 the UN General assembly adopted 2030 Agenda for Sustainable development. It consists of 17 Sustainable development goals which are converted to 169 UN targets. The goals are meant to achieve the development of all.



The year 2016 marked the first year of the implementation of the SDGs.

### **Sustainable Development Goals**

The 17 sustainable development goals (SDGs) to transform our world are given below

1. No Poverty
2. Zero Hunger
3. Good Health and Well-being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation and Infrastructure
10. Reduced Inequality
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace and Justice Strong Institutions
17. Partnerships to achieve the Goal

### **Implementation in India**

The requirements for the successful implementation of Sustainable development goals include

- a) Collective efforts of all the stakeholders of the society
- b) Collaborative efforts and good governance at all the levels of the central and state government
- c) Sponsoring schemes which will bring in quality education, provide clean water and sanitation ,reduce poverty and hunger etc

Niti Aayog the think tank of the government is responsible to track the progress of the implementation and

provide overall coordination and leadership for it. It has released a 15 year vision statement . Mapping of 17 goals and 169 targets to nodal central ministries is done. Similar mapping is done with state government departments also.

Some of the notable schemes of the Government of India include Pradhan Mantri Jandhan Yojana and Swachh Bharat Abhiyan.

#### **Monitoring the Progress of SDG in India**

India has improved its composite score from 57 in 2018 to 60 in the Sustainable Development Goals Index 2019-20. This was revealed in the second edition of the Sustainable Development Goals (SDG) India Index .

Index for Sustainable Development Goals in India was released by Niti Aayog For 2020-21 The overall score improved by 6 points from 60 to 66 in 2020-21. The reason for improvement was the consistent efforts in providing clean water ,sanitation and clean energy.

Kerala has topped the performance in SDG India Index 2020-21.

#### **Monitoring The Progress Of SDG Among Member Countries**

The world is facing the worst of economic and health crisis. Total infected cases are 17.56 crores , out of which 1.23 crore are active cases. 37.88 lac people have lost their lives in Covid Pandemic. Due to the lockdown ,the economic activities have slowed down giving rise to unemployment rise throughout the world. Health care system has to be upgraded to fight the pandemic situation.

Covid 19 crisis has lead to the increase in income inequality and poverty. Quick and proper solution to the Covid Crisis and stronger international and multisectoral partnerships among the member nations will help to achieve the SDG 2030.

Most vulnerable and poor countries will require increased support and help from the developed countries to achieve SDG 2030.

#### **Conclusions :**

The Central and state governments should not leave any stone unturned to make sure India achieves Agenda 2030. NITI Aayog should monitor progress at the state level. Malnutrition and gender inequality continues to be problem areas which require a more focused approach.

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## **Role of Bar Council of India in Imparting Quality of Legal Education Versus the Management Seats in Private Law Colleges in Andhra Pradesh - Creating a Black Hole in the Quality of Advocates Impacting on Sustainable Development in Legal Profession**

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### **Abstract**

Majority of the schools and under graduate colleges in Andhra Pradesh focus on STEM subjects rather than on Social Science subjects. There are only few students who are passionate to become Advocates and prepare themselves from the childhood. There are students who have tried but failed in all the qualifying exams and choose their last resort to study Law. Though there are many Qualifying exams like CLAT, AILET, LSAT, LAW CET, the Private Law colleges are bypassing the rule of taking score in the qualifying exams and provide management seats for the unqualified candidate for a higher price. There are few colleges in Andhra Pradesh where students come to the college from adjacent states, they neither come to the college nor attend the classes, moot court, legal awareness camps and seminars. There are few local students who get inspiration from the non-local students and stop attending the classes but just appear for the semester examination and graduate. Just like MBBS, LL. B is a course where practical training is the most essential part but the management of few private colleges treat it as an investment and encourage absenteeism indirectly. The Bar Council of India (BCI) played its role by introducing All India Bar Exam (AIBE) from 2010 to produce quality lawyers to the society. But the private colleges are making use of it too in conducting coaching classes for both the fresh batches and the candidates who failed the exam which creates a blackhole in the quality and sustainability of legal studies.

*Keywords: Qualifying exams, practical training, absenteeism, Bar Council of India (BCI), All India Bar Exam (AIBE)*

### **Introduction**

Legal Education dates back to Ancient India where “Dharma Shastra” was taught by their “Gurus”. Epics shows that the Dharma and Nyaya shastras were taught to the Kings for a peaceful administration. From 1855 formal Legal Education came into force during the British Era to qualify them to practice as “Vakils” in the lower court. After Independence, a statutory body was created in 1961 for the purpose of regulating legal education. Law colleges were established in Bombay, Calcutta and Madras. In 1988 First National Law University was established in Bangalore, Karnataka.

The quality of education with regards to legal education arises multiple question about the academics, skills and knowledge of a law school graduates from Local/Private law school/college if it is same with that of the National Law Colleges, the precise answer is “No”. Majority of the cases are primarily filed in the Subordinate courts, where rich and poor, educated and uneducated, employed and unemployed files the cases. Advocates must be “Jack of all trades and Master of the laws pertaining to them”. They should possess both knowledge and skill in tackling the case by reducing the pendency of the cases.

### **Theme**

Honourable Chief Justice N.V Ramana in a convocation shared his thoughts about the “Substandard colleges and competency of law teachers to become good lawyers and server the society. The following are the points the guidelines of BCI and the pits holes created by the private colleges.

### **Private Colleges vs Rules on Standards of Legal Education and Recognition of Degrees (‘BCI Education Rules, 2008’)**

#### **Conditions Precedent, autonomy and courses**

1. The Private law colleges do not design their curriculum, but follow the curriculum designed by the affiliated university which are according to BCI guidelines.
2. Many of the Private law colleges now have integrated courses but not to a greater extent in such a way that the Core subjects are taught according to their major and not many Private colleges have electives as part of the curriculum
3. Though the private colleges have Moot court hall and seminar halls not many of the students are taking advantage of it. It is left to the interest of the student as an extra- curricular activity to participate in the Seminars and moot courts.
4. The courses are provided, one cannot even expect that their choice of course is available and there are no additional courses like ADR, Negotiations etc.,
5. There are extracurricular activities that University conducts, if a student is interested, they can participate, the college will take the fame if students succeed and do not care in encouraging the

student to participate in research, essay writing, debates which motivates the students and build confidence.

### **Strength, size of the classroom and ICT**

1. The Private college have competition of getting the top rankers from APLWCET + 45% marks in Intermediate and their fee per semester will be from 7,000 to 7,500. But there are management seats for those who did not qualify LAW CET who scored 50% of the marks in Intermediate can join the college by paying a fee from 50,000/- to 1 Lakh and sometimes even more depending upon the college
2. The classrooms are always bigger to accommodate all the students in private colleges as well with both old way of pedagogy of using chalk and board and the latest blended learning methods are used which is an advantage to the students.

### **Qualification of the Faculty**

1. Most of the faculty are LLB graduates or alumni of the same institute. Some reputed colleges have LLM and even Doctorates as faculty. Qualification and experience of the faculty must be capable of imparting Research knowledge which is essential in the legal field.
2. Not many faculty members are well versed in teaching clinical program, there are minor chance of inviting retired judicial officers but senior advocates from the Bar are invited to conduct clinical programs.
3. Not many colleges are capable of inviting visiting faculty from the profession, judiciary or academia shall have a minimum experience of 10 years
4. Few colleges have senior advocates who takes the classes in the morning so the law colleges work in the morning. Few years ago, there was an imbalance in faculty to student ratio who work full- the contract faculty pitch in if necessary, supported by part-time research scholars from the university.
5. Not all the faculty members are paid according to UCC pay scales
6. BCI regulation is that the workstation of Faculty shall be at least 100 sft per but that depends.

### **Legal Aid and Laboratory**

1. Majority of the institutions run a legal aid clinic under the supervision of a senior faculty member but not all the students take part in in.
2. Majority of the Institutions are running integrated law programs, though they have adequate Lab facilities sufficient training is not provided to the students.

### **Infrastructure and Head of the Institution**

Majority of the advocates or eminent personnel from the legal fraternity establish law colleges so they have a minimum qualification of LLM and even PhD so the infrastructure and Head of the Institute guidelines are followed appropriately as those are the things that attract the students.

### **Library**

1. Majority of the law colleges have adequate library facilities: AIR manual, Central Acts, Local Acts, Criminal Law Journal, AIR, SCC, Company Cases which is a pro. There will be a Librarian but cannot be regarded as Qualified library staff.
2. Not many law colleges Library have adequate reading space for at least 25% of enrolled students and do not allow the student to be in the library for a long time.
3. It is the interest of the student to have a Subscription to online database.
4. Not many colleges have 10 Internet access points with desktop facilities. Wi-fi will be provided and it is up to the students to use it in smartphones or on laptops
5. Not many colleges have a Reading room and Drinking water and rest room facilities are available but not in the library premises

### **What creates the difference between the NLUs and Private colleges with regards to the attitude of the students'?**

The practical application is where the gap has been created between the students graduating from a National Law College and a Local Private college graduate. The law students graduating from National Law Colleges are placed in Corporate domain or in the High Courts and Supreme Court and they are earning good salary. Whereas a law student from a private law college join as junior advocates in the local bar council. The career growth of the junior advocate depends on their senior counsel. Their earnings are meagre and majority of the advocates change their profession or get involved in other businesses due to lack of skill set. The attitude of the young lawyers is to earn money rather than learning the subject.

### **Skill set that private law colleges students need to acquire**

1. As a law student it is mandatory to have knowledge not only about theory but also a practical approach of it where internship with a senior advocate is necessary. Selection of the senior advocate is very

important; the senior is one who encourages and gives opportunity to the student to have a hands-on experience

2. Apart from curriculum – participating in the legal aid camps, moot court competitions, debates, seminars, essay writing and drafting competitions, quizzes, article blog writing competitions, paper publications are all essential not only for enhancing the skill but to build self esteem
3. These days technology is everything – once you hear about a new software, application or any new website relating to law – with a little research and making sure it is safe get acquainted to the current technologies.
4. It is also essential to do certifications relevant to the student's study apart from the curriculum – Like attending computer classes, Cybercrime, ADR, IPR and other certificate courses.
5. Apart from copy pasting the same content from seniors' records – it is suggested to think out of box and choose their own topics, do their own research, write their own thesis and break the stereotype. If a law student gets used to copy pasting the records – later all the cases no matter what a client says the advocate copy pastes the same and asks the client to practice the same. This is one of the major reasons for losing the case.
6. BCI started conducting AIBE in the process of filtration, though it is open book every other year BCI is making the exam even tougher but BCI is allowing N number of materials. But, from the year 2021, the BCI specified that only Bare Acts will be allowed and no other materials can be taken this shows the decreasing quality of legal education.

### **Conclusion**

The NEP 2020 has brought in many changes, implementation of Quality of Education can bring change where senior high the students will be given a scope to choose and learn from various subjects. The student can select the major and elective and make their very own learning mechanism according to their interest. Their subjects comprise of STEM subjects, Arts, co-curricular and extra curriculum without disparity in reducing the difference between STEM and Social Sciences. This will certainly bring in a change in Quality of Education (SDG 4) pertaining to legal studies will have a sustainable impact not only on the Quality of Advocates, quick disposal of cases but also on Peace, Justice and Strong Institutions (SDG 16).

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## **A Geographical Analysis of Sex Disparity of Literacy in Jalgaon District**

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### **Abstract**

*Education is a key factor for the rapid development of a country. It is not only the fruit of contemplation but also instrument of change. The present study deals with the decadal variation in sex disparity literacy population. It is the study of the change in male and female rate in district for the period of 1991-2011. The secondary data has been used for this study The secondary data has been collected from the district census handbook. The researcher used David V. Sopher (1974) disparity index for the result analysis. It is found that female literacy rate is lower than that of male literacy rate which ultimately result in higher disparity index. Through the study it is observed that as per census 2011 Bhadgaon, tehsil have the negative disparity index (-0.111)*

**Keywords** - Geographical analysis, sex disparity, literacy, population.

### **Introduction**

The person age 7 years and above who achieved both skills reading and writing with understand in any language is taken as literate. A person who can only read but cannot write is not literate as a matter of convenience, literary is defined as the ability to read and write one's name in one's mother-language. In India all those persons who can both read and write a simple message with understanding in any language are classified as literate.(UNCP). The person who is engaged in secondary and tertiary activities proportion is high literate.(Ghosh 1985)

### **Study Area**

Jalgaon is one of the district of Maharashtra, this situated at the northern most border of the state. It is the part of erstwhile region of Bombay presidency. Jalgaon district lies in the north west part of Maharashtra state lying between 20° and 21° north latitude and 74° 55' and 76° 28' east longitude, is located in the Tapi river basin stretching nearly 128 kms. Along the river and varying in the breadth from 112 km. to 144 km. it covers an area of the Jalgaon district is 11,765 sq.km. which constitute 3.82 per cent of the total area of State. Administratively it has 15 tehsils viz. Chopada, Yawal, Raver, Muktainagar, Bodwad, Bhusawal, Jalgaon, Erandol, Dharangaon, Amalner, Parola, Bhadgaon, Chalisgaon, Pachora, and Jamner.

### **Objectives**

The specific objectives of the present research paper are

- 1) To calculate the disparity index of literary population in the district.
- 2) To study disparity of male, female literacy population in Jalgaon district.
- 3) To highlight the sex disparity of gender wise literacy during 1991, 2001, and 2011.

### **Data Base and Methodology**

The present study is mainly based on secondary data. The secondary data is obtained from district census hand book of Jalgaon district and socio-economic abstract of Jalgaon district. To calculate the literary rate formula will be used as given.

Literary rate =  $L/P \times 100$

Where L= literate population

P = Total population

To measure the disparity index in male-female literacy the David V.Sopher's (1974)

“ Disparity Index” formula will be used as given below.

If  $\times_1$  and  $\times_2$  represent the respective percentage of value of variable of group 1 and 2 than the disparity index (D) can be calculated by the formula.

$D = \text{Log} (\times_1/\times_2) + \text{Log} ((Q-\times_1)/(Q-\times_2))$

Where  $\times_2 > \times_1$  and  $Q=100$

Whereas  $\times_2 =$  male population Literacy rate.

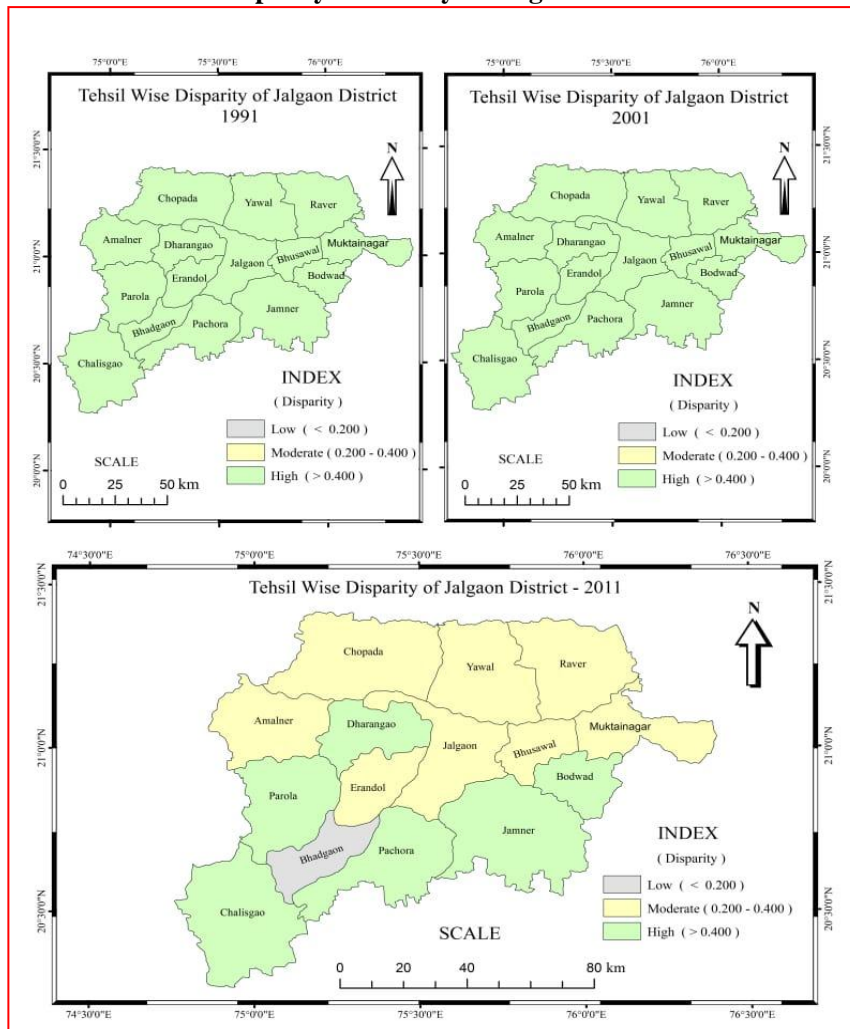
$\times_1$  female population Literacy rate.



Tehsils	1991				2001				2011			
	Person	Male	Female	Disparity(i)	Person	Male	Female	Disparity(i)	Person	Male	Female	Disparity(i)
Chopada	59.53	74.37	44.18	0.564	68.06	80.2	56.4	0.496	72.48	80.18	64.34	0.351
Yawal	65.78	77.61	53.32	0.482	76.2	85.9	66	0.497	78.33	85.39	70.91	0.380
Raver	63.8	77.64	49.14	0.556	74	84.9	62.6	0.526	77.38	84.37	70.02	0.364
Amalner	66.22	79.48	52.43	0.546	74.6	85.8	62.8	0.554	78.52	85.78	70.87	0.394
Erandol	60.43	73.74	46.56	0.508	70.1	81.3	58.4	0.491	87.28	90.91	83.37	0.300
Jalgaon	72.52	83.04	61.14	0.493	82.4	90	74.2	0.495	84.35	89.35	78.96	0.349
Bhusawal	75.64	86.76	63.58	0.574	85.5	92.7	77.9	0.557	86.27	90.64	81.67	0.337
Muktaina	55.12	68.95	40.59	0.512	71.4	83.5	58.7	0.552	75.06	83.22	66.39	0.400
Parola	55	69.36	40.17	0.528	71.4	82.8	59.5	0.515	75.16	83.5	66.18	0.413
Bhadgaon	62.12	75.46	48.13	0.520	74.3	85.2	63	0.529	76.13	84.33	87.41	-0.111
Pachora	55	69.36	40.17	0.528	73.6	85.7	60.8	0.587	75.54	84.1	66.39	0.428
Jamner	56.97	72.96	40.14	0.605	70.2	83.7	56	0.606	74.86	83.89	65.16	0.445
Chalisgaon	61.34	74.7	46.75	0.527	74.7	85.7	62.7	0.552	75.59	83.63	66.84	0.404
Bodwad	0	0	0	0	73.3	85.6	60.2	0.594	79.32	87.17	70.95	0.444
Dharngao	0	0	0	0	72.9	84.3	61	0.536	77.03	84.81	68.7	0.405
District	64.3	77.46	50.34	0.530	75.4	85.9	64.3	0.529	78.2	85.36	70.56	0.386
Maharashtra	64.9	76.6	52.3	0.475	76.9	86	67	0.481	82.34	88.38	75.87	0.384

Source- Census of India, District census handbook of Jalgaon District 2001 and 2011. Socio- Economic abstract of Jalgaon District 2011.

### Tehsil wise sex disparity of literacy in Jalgaon district-1991to 2011



The disparity is male-female literacy population rate has been grouped into three categories i.e. High, Moderate and Low disparity index.

**1) High Disparity Index – (above 0.400)**

As per 1991 census all tehsils of Jalgaon district are included in it of them the highest disparity is found Jamner (0.605) and lowest disparity found in Yawal tehsil(0.482) according to 1991 census. During 2001 census it is observed that all tehsils of Jalgaon district are included in it of them the highest disparity is found Jamner tehsil(0.606) and lowest disparity found in Erandol tehsil (0.491). However as per 2011 census observed that Parola(0.413) Pachora(0.428) Jamner(0.445) Chalisgaon(0.404) Bodwad(0.444) Dharangaon(0.405) tehsils have shown the high disparity index. Because the female literary population rate found lower which ultimately results in higher disparity index. according to 2011 census the whole district male female higher disparity index is not found. The reason behind the rising of disparity index lies in the social aspect.

**2) Moderate Disparity Index – (0.200 to 0.400)**

In 1991 census, whole district male and female moderate disparity index is not found as per 2001 the whole district disparity index is moderate level.during 2011 census it is observed that Chopada(0.351) Yawal(0.380) Raver(0.364) Amalner(0.394) Erandol(0.300) Jalgaon(0.349) Bhusawal(0.337) Muktainagar(0.400) tehsils have shown the Moderate Disparity Idex.

**3) Low Disparity Index – (Less than 0.200)**

The study shows that low male – female disparity index is not found for the past two decades in the whole district. But as per 2011 census in this categories only one tehsil found namely Bhadgaon(-0.111) it is great sign of improving in gender literacy population rate of Jalgaon district.

**Conclusion**

In the present paper, the researcher has found that the disparity rate of based on literacy population rate provided by the information of census 1991 to 2011 for the past three decades. It is observed that if the male literacy rate is increase then disparity index is decreased when the female literacy population rate is increased then disparity index is Negative. It is observed that as per census 2011, the Bhadgaon tehsil male literacly percentage is 84.33 and female percentage is 87.41 that time the disparity index is negative (-0.111)

As per 2011 census the whole Jalgaon district in low male- female disparity index is not found for the past three decades. It is great sign of improving in gender literacy population rate of Jalgaon district.

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## **The Use of Environmental Issues in English Literature: A Study in Ecocritical Perspectives**

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### **Abstract**

*Environment has created a great problem to human society as well as to the great mother earth during the last few decades. The too much misuse of natural resources by the humankind has left us on the brink of total destruction of the universe. The important rainforests are cut down to reduce the rain proportion heavily. The fossil fuel is also decreasing rapidly and the cycle of various seasons is resulted in disorder. Ecological disaster is frequently observed in the world and it has affected a lot on our environment. Under these circumstances, there arose a new theory of reading which is related with the nature during the last decade of the previous century which is called as Ecocriticism. This is worldwide emerging movement which is an impact of man's attempt of dominating nature. The present research article seeks to explore the ecocritical perspectives as observed in some select world literature as well as Indian writing in English. This environmentally study of literature brings about an ecological literacy among the readers who in the process become ecoconscious, thereby taking good care of Mother Nature. Environmental concerns being one of the major concerns of the day, has undergone rapid development during its short tenure since introduction. It is an interpretative method of analyzing nature writing which is commonly associated with Environmental criticism, animal studies, Green cultural studies, Ecology, Deep ecology, Ecofeminism, Eco-spiritualism etc.*

**Keywords:** Ecocriticism, Environment, Nature, Environment, Ecoconscious.

### **Introduction**

Ecocriticism is one of the rapidly emerging movements, which has swept the humanities over the past few decades. The present world is facing the challenge of eco-disasters and our environment is now in a bother of danger. Science and technology are not enough to solve the universal ecological crisis. We must change our attitude towards nature. Literature does not float above life, it has its role to play. For a long time nature was not given a due consideration by the literary critics, so ecologically oriented literature asks for a better understanding of nature in its wider significance. Ecocriticism has developed as 'a worldwide emerging movement' during the last three decades. The scholars are still busy in developing its nature and scope in the world. The term ecocriticism was first coined by William Rueekert in his critical writing 'Literature and Ecology: An Experiment in Ecocriticism' in 1978. The word 'eco' is derived from the Greek root word 'oikos' which means household or earth and 'logy' from 'logos' means logical discourse. Together they mean criticism of the house-the environment as represented in literature. According to Rueekert, ecocriticism applies ecology or ecological principles into the study of literature. Another critic defines ecocriticism as 'the study of relationship between literature and the environment conducted in a spirit of commitment to environmentalist's praxis'. Similarly, ecocriticism does not only mean the study of nature; it has distinguished itself from traditional nature writing, first by bits ethical stand and commitment to the natural world and then by making the connection between the human and the non-human world. Patrick d. Murphy is of the opinion that Ecocriticism is literary 'criticism that arises from and is oriented toward a concern with human and non-human interaction and interrelationship'.

Ecology has two types of shades, the shallow and deep ecology. Shallow ecology believes that the whole purpose of nature is to serve mankind and humans are the masters of nature; man being the only literary animal who thinks himself superior over the other animals. It also thinks systematic usages of natural resources like coal, gas, forests oil.etc for a sustainable future. But deep ecology, on the other hand challenges this conservation mode and advocates preservation of nature to keep in its original forms without any interference of man as nature has its own right to survive. All organisms on the earth have their own intrinsic values and no one is the master of anybody. This view will give the equal rights to every organism on the earth which helps to maintain a good balance in the eco-system. Ecocriticism stresses this eco-consciousness removing ego-consciousness man. The present environmental problems are a bi-product of human culture. It is not caused by how the ecosystem works; but how our ethical system functions; how we behave with our mother nature etc. Ecocriticism creates this awareness among the human being.

There are two waves of ecocriticism as identified by Lawrence Buell. In the first wave, ecocritics focused on nature writing, nature poetry and wilderness fiction. They used to uphold the philosophy of organism. Here it is environment which purely means natural environment. The purpose of the wave was to preserve 'biotic community'. The ecocritics of this wave appraised 'the effects of culture on nature, with

the view toward celebrating nature, berating its despoilers, and reversing their harm through political action. So it is observed that ecocriticism initially aimed at taking care of the earth.

The second wave ecocriticism included towards environmental justice issues and a 'social ecocriticism' those urban landscapes as seriously as 'natural landscape'. This wave of ecocriticism is also known as revisionist ecocriticism. It seeks to locate the vestiges of nature in cities and exposes crimes of eco-injustice against society's marginal section. The Ecocritic interprets nature writing texts. At the same time, they use them as a context for analyzing the principles and customs of our society in relationship to nature. Often, the result is a critique of how our culture devalues and degrades the natural world.

#### **Eco-literature in the world: A Review**

Ecocriticism is motivated from the three major writers whose works celebrate nature as a life force, and the wilderness as manifested in the USA. These writers are Ralph Emerson, Margaret Fuller and Henry Thoreau. They belonged to the group of New England writers, essayists, novelists, poets and philosophers who are collectively known as transcendentalists, the first major literary movement the USA to achieve 'cultural independence' from European models. R.W. Emerson had enjoyed the influence of nature in his first reflective prose narrative nature. The writer here celebrates a non traditional approach to nature which is popularly known as 'transcendentalism'. He suggests that reality can be best perceived by studying nature. *Summer on the Lake During 1843* by Fuller is an account of transcendental travelogue that encounters the American landscape at large. It is based on the great Lakes region. The writer here brings out the difference between the utilitarian motives of the settlers and spiritual aesthetic aims of tourists.

Robert Frost a major American poet has made use of woods, lakes, stars, horses etc. his poems are simple on the surface level. But if we study them with deep interest and observation we can see that surface we find that nature reveals the universal truth of human life. His *Stopping by the Woods on a Snowy Evening* deals with the eternal beauty of nature, and the obligations of transient human life. Ecocriticism is not very much developed in the UK as compared to the USA. The works of American writers celebrates nature while the British ecocritics seek to warn us of environmental threats emanating from governmental, industrial, commercial, and neocolonial forces. For example, Jonathan Bate's *The Song of the Earth* argues that colonialism and deforestation have frequently gone together. His *Romantic Ecology* reevaluates the poetry of William Wordsworth in respect of pastoral tradition in English. Here Bate explores the politics of poetry and urges that Wordsworth is the earliest of ecocritics.

#### **Ecocriticism in Indian Writing in English**

The Indian philosophy is very rich in ecological thought since Veda which is given equal importance to all organisms. India is also the land having rich biodiversity. The country has versatile physical surroundings to its every direction. It had left a deep impact on human beings living in India. Literature is not an exception to this. A good number of writers deal with ecocritical texts. Even the Marathi Saint poets in their abhangas also handled the issues of ecocriticism and asked human beings to pay attention on saving the greenery and surrounding atmosphere. Ecocritical perspectives may be best perceived in the writings of Nobel winner Rabindranath Tagore. His collection of poetry 'Gitanjali' is one of the best examples in which he had provided with the poems based on natural issues. Through his poems he attacked on the human atrocities against nature. His ecocritical poems include 'The Tame Bird was in a Cage' and 'I Plucked you Flower'. In these poems he wanted people to take care of the nature.

Anita Desai's 'Fire on the Mountains' is also a good example of ecocritical text dealing with the issues of population explosion moral degradation of man and of animal killing all causing a threat to the ecology symbolized by frequent fire in the forest. Kamala Markandaya's 'Nectar in a Sieve' represents Nature as a destroyer and preserver of human life. The novelist here has shown how the evils of industrialization spoil the sweet harmony of a peasants' life. Arundhati Roy's *The God of Small Things* is an account of exploitation of nature by human beings in the name of progress and modernization which is a dominant theme of the novel. The author here has shown her keen awareness of today's pressing environmental issues. Along with these writers, we have the other writers like Amitav Ghosh, Kiran Desai, Ruskin Bond etc. who dealt with the theme of ecocritical issues in their writings. Ecocriticism I India is now in its second phase, which propagates the mixture of the first wave and the second wave as talked about by Lawrence Buell.

#### **Conclusion**

In this way, Ecocriticism which was similar with the American nature writings as well as the British romantic Literature has now received its pace with worldwide eco-literature. It has changed its colour from local to universal perspectives in view of the present ecological problems around the world. Humans have only one earth to live in and we are on the brink of our forthcoming destruction unless we are careful of the blue planet. If we want to hear the song of the earth, we must change ourselves about the carelessness we

are showing towards our dear mother earth. The world literature is now full of ecological concern. Environment being an inseparable part of human culture is paramount in all major writings. An ecological insight may lead them into new perspectives. Indian writing and its philosophy is not an exception to this. From the ancient to the modern age, Indian literature is filled with the concern about the environmental issues. The common message from this research article is that keep nature in its rich and varied beauty, let not destroy what we cannot create. The more ecocritical writing will come into focus, the more man will learn to behave with a nature in a proper and careful way keeping in mind the present environmental issues.

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## **Fair Value Accounting**

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### **Abstract**

*Accounting standard-setters of the world have already emphasized on the concept of Fair Value Accounting (FVA) and also implemented this concept in the accounting standards. There is a prominent controversy between fair value-based financial statements and historical cost-based financial statements regarding their contribution towards giving better view of the financial performance and position of a business to its stakeholders. Against this backdrop, the present paper sketches an overview of the fair-value based accounting system and concludes that there is an urgent need for introduction of uniform model of fair value measurement by making a joint effort by the leading accounting standard -setting bodies of the world in order to minimize discrepancies in financial reporting.*

**Keywords:** *Fair Value Accounting, Financial Reporting, Accounting Standard.*

### **Introduction:**

Financial position should disclose firms' present and future ability to generate favorable cash flows which is the object of prime interest to stakeholders of financial statements. But the historical cost-based financial statements cannot satisfy the real objective of preparing financial statements. In fact, they fail to show 'true and fair' view of the financial statements. It is well accepted that most of the items depicted in the financial statements under the existing historical cost-based accounting practices are not properly measured. In order to overcome these inherent disadvantages, some steps have been taken from time to time by different accounting experts to make alternative accounting systems. The latest in this field is the Fair Value Accounting (FVA). Fair value is a rational and unbiased estimate of the potential market price of a good, service or asset. The initiative of implementing FVA was undertaken by the international Accounting Standards Board (IASB) with an objective of introducing the measurement of values of assets and liabilities on the basis of an economically satisfying method instead of the conventional historical cost basis. The accounting standards setting bodies in different countries like USA, UK, Australia, India and the European Union also prepared several standards in the recent past for the use of or to provide guidance for measuring fair value in financial accounting. The significance of FVA in the arena of corporate financial accounting and reporting specially during the post-liberalization era when economy is changing very fast throughout the world has therefore been duly recognized by the leading accounting standards setting agencies of the world. Besides this, its usefulness has also been acclaimed in the literature. However, a great deal of controversy prevails over whether fair value-based financial statements provide superior view of financial performance and position of a company to its stakeholders as compared to the historical cost-based financial statements. On this issue, academicians and accounting experts are prominently divided into two schools of thought. One school of thought argues in favour of adopting FVA at the time of preparing financial statements while the other school of thought questions its reliability. Against this backdrop, the present paper attempts to evaluate critically the FVA system. The remainder of this paper is organized as follows. The starting-point of FVA is discussed in Section II. Section III is concerned with the definition of fair value. In Section IV, a critical examination of the FVA system is made. Section V presents concluding observations.

### **Starting-point of Fair Value Accounting:**

In the recent years, a growing tendency on the part of the leading accounting standard-setting agencies of the world has been noticed to move towards the concept of FVA, although it cannot be said a novel venture. The concept of fair value was used in 1983 by the IASC in its promulgated accounting standard IAS-22 (Business Combinations). After this, the IASC applied this concept to few more standards issued by it, like IAS-26 (Accounting and Reporting by Retirement Benefit), IAS-33 (Earnings per share), IAS-36 (Impairment of Assets), IAS-38 (Intangible Assets), IAS-39 (Financial Instruments: Recognition & Measurement), IAS-40 (Investment Property), IAS-41 (Agriculture) etc. The Financial Accounting Standards Board (FASB) of the United States used the concept of fair value in its several standards. The Statement of Financial Accounting Standards (SFAS) 141 (Business Combinations), SFAS 142 (Goodwill and Other Intangible Assets), SFAS 144 (Accounting for the Impairment or Disposal of Long-lived Assets) are important in this context. Besides this, the Accounting Standards setting bodies in UK, Australia and the European Union also issued standards requiring recognition of assets and liabilities at fair value (Sur, 2008). The most significant step regarding implementation of FVA was taken by the FASB in September 2006 by issuing SFAS No. 157 on "Fair Value Measurements" (FAS-157). The objective of issuing this standard is to improve comparability, consistency and reliability of fair value measurements

by creating a model that can be broadly applied to financial as well as non-financial assets and liabilities. All these efforts have successfully developed a new path towards increasing dependency on FVA in measuring different financial and non-financial assets.

**Definition of Fair Value:**

As per the definition of fair value introduced by the FASB in its FAS-157, it is “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date”. R.N. Anthony said, fair value is “the highest price at which property would change hands between a willing buyer and a willing seller when the latter is not under any compulsion to sell, both parties having reasonable knowledge of the relevant facts” (Anthony, 1983). According to the definition of fair value used by the IASC (presently IASB) extensively in its different standards, fair value is “the amount at which an asset could be exchanged, or a liability settled, between knowledgeable and willing parties in an arm’s length transaction”. The term ‘exchanged’ used in this definition may mean either ‘exit price’ or ‘entry price’. The ASB of the ICAI has followed a similar definition of fair value while formulating its different accounting standards. However, the FAS-157 has considered only ‘exit price’ in its fair value definition. The objective of a fair value measurement is to estimate an exchange price for the asset or liability being measured in the absence of an actual transaction for that asset or liability (FASB, 2004).

**Critical Examination:**

A great deal of controversy exists over whether fair value-based financial statements give better picture of the financial performance and position of a business firm to its stakeholders as compared to the historical cost-based financial statements. On this issue, academicians and accounting experts are clearly divided into two schools of thoughts. One school of thought argues in favour of adopting FVA at the time of preparing financial statements while the other school of thought questions its reliability. Based on this academic debate, an effort has been taken in this section in respect of examining the usefulness of FVA.

The proponents of FVA opine that the historical cost-based financial statements are not good for the decision-making process as these statements fail to give information about current values. Thus, they believe the FVA system shows reliable information useful in the decision-making process. Though, the information exhibited in the fair value-based financial statements is not fully reliable as they are not based on arm’s length transactions. The advocates of FVA argue that although the fair value-based financial statements are less reliable, they give more necessary information to the decision-makers. As the current values are disclosed in the balance sheet items of a business firm under the FVA system, the fair-value-based balance sheet of the firm is definitely more representative of its value. But under the historical cost-based accounting system, only cost of acquisition of assets is considered. So, the stakeholders cannot receive valuable feedback about the appreciation or depreciation of assets from the historical cost-based financial statements. Despite the limitation of providing less-relevant information, the historical cost-based accounting system, in fact, provides more reliable information as compared to the FVA system because under the former system, financial statements are prepared mostly on the basis of hard numbers. Mainly actual acquisition costs and a few estimates are accounted for while measuring the net earnings of the firm under the historical cost-based accounting system. But the fair value-based financial statements depend more on estimates and less on facts. As a result, the information supplied by the fair value-based financial statements is more likely to be subject to manipulation by their preparers. Besides this, the FVA may give reliable results if only markets for all assets and liabilities are liquid and transparent. In case where assets and liabilities do not have an active secondary market, an estimate of fair value can be taken as the basis for measurement. So, its reliability is still questionable.

On the other hand, historical cost-based financial statements, which only take into account cost of acquisition, clearly hide a significant amount of actual volatility in the market place. But the FVA, which accounts for the actual volatility, may make financial statements more relevant to the decision-making process. Again, too much volatility in the market place may make fair value-based financial statements more difficult for the interpretation of their end users. In fact, it is quite impossible for a business firm to show its financial performance and position by preparing separate fair value-based financial statements on a daily basis.

The information appeared in the historical cost-based financial statements are not truly comparable. Under this system, the same asset acquired by two different firms on two different dates fails to reflect the impact of investment decision at different times. It obviously hampers the ‘comparability’ character which is one of the important attributes of financial statements. In contrast to this, the fair value reporting significantly increases comparability as it accounts for the current values. The financial statements prepared under the historical cost-based accounting system may disclose true and fair view of the financial state of affairs of a

business firm only in inflation less static economy. Therefore, in a dynamic economy where prices and all other things change very fast, the data generated through the historical cost-based accounting system mislead the stakeholders in taking their decisions. In order to overcome the problems of the traditional accounting system, a growing tendency on the part of the accounting standard-setters the world over to more towards FVA has been identified. In order to make the FVA system effective, the existence either of active secondary markets for all categories of assets and liabilities or of reliable techniques for measurement of fair value is indispensable. However, in reality there are several assets and liabilities which have no active secondary markets and also the accounting standard- setting agencies have failed to develop any generally accepted techniques for fair value measurement. So, the application of FVA is not very easy. It may introduce inaccuracies and subjectivity into the financial statements and may decrease their reliability and usefulness to the stakeholders.

**Concluding observations:**

Importance of FVA system cannot be ignored in the area of corporate financial accounting and reporting. The concept of FVA has already been approved by the leading accounting standard-setting agencies of the world and its usefulness has also been appreciated in the literature. Hence, considering the significance of FVA, proper initiation should be taken jointly by the professional bodies both at the national and international levels in respect of formulation of generally accepted fair value measurement techniques so that a comprehensive system of FVA can be implemented. More research in this field is, therefore, highly needed

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## **Ground Water Quality in Osmanabad City (MS)**

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### **Abstract:**

*In India water table has gawn down in many areas as a recent of indiscriminate and high withdrawal ground water for drinking and sanitation purposes, with lowering of water table, the cost of ground water extraction has not only increased but also affected the quality of water.*

**Keywords:** *Physical parameter, ground water quality.*

### **Introduction:**

Tremendous increase of population in last two decade has put extra trace in water source in any area .The ground water quality directly depends upon geology of the area .The sewage water released from city contributes to the pollutant ground water surrounding the area. Their fore, detail study of hydrogeological and hydro chemical condition of the area. To understand the groundwater quality of the hour.

In the present investigation the relation between ground water quality and health effect has been studied.

### **Study area:**

Osmanabad city is located in central part of Osmanabad district. The area is acquired in 3.57Sq.km.The whole region is an average elevation on 548 meters. Mean sea level. Ground water available only in weathered and fractured zone. Most of the people depend on ground on ground water. Average annual rainfall is around 700 mm, which is mostly loss surface and runoff and

### **Aim and Objectives:**

1. For this study we have choose following objectives.
2. To identify the ground water quality for drinking purposes. To study the spatio -temporal analysis of ground water.
3. To understand the geological conditions.
4. To suggest the measures to improve underground water levels. Evaporation. Geographically location of Osmanabad is 180 08' north latitude and 740 32' at longitude.

### **Material and Methods:**

For this study we have collected six samples from different places in Osmanabad city .All samples were kept in pre cleaned white polythene plastic made Jeri cane. EDTA trimetric and gravitation of were sold for the determination of calcium. TDS denote the various type mineral present in the water in dissolved form

.According to BIS the limit of TDS in drinking water is 500mg (Dhembare 1998,Sangeetha 2000)observed higher values of TDS that of is standard calcium and magnesium are the major cation responsible for hardness.

### **Result and Discussion:**

The present study is undertaken to assess the water quality and identify physiochemical analysis of ground water quality. More than 75% population depends upon ground water in study region. We report here this study had been

Obtained result of ground water were within the limit as compare to drinking water standard.

### **Physio-Chemical Analysis of Ground Water in Osmanabad City**

Site	1 Police line-B	2 Tambri area-H	3 Barshi naka-B	4 Ganesh nagar-H	5 Amrut nagar-B
TDS	420	1420	950	1050	760
CAL	50	210	81	251	85
Mg	21	65	35	52	45
Hardness	235	650	208	478	265

Above table shows that, the contamination of TDS, Cal. Mg, and Hardness are observed in different sites in Osmanabad city. The higher concentration of TDS shows in site no.2 (Tambri area) and site no. 4 & 5 (Ganesh nagar & Amrut nagar).On the other hand higher concentration of calcium has been found in site no.2, whereas site no.1&3 (Police line and Barshi naka) calcium observed under permissible limit. Of BIS. So high content of calcium are undesirable for clothing, bathing and drinking

.Above table indicate that Tambri area has more hardness compare to other samples. Hence, this ground water is very hard and not suitable for drinking purposes' K Jain (1992) reported that the content of hardness may be causes kidney problem, high content of mg causes nausea, muscular weakness and paralysis in human being.

The study is reveals that, ground water is deteriorate with high level of TDS, Ca, mg, and hardness. The permeability in the rock formation is high especial Tambri area and Ganesh nagar. City waste water comes and stored in Tambri area. So, it is affecting ground water quality.

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## **COVID -19 Pandemic: It's Effect on Academic Library Services**

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### **Abstract**

In this paper the researcher focus on Technological advancements have revolutionized the library services in digital era. Libraries on the web have become more competent and confident in terms of resource management and digitalization. Information societies are seeking information in digital format, therefore, library services depends upon skilled professionals. Library plays vital role in data acquisition, storage, analysis, interpretation and dissemination of information among the library users. This Article has brought out opportunity to learn recent technological advancements in order to maximize the usage of library resources and services in worldwide lockdown and pandemic situations prevailing in the country. This article will provide an overview on preventive measures and current trends in libraries to play proactive role in the present and post pandemic situation.

**Keyword:** *COVID -19, Online services, e resources, pandemic,Ask the Librarian,*

### **Introduction**

In India, the first case of corona virus was reported on January 27, 2020 in Kerala.. Subsequently, cases of COVID-19 appeared all over the country. Consequently, all academic institutions and libraries were closed from March 17, 2020 and after 22<sup>nd</sup> March 2020 Indian Prime minister declare National Lockdown (Janta Curfew) The students were banned from entry in the educational institutions and they were vacated from hostels. The COVID-19 pandemic has changed virtually every aspect of our lives almost overnight. There is an uncertainty, and no one knows how long the COVID-19 crisis will last. Therefore, the educational institutions have started online engagements such as classes and assignments for students. The UGC asked the universities and institutions of higher education to outline a plan of online teaching and online interaction as soon as possible to avoid risk of losing an academic year. UGC has assisted the universities in arranging software for online classes, the internet connection packages, curation of online materials, training of faculty members, building a data repository, providing guidance on quality enhancement, and setting up and adapting monitoring and evaluation systems. In terms of online classes, UGC and universities has issued guidelines for online readiness and identified eight factors such as university's management system, the course itself, the faculty members, the library or resource bank, the technological infrastructure, the readiness of the students, the evaluation system and the laboratory system. one of the worst hit countries and the educational institutions are still closed. In response to the nation wide lockdown during March and April 2020,the school education sector was quick enough to shift its whole affair to online platform than the higher education sector in India(Wadia,2020).Perhaps the timing and duration of the initial decision to close educational institutions in India is one of the reasons behind this. As per the academic calendar in most of the higher education institutions class room teaching was almost over and examinations were about to start. However considering the rapidly evolving situation of the pandemic, the apex body of the higher education system of India, the University Grants Commission(UGC),decided to cancel all the examinations except the terminal semester/final years and directed to complete it by end of September 2020(University Grants Commission, 2020).But the sudden developments of lockdown and shutdown for almost six months have forced dislocation of many students leaving them with lack of course materials to prepare for the examinations. This situation challenged the ways academic libraries used to function. The suspension of in-person services and loss of access to physical collections at the institutions' libraries has left the students, faculty and library professionals with consideration of adopting the technology which is the only way out to resilience the challenging time. In fact library professionals have demonstrated their skills, empathy and flexibility during lockdown to respond to the rapidly evolving situation. And in such circumstances the website is an essential and dynamic platform to connect and serve the targeted users. But technology cannot do this alone.In this unique and urgent situation the role of library professionals especially of premier technological institutions is very crucial to make their users aware about the facilities and services provided by them. The LIS professional responded to the COVID-19 crisis and started planning to support online education and to get connected with faculty members and students. However, public libraries in India lack resources, facilities and information and communication technologies to operate in the prevailing situation.

### **Key findings for libraries during/After Covid 19 Pandemic**

- The COVID-19 pandemic reinforced and accelerated trends in library investments toward digital resources and services.

- Library leaders feel they have been recognized for being well-positioned and prepared for the emergency pivot to support remote research, teaching, and learning.
- Library directors prioritized staff well-being and financial responsibility in their decision-making.
- Most libraries have experienced budget cuts in the current academic year, and there is great uncertainty about longer-term financial recovery.
- Personnel cuts have occurred across all library departments but have most affected those who work in physical library spaces.

It is clear that the COVID-19 pandemic has shifted the strategies and priorities of library leaders as they navigate an even more constrained financial environment than they typically operate in. As many directors have needed to close the physical library locations, they have increased their investment in digital resources and services. They also have had to make difficult decisions about staffing, and staff whose jobs rely on the physical library location have been most impacted by budget cuts. Library directors have had to make these difficult decisions while keeping employee well-being in mind and also balancing the financial stability of the library.

### **Types of services to be provided by Libraries during/after COVID-19 pandemic**

#### **Research and Reference Help**

Library professionals may continue to offer one-on-one research and reference help through:

- Phone meetings;
- Zoom and Microsoft Teams virtual meetings;
- Email.

#### **Document Scanning**

Library professional may able to scan and send by email a PDF copy of articles and that are **only** available in print format.

#### **Group Study Rooms**

Using zoom or any other platform.

#### **Ask a Librarian Chat Service**

The library professional may offers help through the Ask a Librarian chat service, where students have access to librarians' help in real time through a virtual chat.

#### **Interlibrary Loans**

Interlibrary loan facility may apply for electronic materials (articles, copies, and book chapters). Print materials are not available via interlibrary loan.

#### **Remote Access to E-resources**

The main aim of any academic library is to enhance and strengthen the teaching, learning and research process by installing seamless document/information delivery system and around the country all libraries of higher education system have been working hard to provide services and access to collections to the users who have been displaced due to COVID-19. While all the libraries under study have provision of remote access to subscribed e resources, many have taken a lot of effort in leveraging and expanding existing online services. some reputed institutions have displayed step by step user guide on remote login to get access to the licensed E-resources

#### **Open Access Resources**

Beyond this, there are many scholarly freely available resources available notably National Digital Library of India (NDLI), Shodhganga, a repository of Electronic Thesis and Dissertation, Directory of Open Access Journals (DOAJ), AMS Free Online Books, Book Boon, Directory of Open Access Books (DOAB) and many more. Some institutions have brought together all such resources onto a single page and made these available for their users.

#### **Conclusion**

The library is dedicated to supporting its students and faculty during this time. To ensure the health and safety of staff and patrons alike, we are providing limited face-to-face assistance. COVID-19 pandemic has necessitated sudden and radical changes in delivery of library services, as strict social distancing and lockdown measures were imposed in the early phases of the pandemic. The Internet and web technologies have created a new and unparallel environment and enabling the libraries to enhance and strengthen the research, teaching and learning even in this difficult and uncertain time. The concept and practice of providing remote access of e resources by libraries is not new, but the user friendly way adopted by many libraries and the number of resources made available by them during the pandemic is exemplary. Considerable planning by the library professionals will be required even after the open of educational campuses. It will be imperative to re-assess every existing service and re-design it in view of the government protocols to deal with the situation.

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## **Bank Branch Expansion in India**

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### **Abstract**

*The banking sector plays a vital role in the development of one country's economy. Nationalization of commercial banks in 1969, 1980 and branch licensing policies have been undertaken to expand the rural banking in India. This significantly had improved the branch network of the banks and the public sector banks in particular moved into the interiors and previously unbanked locations, but the banking reforms of 1991 reversed the growth of rural banking outreach. In light of this background, this paper makes an attempt to analyze the number of branch expansion of scheduled commercial banks (SCBs) in India during the period of 2011 to 2021.*

**Keywords:** *Structure of Banking Sector, Bank Expansion, RBI and Government of India guidelines, Bank Branch Expansion*

### **Introduction**

The growth of banking sector depends upon the services provided by them to the customers in various aspects. The growing trend of banking services is found significant after the new economic reforms in India. Today, India has a fairly well developed banking system with different classes of banks – public sector banks, foreign banks, private sector banks – both old and new generation, regional rural banks and co-operative banks with the Reserve Bank of India as the fountain Head of the system. Nowadays banking sector acts as a backbone of Indian economy which reflects as a supporter during the period of boom and recession. From 1991 various trends and developments in banking sector are credited. It also reflects the various reforms were caused to improve their services to satisfy the customers. Branch expansion is need for economy growth in India.

### **Objectives of the study:**

1. To study the Structure of Banking Sector in India.
2. To study the Commercial Bank Expansion in India.
3. To study the Commercial Bank Branches Expansion in India.

### **Research Methodology:**

This paper is totally based on secondary data. Secondary data has collected from various books, journals, Government reports and articles. Researcher has taken Indian banking sector for purpose of financial study.

### **Structure of Banking Sector in India:**

#### **Reserve Bank of India (RBI)**

the RBI is India's central bank. The RBI was established on April 1, 1935 in accordance with the provisions of the Reserve Bank of India Act, 1934. RBI acts as a banker to the Government and Banks. The Central Bank maintains record of Government revenue and expenditure under various heads. It maintains deposit accounts of all other banks and advances money to other banks, when needed. Another important function of the Central Bank is the issuance of currency notes, regulating their circulation in the country by different methods. Banks in the country are broadly classified as scheduled banks and non-scheduled banks.

#### **Scheduled Banks**

All banks which are included in the Second Schedule to the Reserve Bank of India Act, 1934 are scheduled banks. These banks comprise Scheduled Commercial Banks and Scheduled Cooperative Banks. These banks are eligible for certain facilities such as financial accommodation from RBI and are required to fulfill certain statutory obligation. The RBI is empowered to exclude any bank from the schedule whose: (1) Aggregate value of paid up capital and reserves fall below Rs 5 lakh (2) Affairs are conducted in a manner detrimental to the interests of depositors (3) Goes into liquidation and ceases to transact banking business

#### **Commercial Banks**

Commercial banks may be defined as, any banking organization that deals with the deposits and loans of business organizations. Commercial banks issue bank checks and drafts, as well as accept money on term deposits. Commercial banks also act as moneylenders, by way of installment loans and overdrafts. Commercial banks also allow for a variety of deposit. These institutions are run to make a profit and owned by a group of individuals.

#### **Public Sector Banks**

These are banks where majority stake is held by the Government of India.

#### **Foreign Banks**

These banks are registered and have their headquarters in a foreign country but operate their branches in our country.

#### **Private Sector Banks**

These are banks majority of share capital of the bank is held by private individuals. These banks are registered as companies with limited liability.

#### **RBI guidelines for Bank Branch Expansion**

The opening of new branches and shifting of existing branches of banks is governed by the provisions of Section 23 of the Banking Regulation Act, 1949. In terms of these provisions, banks cannot, without the prior approval of the Reserve Bank of India (RBI), open a new place of business in India or outside India or change, otherwise than within the same city, town or village, the location of the existing place of business.

The guidelines for opening of branches of domestic scheduled commercial banks in India are given in the Branch authorization Policy of RBI. For the purpose of Branch Authorisation Policy of the RBI, a "branch" would include all branches, i.e. full-fledged branches, specialised branches, satellite offices, mobile offices, Extension Counters, off-site ATMs (Automated Teller Machines), administrative offices, controlling offices, service branches (back office or processing centre).

#### **Government of India guidelines**

As per the Government of India guidelines, a newly opened branch has to become profitable within twelve months of its setting up i.e. the proposed new branch would be profitable at the end of the first year of operation. The business projections for the proposed new branches are to be in accordance with the guidelines.

#### **Commercial Bank Expansion**

##### **Number of Banks of Different Sector Bank**

Sr. No.	Sector Banks	Number Of Banks in different Years				
		2007-08	2008-09	2009-2010	2010-11	2020-2021
1	Public Sector Banks	28	27	27	26	12
2	Private Sector Banks	23	22	22	21	22
3	Foreign Sector Banks	28	31	32	33	44
<b>Total Commercial Banks</b>		<b>79</b>	<b>80</b>	<b>81</b>	<b>80</b>	<b>78</b>

Source: www.rbi.org.in

After the reforms, the total number of commercial banks in India decreased from 79 in 2007-08 to 78 in 2020-2021. It is marked that the number of bank under public and private sector bank decreased but foreign sector bank showed improvement during 2007-08 to 2020-21.

##### **Sector Bank-wise Branch Expansion**

Sr. No.	Sector Banks	Number Of Banks in different Years				
		2016-17	2017-18	2018-2019	2019-20	2020-21
1	Public Sector Banks	96526	95152	92456	92753	92559
2	Private Sector Banks	27814	29439	33179	35680	36674
3	Foreign Sector Banks	312	311	326	336	920
4	Other Sectors Banks	22032	23874	26349	27660	28220
<b>Total Commercial Bank Branches</b>		<b>146684</b>	<b>148776</b>	<b>152310</b>	<b>156429</b>	<b>158373</b>

Source: www.rbi.org.in

The total number of commercial bank branches in India went up from 146684 in 2016-17 to 158373 in 2020-21. Table shows that maximum branches are with public sector banks followed by private sector banks. Foreign sector banks have very less branches in the Indian banking system. But if we see the growth rate of different sectors banks during the period of 2016-17 to 2020-21, the other sectors banks branches is 22032 in 2016-17 and 28220 in 2020-21 it shows the increase bank branches. Other sectors banks include are Regional Rural Bank, Local Area Banks, Small Finance Bank, Payments Bank.

##### **Population Group-wise Number of Functioning Offices of Commercial Banks**

Sr. No.	Year	Rural	Semi -urban	Urban	Metropolitan	Total
1	2010-11	31450	24083	18495	20986	95014
2	2011-12	33813	26990	19970	22479	103252
3	2012-13	36782	29808	21171	23621	111382

4	2013-14	41953	32991	22829	25228	123001
5	2014-15	45209	35374	24376	26827	131786
6	2015-16	48336	38078	25971	28425	140810
7	2016-17	49915	39450	27489	29830	146684
8	2017-18	50910	40160	27868	29838	148776
9	2018-19	51662	41575	28731	30342	152310
10	2019-20	52454	42773	29788	31414	156429
11	2020-21	52773	43683	30638	31279	158373

**Source:** Basic Statistical Returns of Commercial Banks in India, RBI.

Distribution of banking system is another indicator of level of financial inclusion in a country. Banking system should not be concentrated particular area or region in a country like India which has vast geographical area and population. Above table indicates distribution of SCBs' branches in different areas of India at different periods of time. In the year 2011, there were 31450 bank branches in rural areas, 24083 branches in semi urban areas, 18495 branches in urban areas and 20986 branches in metropolitan areas. Number of branches in rural areas, semi urban, urban and metropolitan areas increased between 2011 and 2021. As on 31st March 2021, there were 52773 branches in rural areas, 43683 branches in semi urban areas, 30638 branches in urban areas and 31279 branches in Metropolitan areas. In 2011 total bank branches are 95015 and year 2021 increased the total bank branches are 158373 in India.

### Conclusion

Now a day, there is a significant national as well as global focus on inclusive growth. After Independence, the Indian Banking System was recorded rapid progress. This was due to planned economic growth, increase in money supply, growth of banking habit, control and guidance by the Reserve Bank of India and above all, nationalization of banks in July, 1969. Thus the banking sector particularly public sector banking played a tremendous role in providing the needed impetus to meet the challenges from time to time. No one denies the fact that banking sector played a crucial role in achieving fast rate of economic growth in all sectors in the country.

The essence behind bank nationalization was to expand the rural banking in India, post-nationalization growth rate of the rural branches, rural deposits, rural credit and rural credit deposit ratio of SCBs was very impressive. The incremental ratio of rural, semi-urban to urban, metropolitan branches are increased in India. The branch expansion is fundamental to the improvement of the financial infrastructure, there has been a continuous deterioration in the growth of these very supporting indicators of the banking in India.

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## **Sustainable Development Goals: An Overview**

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### **Introduction :**

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

The SDGs build on decades of work by countries and the UN, including the UN Department of Economic and Social Affairs.

At the United Nations Conference on Sustainable Development (Rio+20) in Rio de Janeiro, Brazil, in June 2012, Member States adopted the outcome document "The Future We Want" in which they decided, inter alia, to launch a process to develop a set of SDGs to build upon the MDGs and to establish the UN High-level Political Forum on Sustainable Development. The Rio +20 outcome also contained other measures for implementing sustainable development, including mandates for future programmes of work in development financing, small island developing states and more.

In 2013, the General Assembly set up a 30-member Open Working Group to develop a proposal on the SDGs.

In January 2015, the General Assembly began the negotiation process on the post-2015 development agenda.

2015 was a landmark year for multilateralism and international policy shaping, with the adoption of several major agreements:

In March 2015 Sendai Framework for Disaster Risk Reduction.

In July 2015 Addis Ababa Action Agenda on Financing for Development.

The 2030 Agenda for Sustainable Development with its 17 SDGs was adopted at the UN Sustainable Development Summit in New York in September 2015. The Division for Sustainable Development Goals (DSDG) in the United Nations Department of Economic and Social Affairs (UNDESA) provides substantive support and capacity-building for the SDGs and their related thematic issues, including water, energy, climate, oceans, urbanization, transport, science and technology, the Global Sustainable Development Report (GSDR), partnerships and Small Island Developing States. DSDG plays a key role in the evaluation of UN systemwide implementation of the 2030 Agenda and on advocacy and outreach activities relating to the SDGs. In order to make the 2030 Agenda a reality, broad ownership of the SDGs must translate into a strong commitment by all stakeholders to implement the global goals. DSDG aims to help facilitate this engagement.

### **SDG had the following objectives:**

- To promote healthy competition among the States/UTs in their journey towards achieving the Global Goals
- To rank the performance of States/UTs based on their achievements across SDGs. For every goal, all States/UTs were ranked. A composite score was also calculated, which ranked the States/UTs based on their overall performance across multiple goals.
- To promote healthy competition among the States/UTs in their journey towards achieving the Global Goals.
- To support the States/UTs in identifying areas which demand more attention.
- To enable the States/UTs to learn from the good practices of their peers.
- To highlight data gaps in the statistical system of the States/UTs and identify the sectors in which robust and more frequent data need to be collected.

The limitations of the SDG India Index 2018 were acknowledged and shared in the first report to seek feedback from the broader community of stakeholders. NITI Aayog is committed to advocating about the SDGs in a manner that is understood by all. Towards this, SDG India Index Dashboard was also created to present rankings in an informative and exciting manner for increased accessibility and broader outreach.

### **Sustainable Development Goals :**

In September 2015 the Sustainable Development Goals (SDGs) were adopted, as a part of the resolution, 'Transforming our world: the 2030 Agenda for Sustainable Development'. India is committed to achieve the 17 SDGs and the 169 associated targets, which comprehensively cover social, economic and environmental

dimensions of development and focus on ending poverty in all its forms and dimensions. At the Central Government level, NITI Aayog has been assigned the role of overseeing the implementation of SDGs in the country.

#### **National level consultations :**

A National Workshop on capacity development for localising the SDGs was held. Union Territories (UTs) and 23 states, as well as other relevant stakeholders participated in the workshop in Feb 2018.

The private sector is an important stakeholder in the implementation of SDGs. Recognising this, a government and business partnership conclave was held in August 2018 to sensitise businesses and industries in the private sector and analyse their programme strategies on various SDGs.

#### **Regional level forums on SDG :**

The central platform for international follow-up and review of the 2030 Agenda is the High-Level Political Forum (HLPF), which meets annually under the auspices of the UN Economic and Social Council (ECOSOC). Regional and sub-regional organizations supporting implementation of SDGs participated in the Forum. Key focal areas of the deliberations were the scope and options for improving the regional/sub-regional policy environment for implementation of SDGs and capacity development of key stakeholders.

#### **Monitoring Progress on SDGs :**

NITI Aayog finalised and released the SDG India Index – Baseline Report 2018 in December 2018, to track the progress of all the States and Union Territories (UTs) on the priority Indicators, measuring their achievements and failures on the outcomes of the interventions and schemes of the central Government.

The SDG India Index has been developed to provide a holistic view on the social, economic and environmental status of the country and its States and UTs. It will also go a long way in helping analyse and identify best practices and priority areas, giving direction to developmental policies.

#### **I. About the SDG India Index Report :**

It is universally acknowledged that the SDGs represent an elaborate agenda for the governments, that necessitates achieving progress simultaneously across social, economic and environmental pillars. SDGs represent the aspirations of the global community and also a valiant effort to push the frontiers of development. SDGs impose an extraordinary demand on the national statistical systems to generate and analyse an unprecedented amount of data and more so on issues that are complex and evolving. India, with the world's 17 per cent of the population, holds the key to global SDG achievement.

Today, the country faces multiple challenges in several sectors of development, be it health, nutrition, education, sanitation and infrastructure. However, these challenges also make India conducive for developing innovative solutions to address them and also provide a useful lens for solving similar problems in other parts of the world. Given the federal structure of India, States are crucial to India's progress, as they are best placed to put people first and ensure that no one is left behind. State and local governments also play a pivotal role in implementing development programmes by almost spending seventy per cent more than the central governments. State governments are, therefore, essential stakeholders if the SDGs are to be realised in India, as well as globally. India is fully committed to achieving the Global Goals within the specified timelines. The country is well aware of the prospect that if India does not meet the SDGs, the world will be far from achieving them. The political leadership is cognizant of the responsibility this warrants.

The SDG Index is a powerful tool which offers excellent possibilities for the States/UTs to identify priority areas which demand action, facilitate peer learning, highlight data gaps, and promote healthy competition

#### **II. The Global Picture :**

Since the coming into force of the Global Goals in 2016, countries have taken a host of proactive measures to achieve the targets on time. Extreme poverty and under-5 mortality have reduced; a large number of countries have ratified the Paris Agreement on climate change and developed policies to address rapid urbanisation and support sustainable consumption and production.

#### **III. SDGs – The Indian Action**

The expression "Sabka Saath Sabka Vikas," which translates as "Collective Effort, Inclusive Growth", forms the cornerstone of our national development agenda. To fast track this agenda, NITI Aayog has released a Three-Year Action Agenda covering years 2017-18 to 2019-20 and unfurled the strategy going forward - 'Strategy for New India @ 75'. Reflecting the country's long-standing federal tradition, States and UTs participate actively to prepare these documents and are based on the SDG framework.

There has been a significant paradigm shift from input-driven evaluation of schemes to outcome-based evaluation. In the new Output-Outcome Monitoring Framework developed by NITI Aayog, the output and outcomes of the schemes of Union Ministries and Departments are linked with the financial outlays as a part of the Union Budget of 2019-20. This will significantly enhance transparency, predictability and ease of understanding of the government's development agenda.

#### **Global platforms:**

India had presented its first Voluntary National Review (VNR) in 2017, outlining the country's ambitious schemes and other initiatives for fast-tracking SDG achievement. At the HLPF in 2019, India released a publication on the experience of and learnings from SDG localisation, which detailed the efforts by all States and UTs in adopting, implementing, and monitoring SDGs. The Government of India has taken all the key steps to promote the localisation of the SDGs in the country by mandating NITI Aayog and Ministry of Statistics and Programme Implementation (MoSPI) to play a coordinating role on planning and statistics respectively, with the central ministries and the state governments.

#### **Monitoring :**

Monitoring of SDGs at the national and State levels is thus a critical aspect of the strategy for achieving them. NITI Aayog has done extensive work in monitoring at the national level and has been working closely with the States/UTs to drive SDG monitoring at the state and district levels. At the national level, one of the first initiatives undertaken was to map the schemes, policies, and programmes of the Central Government with corresponding SDG targets. NITI Aayog, with the mandate of overall supervision of the Agenda 2030, prepared the first-ever sub-national Index for SDGs for India in 2018, which ranks all States/UTs based on their performance under the SDG framework. The Index also highlights the areas where the States/UTs have made progress and those issues which demand attention.

The following reasons drove the motivation to prepare the 2018 index:

- Enable NITI Aayog and States to track the SDGs over time, to assess progress, identify priorities, determine challenges in implementation, and to stay on track towards the goals.
- Elucidate SDGs so that different stakeholders, and governments can easily understand these at all levels. One of the distinctive features of the SDGs is that these goals are more of political commitments and are not legal.
- Foster competitive federalism by providing a tool that is easy to understand by varied stakeholders.

#### **Conclusion :**

NITI Aayog has been supporting the States/UTs in putting in place monitoring mechanisms at their and district levels. Most States/UTs have mapped their government's schemes, programmes, and policies with the SDG targets, thereby assigning the responsibility of targets to their respective departments. MoSPI has issued guidelines to all States/UTs to draft their own State Indicator Framework (SIF) to monitor progress at the state level. The States are also being encouraged to develop District Indicator Framework (DIF) and District Index to rank the performance of their districts and trigger healthy competition and develop online dashboards to democratise the information on progress and challenges. The underlying principle behind these initiatives is the approach of cooperative and competitive federalism which NITI Aayog strives to push in every aspect of its work with the States/UTs.

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## **A Study Of Increasing Obesity Among High School Age Children In Nagpur City During A Pandemic**

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### **Introduction**

Obesity is defined as abnormal or excessive fat accumulation that may impair health. According to ICMR, The prevalence of obesity in India varies due to age, gender, geographical environment, socio- economic status, etc. India has 14.4 million children with obesity and is the home to the 2<sup>nd</sup> highest number of obese children after china. Today obesity is a biggest challenge in front of India. UNICEF reports that the number of children aged 5 – 19 years who are overweight has nearly doubled over the last 15 years. 04 out of 10 children in Indian cities are dealing with obesity linked problems since the COVID -19 outbreaks. According to the recent stats stated by Indian Journal of Endocrinology and Metabolism, around 5 – 8.8 % of school children are obese in India and if the rates increase at a pace like this, 27 million Indian children will be obese by 2030. Doctors say no school is turning weight gain into a real problem for children. Expert says, one of major cause could be online classes children have to sit for hours with excessive consumption of junk food and almost no physical activity resulting in an imbalance between intake and expenditure of calories, leading to accumulation of more weight. Childhood obesity is associated with a higher chance of obesity, premature death and disability in adulthood. Dr. Ramesh Babu Pothineni, cardiologist and managing director, Ramesh Hospital group said, ``In fact, it will also be a big burden to the healthcare system including Government hospitals as obesity would cause multiple health disorders.’’

### **Objectives**

- 1) To identify the rate of increasing severity in obese high school age children in Nagpur during pandemic.
- 2) To find the eating habits in children.
- 3) To find the causes of increasing obesity.
- 4) To find solutions to overcome the problem.

### **Research Methodology:**

This paper is analytical in nature. It was conducted in Nagpur city. A sample of 100 children was selected from different private schools. The primary data were obtained through an online questionnaire. This data has been analysed by using percentage.

### **Result and conclusion:**

- 10 % of children were overweight.
- 20 % of children do not like to eat leafy vegetables.
- 35% of children eat in front of a mobile or computer.
- 36 % children wake up late in the morning.
- 13 % children do not like to exercise.

### **Causes of Obesity**

- 1) Genetic Problem.
- 2) An increase intake of energy- dense foods that are high in trans or saturated fats and sugars
- 3) Low physical activity
- 4) An increase screen time in laptop and computer, mobile.
- 5) Psychological factors.
- 6) Diseases such as hypothyroidism, insulin resistance etc.

### **Common Health consequences of obesity**

- 1) Cardiovascular disease
- 2) Diabetes
- 3) Some types of cancers including breast, ovarian, liver, kidney, and colon.
- 4) Breathing difficulties.
- 5) Increased risk of fractures.
- 6) Hypertension.

### **Efforts can be done at individual level**

- Regular exercise and should take a balanced diet every day.

- Limit energy intake from total fats and sugars.
- Increase consumption of fruits and vegetables.
- Increase the use of whole grains, legumes and nuts in the diet.
- Engage in regular physical activity for minimum 60 minutes a day.
- Individual responsibility can only have its full effects where people have access a healthy lifestyle.
- School and community should promote awareness and education about healthy eating habits, lifestyle pattern and regular exercise.
- Proper awareness among the commoners should spread about the ill effects of obesity.

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## **Our Immune System A Great Protector: Role Of Nutrients In The Immune System In Battle Against Covid-19**

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### **Introduction**

*At the end of 2019, World Health Organization (WHO) reported a new disease found in China as pandemic coronavirus COVID-19 [1]. The disease spread over 200 countries infected by novel SARS-CoV-2 virus which affected more than 40 million people across the globe. The affected patients have visualized abnormal features in their lungs and showed symptoms similar to pneumonia. The clinical recognition was done with sample screening with a polymerase chain reaction (PCR) which revealed the presence of an RNA virus [2]. The virus which affected millions of people was named as severe acute respiratory syndrome coronavirus type 2 (SARS-CoV-2) [3] had showed similarities to SARS-CoV observed in 2002-2003 outbreak. As compared to the current pandemic the SARS-CoV and the Middle East respiratory syndrome (MERS-CoV) had lower transmission potential and allowed the effective prevention of spreading. Transmission of SARS-CoV is high in comparison to other coronaviruses because of high infectivity, many asymptomatic carriers and a long period of latency. As per the results of Wuhan, the probability of dying is 1.4 %. The risk increased with age, and asymptomatic adults between 30 and 60 years old were 4 % of the patients per year [4]. Moreover, the majority of persons can be asymptomatic and unaware of spreading the virus. Their daily activities quickly cause person-to-person transmission. It was assumed that it also transmitted through contaminated surfaces and self-inoculates within nose, eyes and mouth mucous membranes [5]. Analysis on aerosol exposure concentrated on swab samples and surface of sickbed handrails, floors, masks, computer mice, trash cans and other personal protective equipment used by patient caused with severe disease [6]. This showed more risk for people contacting patients with COVID-19.*

### **Immune System And Different Players In Our Immune System**

Our immune system guards us against viruses, bacteria, fungi, foreign proteins and abnormal cancer cells. Every individual has a sophisticated interplay of many different kinds of immune cells and that have protected them from this pandemic coronavirus COVID-19. It is important to know what these basic players are and how they act as line of defense in our **immune system:**

Phagocytes or Macrophages are white cells that are the first line of defense. Any foreign invader such as virus or bacteria can be attacked quickly by phagocytes by gobbling it up. These phagocytes take help from the T-helper cells which are from a group of white cells called lymphocytes. A T-helper cell comes along and attaches itself to the macrophage. It secretes hormone called cytokines which stimulate the inflammatory reaction which literally signal the immune system to kick itself into high gear. This stimulates the B-cells into action and attracts more macrophages and T-helper cells to come to the rescue. B-cells have the ability to shoot down the intruder with enzymes that destroy it by creating oxidative stress. Some of the B-cells will return to the lymph nodes to create antibodies against these intruders. If this intruder ever comes again, our immune system is ready for it because of these antibodies. Natural killer cells can destroy anything in their path. They flood infected cells with toxins and destructive enzymes which effectively destroys all foreign invaders or cells that are growing abnormally such as cancer cells. T-suppressor cells are the riot police that come along after the foreign invader has been destroyed and tries to calm down this tremendous immune response. They are critical for the control of collateral damage. If this highly reactive response not checked, tremendous damage to the surrounding normal tissue could occur.

## **Role of Nutrients In Our Immune System**

Nutrients (Nutritional Supplements) enhance significantly the body's own immune system. The whole optimal function of the host defense system depends upon an adequate supply of antioxidant micronutrients [7]. Each of these individual nutrients actually affects our immune response.

### **Vitamin E**

Supplementation with Vitamin E corrects the deficiencies in our immune system and help in clearing infections . Clinical studies demonstrated that the immune-enhancing effect of Vitamin E supplementation is even greater in the elderly and in individuals who had malabsorption syndromes [8]. Vitamin E supplementation also protect against the immunosuppressive effects of cortisol which is released in great quantities during a stress reaction.

### **Carotenoids**

These are capable of protecting the surrounding normal tissue from potential damage created by the inflammatory response of the immune system. Thus supplementation of the carotenoids can increase the number and effectiveness of the T-helper cells and the natural killer cells which constitutes an important part of our defense system against cancer cells. This greatly improves the tumor surveillance of our immune system.

### **Vitamin C**

Everyone must be aware of the importance of supplemental Vitamin C. It has the ability to enhance the immune system . Vitamin C actually improves the function of the macrophages significantly improving the first line of defense against bacterial infections. It is always helpful to take Vitamin C daily rather than massive doses with an infection. Taking 1g of Vitamin C daily for more than two months showed a striking enhancement of several aspects of the immune system. It has the ability to regenerate Vitamin E and handle the excessive free radicals within the plasma. Both these properties further enhance Vitamin C's ability to improve the immune system.

### **Glutathione**

The precursors of glutathione supplementation consisting N-Acetyl-L-Cysteine, selenium, niacin and Vitamin B2 have shown significant enhancement to the overall immune system. Even the patients suffering with HIV infections have the positive effect.

### **Coenzyme Q10**

With the increasing age, CoQ10 levels decline and make the mitochondria especially vulnerable to oxidative damage. CoQ10 is critical for the optimal function of the immune system. It has its major role in the production of energy in the cells of the immune system. Supplementation of CoQ10 has been shown to reverse these problems and significantly enhance the immune system [9].

### **Zinc**

Every aspect of our immune system needs Zinc. Deficiency of Zinc actually suppresses several parts of the immune system such as decrease in lymphocytes, reduction in function of many white cells and thymic hormone which is strong stimulus of the immune system that falls. Zinc not only boosts the immune system but also inhibits the replication of virus [10]. During the pandemic of coronavirus COVID-19 people suffering from this disease have continuously taken the supplementation of Zinc and Vitamin C. The consistent and long-term use of high doses of Zinc or even Vitamin C as nutrients in the supplementation is best for the antioxidant defense system and the immune system.

When all of the players of our immune system are functioning at their peak capacity, our overall health is obviously the beneficiary. Children are able to optimize their immune system via nutritional supplementation within six months. Whereas aging is generally associated with an impairment of our immune responses, which leads to increased frequency

and severity of infections. In fact infections especially of respiratory tract are the fourth most common cause of death in the elderly which we experienced during the pandemic of COVID-19 outbreak occurred at the end of year 2019 and till date.

### **Conclusions**

The patients who received the nutritional supplements had significant improvements in their overall immune response. They enjoyed fewer and less severe infections compared to those who received the placebo. It took at least a year of supplementation of nutrients to optimize the immune systems but at the end benefits were dramatic.

The study along with several others, confirms the fact that our immune system is extremely dependent on the micronutrients, as is our antioxidant defense system in the pandemic situations of coronavirus COVID-19 outbreak. Also studies exploring prevention and control measures have begun to gradually increase. Studies providing evidence on prevention and control measures are being implemented to minimize the impact of the outbreak. Government agencies have quickly incorporated recent scientific findings into public policies at community, regional, and national levels to slow down and/or prevent the further spread of the 2019-nCoV.

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## **Comparative study of Rainfall Distribution of Monsoon 2019 and 2020 in Maharashtra**

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### **Abstract:**

Monsoon is seasonal rainfall during the months of June to October over the Indian subcontinent. Basically India is depending on the agriculture activities from long time and share of agriculture sector in Indian economy is more. The monsoon directly affects on the agriculture sector and farmers of India as well as Maharashtra. Agriculture is gamble in the hands of monsoon. Maharashtra state receives 90 per cent of rainfall from the southwest monsoon and for different purposes it was used. So it is very important to analyze the rainfall received during 2019 and 2020 monsoon in the specific Maharashtra at the regional level and tahsil level to understand the distribution of rainfall and according to agricultural pattern.

**Keywords:** *Monsoon, comparative study, Maharashtra*

### **Introduction**

In India southwest monsoon gives 75 per cent of rainfall in the total country and nearly 70 percent of India's population is engaged in agricultural practices and near about 59 per cent of total employment from the country is comes from the agricultural sector and feed the increasing population. The agriculture sector contributes around 18 per cent of the gross domestic product (GDP) of Indian economy. The south west monsoon is also backbone of agriculture sector in Maharashtra. Maharashtra is leading state in agriculture sector. There are two main cropping season in Maharashtra which is rabbi season and Kharif season. Crop diversity also found in Maharashtra, most of crops are grown in starts are rice, Bajara, Jowar, wheat, pulses. The Maharashtra is major producer of oilseeds which are sunflower, groundnut and soyabean etc. Cotton, sugarcane and vegetables are also grown in Maharashtra at large scale. This agriculture is depends on the monsoon in the Maharashtra. In the present work the classification of tahsils according to rainfall received from during the monsoon of 2019 and 2021 from June to month of October and classified percentage to normal from 120 and above to 0-20 percent rainfall received. The rainfall in the hilly area and coastal region received is highest and decreasing towards the interior tahsil and low during the October month. The rainfall is highly variable over all of Maharashtra

**Objective;-** The objective of the present study is to analyze the rainfall received during monsoon season in Maharashtra in 2019 and 2020.

### **Study Area**

Maharashtra state is selected for the present study and rainfall data is collected for the all revenue regions and all tahsil of Maharashtra for the analysis of distribution of monsoon.

### **Database and Methodology**

The rainfall data for the Maharashtra state is collected from the agriculture department of Maharashtra. The region wise and tahsil wise rainfall received analyzed for the Maharashtra state for the comparative study and distribution and impact of onset and off set of monsoon over the Maharashtra. The rainfall data of June to October 2019 and 2020 used for the analysis of rainfall distribution and distribution over the all tahsil and region of the Maharashtra. Actual rainfall data from the region was collected for the all region for the year 2019 and 2020 to study the distribution of the rainfall during monsoon months in the Maharashtra.

**Table 1. Classification of tahsils according to rainfall received**

Rainfall (percentage to Normal)	No. of Tahsil									
	June		July		August		September		October	
	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
120 & Above	33	177	108	113	132	144	232	180	256	220
100-120	33	64	74	51	51	58	54	46	20	24
80-100	62	50	97	69	65	60	42	58	36	41
60-80	98	34	52	58	60	51	21	42	21	35
40-60	95	26	20	42	36	39	6	25	17	26
20-40	31	4	4	21	10	3	0	4	4	7
0-20	2	0	0	1	1	0	0	0	1	2

Source: Commissionerate of Agriculture, GoM

**Table 2. Region wise actual rainfall received**

Rainfall during		Region							
			Konkan	Nashik	Pune	Aurangabad	Amravati	Nagpur	Maharashtra
June	2019	Normal	660.2	127.7	166.0	145.8	154.1	187.5	223.3
		Actual	593.9	82.8	148.0	94.0	108.4	93.6	160.1
	2020	Normal	662.5	139.7	198.6	134.0	147.6	187.1	207.6
		Actual	541.2	210.0	200.9	203.2	183.1	193.3	235.1
July	2019	Normal	1164.7	235.5	330.6	201.2	261.0	412.3	402.6
		Actual	1480.5	245.7	372.2	151.8	250.2	392.1	406.9
	2020	Normal	1063.8	218.5	327.2	186.2	239.6	362.3	330.9
		Actual	886.1	204.7	165.4	209.0	247.6	347.8	287.5
August	2019	Normal	757.1	189.0	216.7	197.3	210.0	352.4	303.3
		Actual	925.5	260.5	360.2	141.1	168.7	385.1	328.6
	2020	Normal	766.3	197.4	2474.5	193.3	231.7	247.8	286.0
		Actual	1222.0	192.4	310.4	151.1	199.5	444.4	353.5
Sept	2019	Normal	379.0	158.6	158.1	176.9	166.7	209.5	202.1
		Actual	897.1	207.1	221.9	220.3	200.3	339.9	304.3
	2020	Normal	375.5	151.5	171.7	166.0	130.9	175.3	179.7
		Actual	429.9	193.7	189.3	270.3	151.0	139.1	218.8
October	2019	Normal	115.4	50.8	91.6	58.6	46.1	53.5	67.4
		Actual	183.6	131.6	217.5	209.8	80.9	48.2	150.3
	2020	Normal	108.6	53.1	96.5	71.3	57.5	53.4	71.1
		Actual	242.5	71.0	232.7	110.7	59.2	51.5	124.7

Source: Commissionerate of Agriculture, GoM

### Result and Discussion

Rainfall is the main source of water on the earth surface. The received rainwater is used for the different purposes such as drinking, washing, and industrial and mainly for agricultural. Climate change is main reason for the uneven distribution and uncertainty in the monsoon rainfall over Maharashtra and all over the Indian subcontinent. In Maharashtra in the month of June 2019 only 33 tahsils received rainfall 120 and above in percent and in 2020 is increased up to 177 tahsils it means rainfall received in 2020 is more than the 2019 it show the variation in receiving in rainfall. In the remaining months there is less difference in 2019 and 2020 rainfall occurrence. There is increasing number of tahsil in the month of July, and August (120 and above mm percentage) and decrease in the months of September and October. Only few tahsils are receiving rainfall in 0 to 20 per cent. Rainy months are august, September and October because most of the tahsil are getting rainfall during these months.

In the region wise analysis of rainfall distribution the Konkan region is receiving actual rainfall is highest than other remaining Nashik, Pune, Aurangabad, Amravati and Nagpur region. Konkan region is getting more rainfall in the month of July and august and decreasing in the month of September and October due to south west monsoon period is come to end and after that days retreating monsoon starting and changed wind direction. From the south west monsoon Nagpur region is receiving very less rainfall as compared to other region and in the month of June it is receiving very less rainfall which is 93.6 mm in 2019 and 193.3 in year 2020 and increasing towards the July, august and again decreasing into September. Nashik, Pune, Aurangabad and Amravati regions are getting more rainfall from the southwest monsoon in the month of July and august more than other remaining months. The intensity of the rainfall distribution is more in the months of July and august is more than other remaining months in Maharashtra.

In the state level actual rainfall distribution in the month of June, 2019 160.1 cm and in 2020 235 cm rainfall received which is higher than 2019. In the month of July, 2019 406.9 cm and in 2020 287.5 cm rainfall received which is decreased than 2019. In the month of august 2019 328.6 cm and in 2020 353.5 cm rainfall received which is higher than 2019. In the month of September 2019 304.3 cm and in 2020 218.8 cm rainfall received and decreased than 2019. In the month of October 2019 150.3 cm and in 2020 124.7 cm rainfall received which is lower than 2019.

### Conclusion

Monsoon is the source of rainfall in the Indian subcontinent. India as well as Maharashtra receives rainfall from southwest monsoon. In Maharashtra, Nagpur region is getting rainfall from northeast monsoon also. In the present study it shows that the distribution of rainfall in the tahsils of Maharashtra is

unequal and according to the months it is concentrated in the months of July and August. Nearly on 7<sup>th</sup> June monsoon enters into Maharashtra from the western coast and distributes all over the region. As per analysis of distribution of actual rainfall received in all regions of Maharashtra, the Konkan region is getting the highest rainfall and the Aurangabad region is getting low rainfall during the southwest monsoon of 2019 and 2020. The uncertainty and uneven distribution of rainfall affects the cropping pattern as well as agricultural practices in Maharashtra and the condition leads to drought.

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## **Poverty Ratio and Poverty Alleviation Programme in India**

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***India is a developing nation. Although its economy is growing. Poverty is still a major challenge. However, poverty is on the decline in India. It has around 86 million people living in extreme poverty which makes 29.7% of its total population as a May 2021 (Net April.2021)***

### **Abstract**

India is the second most populous country after China with about 1.3 billion people and it's the seventh largest country in the world with an area of 3.287.00km<sup>2</sup>. The highly contracted country has enjoyed growth rates of the largest economy in the world with a GDP of 1.644 billion US dollars. But only a small percentage of the Indian population has benefited from this impressive economic boom so far. As the majority of the people in India are still living in object poverty.

More than 800 million people in India are considered poor most of them live in the countryside and keep afloat with odd jobs. The lack of employment which provides a liveable wage in rural areas is driving many Indians into rapidly growing metropolitan areas such as Bombay, Delhi, Bangalore, Calcutta, Madras these more of then a life of poverty and despair in the mega-slums made of millions of corrugated ironworks without garbage disposal and in many cases. The poor hygiene condition is the cause of disease such as cholera, typhus, and dysentery, in which especially children suffer which are below poverty ratio people.

### **Introduction**

Poverty is widespread phenomenon and is one of the outstanding features of developing economics. It is not just an economic problem. It is a human condition and is an emotional, cultural and political problem as well poverty is the hopelessness of the people and their disappointment. Their suffering in India, in spite of the developments that have taken place during the past seven decades majority of the people are poor and for more of the time they suffer from extreme destitution. It is a human condition. It is despair, grief and pain. It is the despair of a father with a family of seven in a poor country, when he joins the swelling ranks of unemployed with no prospects of unemployment compensation. Poverty is longing of a young boy playing outside a village school but unable to enter because his parents lack of few rupees. needed to buy textbooks. Poverty is the grief of parents watching a three-year child suffering from nutritional food, because he is not able to purchase which are he need for their children. due to unemployment, when unemployed he is not earning any income in his life, due these reasons are showing the poverty ratio.

***People living in poverty do not have enough money for basic necessities such as food and shelter. The rate of poverty in India is increasing because of the population in the urban areas. Most important is cross of peoples are below the poverty line and most of the people are on the borderline of poverty - Indian essay.***

### **Objectives of study.**

- 1) To study the poverty ratio in Indian.
- 2) To study the various schemes of poverty. Alleviation programmes.

### **Research methodology**

The present study totally depends on the secondary literature information is obtained from the various sources. The information is collected from various literary and philosophical articles and philosophical books are main source for this article. It includes search reference books of literature which are related to the research paper.

### **Significance of study.**

People living poverty line in India do not have enough money for basic necessities such as food and shelter and cloths. An example of poverty is the state a person is in when he is hopeless and not has enough "income sources. The rate of poverty in India is increasing because of the population in the urban areas, most important is cranes of people are below the poverty line and most of people are on the borderline of poverty. poverty in India is seen mainly is the rural area because of uneducated and unemployment and increased number of Population, many people don't afford get proper foods for their daily life and even they don't have their own. homes, they sleep on the footpath or road, more population. need more food, money, and for staying house but due to Lack of this poverty growing richer and poor becoming more poorer which becomes difficult to fill the gap, poverty has many effects like it reduces

poor housing, illiteracy. Increase rate of child labour and unemployment poor hygiene hence their poor people cannot afford a balanced diet, nice clothes, well education, etc., season. Only because they don't have much money. To afford this. The poverty can be controlled by giving them proper education and also provide proper facilities to the farmers so that those farmers get more profitable and do not migrate to cities in search of employment. Also, the illiterate people should get proper education to make their life better, also the family planning is also essential for coming out from the poverty. Country is from the ancient times even earlier times the poor people were not given such place what such people used to get even they were not allowed to enter any particular work. Main cause of poverty is like unemployment, lack of education, poor utilization of resources, regional imbalance and poor government policy, concept of poverty and poverty line.

Poverty may be defined as the inability to secure the minimum consumption necessary for life, health and efficiency. It is the hopelessness resulting from our acute lack of life's necessities. A person who fails to get a square meal of a day is said to be poor, poverty is a selective and one and it is expressed the materialistic term.

Lord Boyd-Ores, the first director of FAO, was the first to introduce the concept of poverty on the basis of starvation line in 1945. According to him, an intake of less than 2300 calories per person per day was considered the line

starvation and this idea has been transformed into poverty line. The National Planning Commission has defined poverty line on the basis of nutritional requirements of 2400 calories per person per day in rural areas and 2100 calories per person per day for urban areas.

The working group consisting of Prof. Gadgil, Dr. V.K. R.V. Raw & Dr. P. S. Lokanatha, Dr. Gadgil and Ashok Mitra worked out the poverty line in India and recommended a Standard & Private Consumption at Rs 240 per capita per year at 1960-61 prices as the basic minimum. Now the poverty is estimated not on the basis of calories intake but on the basis of per capita expenditure data on the basic needs like food, clothing, housing and services like health and education as suggested by Suresh Tendulkar expert committee on poverty estimation.

#### **Extent of poverty**

In India appropriate and reliable data for the direct estimate of poverty are unfortunately not available. No serious efforts were made by the government in the dissection. Some private people and economists have made an attempt to estimate poverty. Some of the worthwhile estimates are as follows:

1. Dandekar & Rath: According to Daniella's and Rath, in 1960-61 roughly 40 percent of rural and 30 percent of urban population were living below poverty line.
2. P.K. Bardhan: By fixing the poverty line at Rs 15 per person per month in rural areas and Rs 18 per person per month in urban areas at 1960-61 prices he found that around 55 percent in rural areas and 41 percent in urban areas were living below the 1960-61 poverty line.
3. Estimates of B.S. Minhas: Dr. Minhas estimated that about 65 percent of population in 1956-57 and 50.6 percent of population in 1967-68 in rural India were living below the poverty line.
4. Planning Commission estimates: - The estimate of poverty in the country are made at national and state level by the planning Commission at an interval of approximately five years, from the large sample survey data on consumption expenditure conducted by the National Sample Survey Office (NSSO). Comparable estimates based on a consistent methodology and data sets are available until 2004-2005. Some of the key results of the latest Large Sample Survey data on consumption expenditure have been made available by the NSSO from its 61<sup>st</sup> round (2004-05) and Suresh D. Tendulkar Committee report the national poverty line at prices was a monthly per capita consumption expenditure of Rs 446.68 in rural and Rs 578.80 in urban areas in 2004-05.

**Table No: 1**  
Estimates of poverty ratio in India (percent)

	<b>Earliest estimate (URP) based on the Lakdawala Methodology</b>	<b>Estimate (MRP) based on the Tendulkar Methodology</b>	<b>Planning Commission (MRP)</b>	<b>Rong wagon Methodology MRP</b>

AREA	1993-94	2004-05	1993-94	2004-05	2009-10	2011-12
<b>Rural</b>	37.3	28.3	50.1	41.8	33.8	33.5
<b>Urban</b>	34.4	25.7	31.8	25.7	20.9	21.4
<b>Total</b>	36.0	27.5	45.3	37.2	29.8	29.7

Source- planning commission Eco survey 2011-12

URP – Uniform Reference Period. MRP- Mixed Reference Period Economic development of india- 2012-13 Page No: -125

### **Cause of poverty.**

Poverty, the State of one who lacks usual or socially acceptable amount of money or material possessions. poverty is said to exist when people lack the means to satisfy their basic needs. In this context, the identification. first a determination of poor people first requires of what constitute based needs.

**Some causes are mentioned below,**

- 1) **High Growth rate of population.**
- 2) **inequality of income**
- 3) **low per capita income**
- 4) **Backwardness of the Economy**
- 5) Unemployment
- 6) low consumption expenditure
- 7) Regional Imbalance
- 8) Inflation.
- 9) Backward agriculture
- 10) Poor development
- 11) lack of technology and shortage of capital.
- 12) Social and political factors.

### **Poverty Alleviation programmes.**

Aims to reduce the rate of poverty in the Country by providing proper access to food, monetary help, basic essential to the households and families belonging to the below the poverty line. The govt. implement some policies which help to alleviation of poverty in India.

### **Government of India. Its Schemes for Alleviation of poverty.**

1. **IRDP-1978-79- Integral Rural Development programmes**  
Aim- To provide Employment opportunities to develop the poor, as well as opportunities to develop their skill improve their life.
2. **PMRY-1993- prime minutes Rozagar Yojana**  
Aim- provide self-employment opportunity to educated youth. (100 days)
3. **TRYSEM- 1979- Training for youth Rural youth for self-employment**  
Aim- providing basic technical and entrepreneurship skill to rural youth in the age group of 18-35 years enable them take up income generation activities (self-employment)
4. **TRYSEM 2000-**  
Food security to BPL peoples
5. **NOAPS-1995 - National old days pension**  
Aim: pension for unable of weak person and aged persons, depends upon schemes & state govt.
6. **NFBS-1995. National Family Benefits Schemes**  
Aims: Farmer Natural Death of farmers. Rs.10000/
7. **7JG SY-1999-Jawahar Gramin Samridhi**  
Aims: Quality Improvement of Rural people and additional gainful employment.
8. **SGRY-15 Aug-2003- Sampurn Grameen Rozagar Yojana**  
Aims: - Providing gainful employment for rural poor, through Panchayati Raj institution.
9. **NFWP-14 Nov. 2004- National Food for work program**  
Aims- Providing additional resources apart from resource available and create Supply monetary wages.
10. **PMGSY-2001- Pradhan Mantri Grameen Sadak Yojana**  
Aims: Road Connectivity to rural and urban and 1000 people and 500 people villages are connected roads.
11. **NMBS-12 April 2005 - National maternity Benefits schemes.**  
Aim - payment of Rs.500 per Pregnancy women. Belong to poor households - pre-natal and post-natal maternity care up to first live birth

12. **MGNREGA- 2006, Mahatma Gandhi National Rural Employment Guarantee Schemes.**  
Aims: providing opportunities to Rural up to 100 to 150-day works.
13. **PM GP 2000-2001- Pradhan Mantri Gramodyog program**  
**Aim-** In order to achieve objectives Sustainable Human development at the village level and additional assistance - States & UTS
14. **TAY - 2016 - Indian Awas Yojana**  
Aim- The schemes provided to houseless persons and who has a Kutch-hours. that person also able to getting the benefits.
15. **SJGSRY-1999 - Swarna Jayanti Gram Sadak Yojana - 12 April 1999**  
Aims: provide to farmers subsidy for products of Horticulture, and sericulture, Fruits and assistance to poor families,

#### **Present Scenario**

The people in extreme poverty are the most affected by the pandemic, which is exacerbating their already limited access to food, clean water, steady income, public services and reducing their ability to Practice social distancing. Before COVID-19, the poor already faced in a range of issue inhibiting their economic advancement.

According to recent World Bank estimates. the pandemic is causing a major economic shock that could unseal decades of progress on poverty alleviation and push more than 29.7 percent into extreme poverty. It is difficult to implement many poverty alleviations programmes during the pandemic period. For example, mid-day meal Scheme cannot be implemented due to lockdown. many poor households depended on this Schemes to feed this child.

#### **Conclusion**

Poverty is a multidimensional phenomenon which goes beyond the realms of adequate income. It is viewed as a state, of lack of Social, economic and political deprivation of people that excludes them to participate as equals in the development process.

poverty alleviation. Programmes aim to reduce the rate of poverty by providing proper access to food monetary help, and basic essentials to the households and families belonging to the below poverty line.

Poverty alleviation programme has helped many of our Country. For those who are able to move out of poverty, progress is often temporary. Economic shocks, food insecurity and climate. change threaten their grains and may force them back in to poverty programme should be modified time to time to meet the requirements of the situation, with government various schemes and individual efforts, poverty can be reduced on a large scale by govt schemes.

According to the 2019, V.N Human development Report 29.7% of the population in India is multidimensionally poor, with proper implementations of the poverty alleviation schemes, India can reduce poverty by empowering the rural poor with optimal use and management of resources, these schemes focus on targeting the multidimensional deprivation the poor face by providing them with food Security, employment, housing and wages. Finally, the strives of these schemes is the objectives to create sustainable mechanisms leading to rural development.

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## **“Challenges for Small scale Industries Sustainability in India for the period of Covid-19”**

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### **Abstract**

*Sustainable Development is the base of research and business is the one important pillar of a nation. Moreover, Sustainable Development Goals and Development policies highlight the role of business which has become today's need to create awareness among the students, researchers, small scale businessman as well as in local communities for environment protection. The present paper gives an overview regarding the challenges Revenue Generation, Growth Opportunities, Disruption in Transportation, Explore Supply Chain Diversification, adopting new technologies, etc. for Small Scale Industries sustainability in India. And I attempt to summaries the strategies overcome on sustainability of Small-Scale Industries in India.*

**Keywords:** *Sustainable Development Goal, Revenue generation, growth Opportunities, Disruption in Transportation, Disruption in Transportation, New Technologies.*

### **Introduction:**

As per the guidelines of United Nation on 1<sup>st</sup> January, 2016, the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for sustainable development which adopted by World Leaders in September, 2015 at an historic UN Summit, it officially came into force and India is one of them. Over the next fifteen years, with these new goals that universally apply to all countries which are the part of this. The main objective to mobilize efforts to end all forms of poverty, tackle climate change, fight inequalities and achieve the new unique goals- to build economic growth and addresses a range of social needs including education, business, health, social protection, job opportunities, and environmental protection. The Small-Scale Industries has played a very important role in the socio-economic development of the country during the last 70 years. It has significantly contributed to the overall growth in terms of the Gross Domestic Product (GDP), Employability and exports. The performance of the small-scale industries has direct impact on the growth of the overall economy. With the increasing competition on account of globalization it is very difficult to sustain the small-scale industries and many more problems faced by them which mainly relate to access to timely and adequate credit, technological difficulties, infrastructure bottlenecks, marketing constraints, etc. And now one more unexpected constraint arises i.e., Covid-19 and overall Small-Scale Industries collapse in some proportion. Due to this reason Small-Scale Industries faces the Challenges during Covid-19 for their sustainability in India. But there are some strategies to overcome these challenges.

### **Objectives: -**

- 1) To study the concept of Sustainable Development Goal (SDG).
- 2) To study the challenges of small-Scale Industries in India for sustainability.
- 3) To study the strategies to overcome Small-Scale Industries in India for sustainability.

### **The Methodology of the study:**

The research paper is mainly based on secondary data collected from various books, National and International Journals, Publications from various websites which focused on various aspects of Small-Scale Industries in India.

### **The recent Overview of affected Small Scale Industries during Covid-19:**

Now in the period of Covid-19 more than 82% of Small-Scale Businesses are suffered a negatively. The story of industrial development, it has been an important determinant of the course of our history as a community of nations. From the first steam engines to the first assembly lines to today, truly global production chains and processes industry has changed our economies and helped drive major changes in our society. But without sustainable practices and infrastructural facilities our growth has left. For this purpose, to study the different challenges for sustaining the Small-Scale Industries related to Challenges for the Building Materials and Machinery, O & G Sector, Water Industry, Power Industry, Electronic Sector, Logistics Sector, Mobility Industry, Food and Nutrition Industry, Chemical Industry, ICT Sector, Steel Downstream Industry, The Challenge of reduced Consumption Compounded by Shortages and Operational Issues of industries. As per the Hindu Newspaper survey report, “small business owners cited three most important support measures, they needed to revive their businesses post the pandemic- better credit facility (59%), better marketing support (48%) and adoption of technology (35%) “, said Arun Singh, global chief economist, Dun & Bradstreet.



## **Challenges for Small scale Industries Sustainability in India for the period of Covid-19:**

### **1) Technical Assistance that support workplace operational continuity:**

Basic foundation of Small-Scale Industries is owner of it is not an industrialist, the person who want to start small-scale industry, he or she carrying limited funds to establish targeting limited production and because of this he or she did not afford professional works in his or her company. Hence the quality of product and goodwill of small-scale industry does not sustain for long period. To solve above challenge with the help of Modern automatic machineries which helps to produce quality product which satisfied the customer's demand.

### **2) Disruptions of Supply Chain, Transportation and Logistics Sector:**

The SSI units are able to forecast only at local demand of production. The government permit to supply only essential goods and services in coronavirus period, due to this a very high negative impact on SSI units. The government should provide relaxation only non-hotspot areas for open up SSIs. So, to enable collaboration facilities in between suppliers, buyers, technology providers and the effect is to enact ease of not doing the business activities but exploring and diversifying possibilities to improve the availability of raw materials with the help of database platform.

### **3) Workforce Welfare:**

The Government should issue SOPs and handling the guidelines of it at every business unit for hygiene purpose. Under state resources of Government to support workers and setting up them to provide quarantine facilities them. To support for contract workers for at least three months looked them and provision for expenditure during this crisis. The restrictions imposed on to temperance to spread over this corona virus and affected the ongoing projects.

### **5) Impact on Revenue Generation:**

The financial disability of SSI is beyond question. Their internal resources are so small that they no surplus to live on during the period of business strain. This leads to instability of their profits which deters banks from giving unsecured loans. So, in this pandemic there is major issue comes in front of the SSI's. No revenue generation by Small-Scale Industries. There is still a need for a positive outlook and approach of our financial institutions towards Small-Scale Industries.

### **6) Growth opportunities critical for Future Success:**

The demand of the product decreases, only essential products demanded by customers, job losses, etc. in Covid-19 period. Growth opportunities The Government cut the GST rate on operation hours for businesses for offer export incentives to the SSIs. To provide support to the domestic industries by Government- ongoing infrastructure projects, plug-n-play infrastructure with focus on technological support

### **The strategies to overcome Small-Scale Industries in India for sustainability:**

With the help of following strategies, to overcome the Small-Scale Industries in India for their sustainability:

**Government Initiation:** a) Training and Workshop Programme provided to entrepreneurs in the areas of Marketing, financial, technological, managerial, etc. b) Awareness campaigns carried out to encourage young and new entrepreneurs. c) The License Procedure must be in simple way and fair incentive and subsidy awareness provide to SSI. d) Infrastructural facilities and Technological support provided by government to SSI at low cost. e) Provide time to time Export promotion schemes to SSIs units for encouraging them.

**Better Marketing Support:** Small-Scale Industries suffer from marketing difficulties as their products are often unstandardized and of variable quality. The main specialty of SSI product is that the originality of design but it is the imperfection of market. So, SSI's and dealers into close contact with another. The National Small-Scale Industries Corporation assists small firms in obtaining a greater share of government and defense purchase but does not assume marketing responsibility. SSIs develop and go for their own marketing strategies. In Covid-19 period most customers are directly contact with industries due to government guidelines of Covid -19. And it is really one opportunity to reach directly door step of customer by industries. Use different online Marketing tools to understand the customers demand, to prepare the qualitative products as per their requirements and finally to satisfy the customers. **Adoption of New Technology:** The Small-Scale Industries are the adopted digital technologies and limited resource availability they doing their production activities in pandemic situation. These are the manufactured or produced their nearly half of the products which exported from India, and this is very essential for growth of GDP of the country. This is the opportunity to SSI to create employment and earn wealth to them. This creates social growth and also simultaneously development of our country.

**Conclusions: -**

Some sectors in India have made gains and exciting opportunities are emerging while careful risk mitigation strategies are helping others chart a new course for the future. With the help of Sustainable Development Goal of India- the main objective is to mobilize efforts to end all forms of poverty, tackle climate change, fight inequalities and achieve the new unique goals- to build economic growth and addresses a range of social needs including education, business, health, social protection, job opportunities, and environmental protection and at very. The Small-Scale Industries has played a very important role in the socio-economic development of the country

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## **The Role of Chemistry in Energy and Sustainable Development of India**

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### **Abstract:**

Today is a big challenge facing the sustainability of Chemical Technology and Pharmaceutical in India. Many environmental and resources are at the heart of sustainable development and collaboration from interdisciplinary groups. The third our Global challenge chemistry solution feature looks at energy and sustainability we are doing to support our community and collaboration with organization. As a Govt. strives to tackle inter related challenges such as energy and material survey climate change and pollution. Chemistry will have a vital role to play in development of new technologies required to help Global energy and sustainability issues for future generations.

**Research methodology:** New chemical research green and sustainable Chemistry education, manufacturing practice and since of social responsibilities and crucial for current and future chemists as we work together to perfect the planet.

### **Goal:**

In 2015 the United Nation created a Universal call to action to end Poverty, protect the planet and ensure that all people enjoy peace and prosperity. By 2013 the framework comprising 17 aspiration goals known as sustainable development goals (SDAS) was being adopted by Government industry and many other organizations worldwide.

1. End poverty in all its forms everywhere.
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
3. Ensure healthy lives and promote well-being for all at all ages.
4. Ensure inclusive and quality education for all and promote lifelong learning.
5. Achieve gender equality and empower all women and girls.
6. Ensure access to water and sanitation for all.
7. Ensure access to affordable, reliable, sustainable and modern energy for all.
8. Promote inclusive and sustainable economic growth.
9. Build resilient infrastructure, promote sustainable industrialization.
10. Reduce inequality within and among countries.
11. Make cities inclusive, safe
12. Ensure sustainable consumption and production patterns.
13. Take urgent action to combat change and its impacts.
14. Conserve and sustainably use the oceans, seas and marine resources.
15. Sustainably manage forests, combat desertification, halt.
16. Promote just, peaceful and inclusive societies.
17. Revitalize the global partnership.

### **Hypothesis**

Sustainable Chemistry refers to the design of Chemical products and processes that reduce or eliminate the use and generation of hazardous substances.

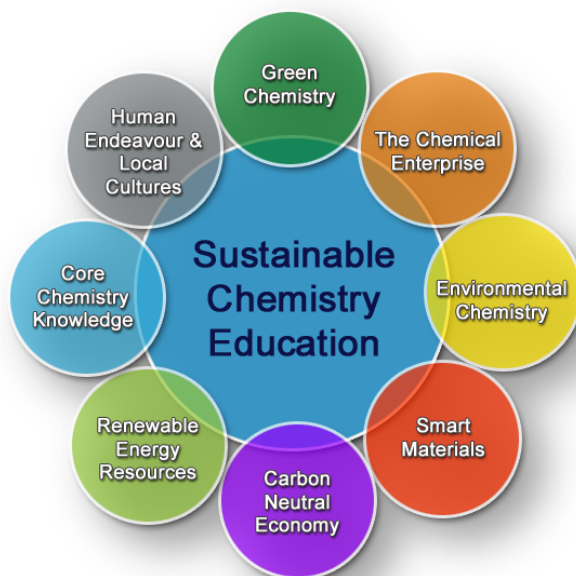
### **Explanation:**

In the world with continuously increasing population and limited resources. The idea of sustainable development is of major importance for the future. Only research and innovation will allow the development of economic and social networks that fulfill the requirement of sustainability. The future has to plan vision, creativity and fantasy including a brand new approach known as sustainability in Science and technique. Chemistry as the Science of matter and its transformation, plays a central role in the process. It is the bridge between physical and material life science. Scientists and engineers who invent, develop and optimize such processes play a key role there awareness, creativity and looking ahead needed to bring reaction chemical processes to maximum efficiency.

### **What can chemists do to promote sustainable development?**

Sustainable development is an inherently political issue. There are limits to what can be achieved at a global level, unless the limits to Governments give a firm lead by tackling difficult issues and, if necessary, providing the incentives to change people's behavior (Hazell *et al.*, 2000). For example, if approached in the right way, re-efficient processes using less material and producing less waste can often go hand in hand with economic growth and improve social well-being. However, this is not always the case and it may be unrealistic to expect commercial organizations to adopt the more sustainable practices unless the financial and other frameworks within which they operate make this advantageous to their

bottom line'. Individual chemists can still achieve a great deal within existing frameworks by the application of sound chemical science, common sense, and good management Figure1.



**Figure: Dimension of Sustainable Chemistry Education**

#### **The Way Forward for India Greene's:**

India is said to be endowed with an abundance of renewable energy resources. According to the India Energy Commission, there is a lack of technologies, a dearth of professionals and an absence of appropriate policies and regulations to stimulate the demand and attract investors. Under the Kyoto Protocol on climate change, developed countries can offset some of their emissions through renewable energy projects in the developing countries via the Clean Development Mechanism (CDM). It is estimated that projects under the CDM could (over the long-term) generate up to \$100 billion worth of funds for developing countries. Unfortunately, Indian share of such projects remains low. What would be a practical way forward? The short answer is "take small steps". Government agencies must lead by example. Professionals in the industry need to educate themselves and their clients and commit to introducing environmental sustainability in design and building. Just like rebranding India, the government needs to embark on environmental initiatives to develop a green consciousness amongst Indians. To actualize Vision 20:20:20, there is a need to develop green technologies that are relevant to the needs of the country. R&D is the needed catalyst for the historical milestone in scientific, technological, and economic advancement of any nation. There cannot be sustainable industrialization without research and development. Special research grants should be awarded to universities, research institutes, and polytechnics with specific projects geared towards green technology development. Some scholars should also be sent abroad to acquire more training in areas relevant to green technology development.

#### **Future Challenges and Opportunities for the Chemical Profession and the Science of Chemistry:**

The principles of green chemistry are also a substantial beginning for the chemical profession in trying to deal with the novel ethical context in which humanity has been placed by the unprecedented power afforded to it in the 20<sup>th</sup> century by science and technology (Jonas, 1984). Generally, green chemistry has major contributions to make to the quality of life, human welfare, and sustainable development. However, before green chemistry can contribute fully to these areas, it must be integrated into the discipline of chemistry, itself. This requirement presents a number of major challenges to the chemical profession. Chemists will need to integrate into pure chemistry the questions of why or why not a particular technology should be abandoned, improved, or adopted on environmental protection grounds. These questions must become as important in research and education and made as concrete as the ubiquitous questions associated with what comprises chemical technology and how it actually works. Nowadays, green chemistry has become a preference, in which chemistry that is not really "green" gets paraded as such before the scientific community and the world. Such fraud will inevitably bring the type of disenchantment and confusion that might simply discredit the field and would deny future generations the experience of the chemical dimension essential to a sustainable, technologically advanced civilization.

Certainly the largest sustainability issues, where chemists have so much to offer, will require new approaches that can only be built with long-term commitment. For example, finding an efficient way of converting solar to chemical energy is a large sustainability issue. The culture of present-day chemistry places too many short-term obstacles in the path of research problems of this type. But chemists must solve such problems to achieve sustainability. Thus, the culture must adapt to recognize that certain sustainability problems will require novel approaches with inherently longer incubation times. Chemists must learn how to better evaluate and sustain research programs, instead of rapid publication of incomplete research work. do offer reasonable promise of bringing within, the fullness of time, those critical advances that will genuinely promote the cause of sustainability. The very difficult issue of achieving a wholeness of scientific intelligence were more than the current specialized and professionalized expertise has paid due homage to. The science of chemistry cannot escape this growth and remain meaningful and important to humanity. Chemistry exerts an enormous influence on human action and is thus inextricably intertwined with the forces that guide human action, especially ethics and certain forms of passion. As such wholeness is achieved; the power of scientific objectivity will be more openly directed by the action orienting insights and passions that make us all human, such as our love of life and our desire to protect it. Such passions are neither vacuous nor disorienting. Rather, they are forces that are fully capable of directing chemists toward research that really matters to each and every human being living and to come. Finally Chemistry will have much more to offer by becoming more meaningful to humanity, increasing In attractiveness as a career choice, growing to be more worthy of support, spawning new large economic developments, and progressing to be more interesting and compelling if chemists work to define and follow their natural and unique role in achieving a virtuous civilization that sees broad validity within the community of living things for the claim to continuity of existence in an environment of natural genesis.

#### **Conclusion:**

With the ever-growing human population in India, environmental pollution, depletion in supply of non-renewable energy sources, high cost of living, and incessant power failures, the country needs an alternative energy source, more environmentally friendly products, and processes that are more reliable, safer, secure, and affordable. Research and development in green chemistry is the only key to an industrialized, technologically advanced, economically vibrant, less polluted, and a safer India. If India can provide leadership in this vital field, we shall play a dominant role in the future as far as power generation is concerned and our Vision 20:20:20 will be achieved, if not surpassed. Then, we would have secured not only ourselves, but the future generations.

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## **Higher Education in India: Issues and Opportunities**

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### **Abstract**

The post independence development path of the republic India turns out darksome. When we review the development of higher education, We can find multiple issues like unemployment, unplanned education growth, commercial market of education, lack of education budget, major divide in urban rural education path, unskilled teachers, uncalculated education policy. At this point, In global citizen context the higher education must be teach to every individual who will able to teach how to look at the new world problem and how to find solution. The educated citizen of India is backbone each and every development of India and the teacher is the asset which makes this asset. Because, Teachers are the producers of the scientist, Engineers administrators,Employers,Bussinessman and another Teachers also. Therefore quality assured teaching is must to compete in the globalization and which will produce innovative, intelligent,competant professionals. Hence, The historic Indian society needs futuristic, demanding globalized education. The current education system has major influence of British India and change is required. Looking these factors the education from the primary to the higher education and the technical education need improvement from the time to time to adopt the market demand. This change will result in to prosper society and finally into India as a super power in education.

**Key words:** Higher Education; issues; regulatory development ; quality; collaborative work; investment; globalization; manpower training ; opportunities in education sector

### **Introduction**

The expansion in the Indian higher education is phenomenal in Independent India. The Indian education has made scientists, Engineers and Scholars who are in the demand in the world. Now India in the top five nations in the Industry and technical capacity because of the significant amount of sources and technology provided by college education mainly in the software technology education. The methods of education also have to be appropriate, The four pillars of education, learning for the learn, learning to do, learning to be and learning to become in life. The student focused education and dynamic method of education will provide more employment opportunities. The Indian higher education should explain every individual, how to classify the information, how to tackle the problem from different views and how to explain himself/herself. Teachers are the trained manpower and asset for the nation. Because they produce new Engineers, scientists and administrators ,businessman and also new teachers. Therefore through quality assured program it has necessary to produce globalized ,competent,intellectaul to meet growing demand of liberalized world. Each and every education institution targets at shaping the citizen to play their roles in the society most effectively. Thereafter ,efforts are made to create vast system of higher technical education. Building upon the capacities and immense contribution to country building that the network of institution of education in the post independence. The nation has gone through second level of expansion and establishes centers of excellence in higher studies. It is strengthened two ends primary education and higher education and would meet objective inclusion and excellence in higher education

### **Indian Higher Education And Its Issues**

India has been diverse society which having multi-cultural,multi religion and multi linguistic society. Each state in India has different and unique identity. Dealing with this uniqueness in democratic country is needed challenge to the government. In the scenario of developed world competition entering into the field of higher technical education, quality assurance in education become mandatory. India have to consent in which field knowledge and skillset would be the important to prepare students for encounter the continue change. Students of India learning new skills which specific content will find to his interest that he is not prepared to face the life which he has to live for the next two decades because of knowledge not used and has become outdated .The coming few decades will be miracles in IoT,Artificial Intelligence ,cloud Technology, Edge technology and Space technology etc.The recent development in telecommunication technology have helped to cross barrier no time and distance which also made country border porous and the blue sky open for all. The methods of teaching through lectures will have supplemented with methods of self study and use of digital technology and personal consultation between teachers and students or Mentor and students and informative seminars are add-on to learning. In Engineering Indian Society, Knowledge gathering ,Knowledge exchange ,networking are most important in advancement of higher education. India need to change existing education system innovative and futurist in responding to the change in demand of the modern Indian society.

### **Indian Higher Education And Its Situation**

In higher education institutions, as student need to qualify senior secondary exam conducted by states or the central board of education. The complete higher education from the bachelors to doctoral degree in the field of Arts, Commerce and science is 3 years for bachelors, 2 years of master and two to three years for the doctoral respectively. As far the recent statistics, 35 percent are studying in the field of arts, 20 percent of the students in

the science and 18 percent in commerce stream and 27 percent of students in the field of Engineering. As per reports this good improvement in the field of technical education compared to the other developing nations. The Indian higher education system has gone through a large success after becoming a sovereign nation and emerged as significant in the developing world. As per the recent survey of Indian government, there are more than 260 lakhs of students getting their higher studies in around 800 universities. Also, there are 40,050 colleges out of them 1,900 colleges are specially for women. There are near about 11 state universities for women. There are approximately 11,700 single institutions. This is a large capacity for the fast development and scientific research in the country.

#### **International Collaborations**

Institutional collaboration by universities and business schools generate multiple advantages resulting in enhanced quality education. The result will be seen in the field of research and development, student exchange program, dual degree program and certification courses, training and placement thus finally it results into future employable generation. The partnerships help institutions develop into high quality intellectual hubs with innovation and research as focus. Collaborative research can be done by both faculty and students of institutions worldwide leading to a repository of knowledge. Most partner institutions support each other by involving industry projects at both home and host universities. Such projects help the fraternity understand the business models and strategies adopted besides being useful to the industry and business through consultancy and research. Institutional collaboration helps students become globally competent intellectual and thinkers. This shift is welcomed by the Indian enterprises as well with an increase in accessibility of students being trained in research design making and entrepreneurship, contributing to overall business development. The tie-ups impact the institutional rankings, increasing the quality of teaching and learning. With India moving towards international credit recognition to enable more international student mobility, there is an increased interest expressed by the international students travelling to study and get trained by partner institutions in India.

#### **Investment For Higher Education**

The new estimation result that the global average of the private rate of return of an additional year of schooling is about 9.2 per cent. This signifies the most long term asset. For future perspective it is good investment on nations citizen. It has shown in many surveys that returns in the developing nations to the developed world. The one more point is developing country focusing on the primary education and developed country mainly focused on the tertiary education. It is critical for the countries to learn this trend as it helps in policy formation. The output at each level of education gives information to policy makers about priorities to public fund investment. In the same manner the education and wage differentials give direction to the skill set that the growing world market gives importance and provide an idea about the required interventions. The requirement to identify appropriate avenues of investment in higher education have even more importance as students in global context deal with the effects of the pandemic on learning to schooling. The Indian government has taken several initiatives to ensure the benefit of the policy is availed by all the students. As an output of various initiatives including online application invite to school, online counseling and online enrollment of seats, setting of supernumerary quota seats in Engineering, Medical and Pharmacy large number of students are taking enrollment in professional courses and hence improving their employability in future.

#### **Ensuring The Quality Of Higher Education**

From past 70 years India made progressive work in primary education, the number of students in higher education is comparably less. The equal access of education to each and every sector of society like in gender, regional and socio-economic groups. There are many committees formed by government to review progress of higher education and suggest measures to improve the education quality. Considering the history of India education system, India's education system is world's third largest system, having a rich combination of government and private institutes with spread of 4000 colleges and near to 1000 universities. The higher education degree in India provided competitive education with global standard and also with 1/4 less than the cost of other countries hence it is value for money. India offers diverse education in each every stream and students earn internationally recognized degree. Students can select courses from traditional to recent world technologies like IoT, Space technology and cloud computing. For improving the quality to expand the education system the bureaucratic process should be clear.

#### **Conclusion**

The education is most important sector for any country and it has given more importance than defense sector in any country. There is a critical need of change in higher education sector not only in academic but also in pedagogy, and the attitude to the test and mark systems. Finding the solution in higher education and co-operation of international community collaboration more into this Indian universities must be compatible with new ICT era. There is no means to give information for the ICT era. The HRD ministry taking lots of initiative to adapt global standard for receiving skilled manpower. Expanding the concept of making India a global center for the higher education is need of the hour and systems procedure. The education system must attract foreign students to the Indian institutions. By a large there are lot of aspects for Indian higher education in the future years. The students of all sectors have lot of opportunity for modern education field. After independence there are many

institutions emerge in Higher education sector. In present scenario, There has been significant progress in recent years. The investment in Higher education increased in rapid pace and It will surely give bright and prosperous result in higher education sector of country..

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