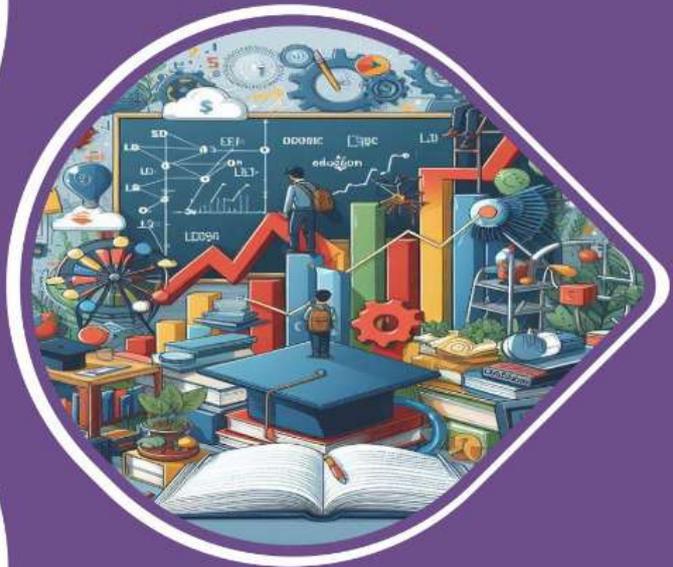


ISSN 2249-2089

Exploration

Indian Journal of Multidiscipline

Peer Reviewed
Biannual Research Journal
For Multidisciplinary Studies
in Arts, Commerce,
Management,
Social Sciences & Education



E-IJM

June 2025

Volume - VIII Issue - I

Shri Shivaji Education Society, Amravati's
Dhanwate National College

Congress Nagar, Nagpur

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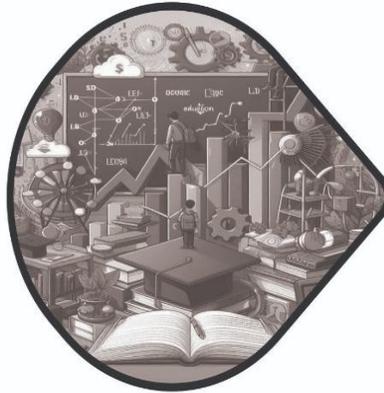
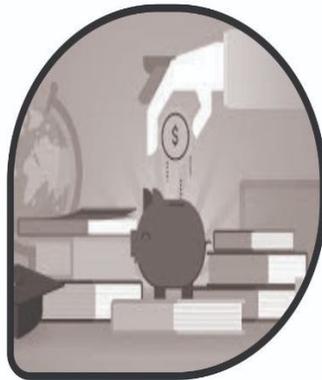
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ISSN 2249-2089

Exploration

Indian Journal of Multidiscipline

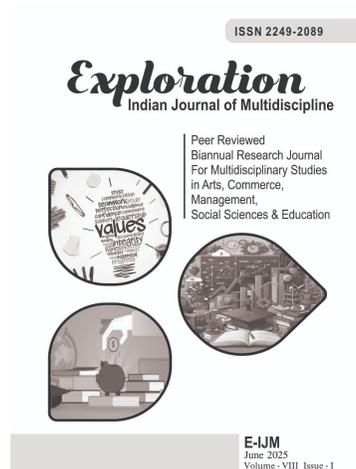
Peer Reviewed
Biannual Research Journal
For Multidisciplinary Studies
in Arts, Commerce,
Management,
Social Sciences & Education



E-IJM

June 2025

Volume - VIII Issue - I



FORM IV (See Rule 8)
Statement about ownership and other particulars about
the Journal Exploration

- | | | |
|-------------------------------|---|---|
| 1. Place of Publication | : | Dhanwate National College,
Congress Nagar, Nagpur - 440012 |
| 2. Periodicity of Publication | : | Biannual |
| 3. Printer's Name | : | Sunil Pawar
B/H Process Sabhagruha Indranagar,
Nagpur |
| Nationality | : | Indian |
| Address | : | Indra Pro Systems,
78, Ganeshnagar, Nagpur - 440009 |
| Cover Design | : | Prakash Tandulkar
Prakash Computer, Nagpur - |
| 4. Publisher's Name | : | Dr. Prashant P. Kothe, Principal |
| Nationality | : | Indian |
| Address | : | Dhanwate National College,
Congress Nagar, Nagpur - 440012 |
| 5. Editor's Name | : | Dr. Vaishali D. Malode
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| Address | : | Dhanwate National College,
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**MARATHWADA REGIONS RURAL ECONOMY IN THE ERA
OF GLOBALISATION: TRENDS, PATTERNS,
AND PROSPECTS****Dr. Syed Saleha Javed Abbas**

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Abstract:

The rural economy of Marathwada, a region historically known for its agricultural legacy and economic difficulty, is experiencing dramatic transformation in the context of globalization. This paper analyzes the dynamics, trends, and potential of the rural economy of Marathwada in the context of rapid technological creation and deepening market penetration. Although promising, the area has long been beset by poverty, inequity, and backwardness. This paper investigates the impact of globalization on the rural economy of Marathwada, namely the effect on agricultural production, employment and income inequality. The research defines not only the prospectively and retrospectively positive and negative effects of globalization, but also the opportunities and challenges it has brought in the region, such as new market availability, new consumption patterns and the need for stakeholders to address the region's structural shortcomings. Using trends, patterns, and possibilities of the rural economy of Marathwada area this study has the objective to inform evidence-based policy actions in aiming to leverage the advantages of globalization, while addressing its disadvantages, and to therefore contributing to sustainable and inclusive economic development in that area.

Key words: globalisation, impact, rural economy, agriculture.

Introduction:

The world is seeing fast changes in technology and market connections, and the rural economy of Marathwada is a good example of the many effects of globalisation. This area, known for its farming background and economic issues, has faced both chances and difficulties as national rules and international market changes alter its economic situation. This essay will look at the trends, patterns, and future of the rural economy in Marathwada, aiming to show how global forces affect local jobs and farming outputs. Using a qualitative research method that consists of chats with local farmers, observations of markets, and analysis of other data, this study will give detailed insights into the changing economic situation of the region. By looking at how traditional methods mix with modern

global economies, the study hopes to add to the wider conversation about rural development in a global setting.

A. Overview of Marathwada's rural economy:

The rural economy of Marathwada is marked by the link between farming methods and social-economic factors. Environmental issues like lack of water and poor soil have had a big impact on farm output and the ability of farmers to cope in the area. As globalisation progresses, the rural economy in Marathwada has shifted significantly, moving away from basic farming towards more market-focused methods. This change includes varying the types of crops grown, using technology, and applying better irrigation techniques to boost production. These trends are understood better when considering the growing focus on sustainable farming practices, as seen in the important discussions found in (Dr. Vilas V Patil et al.), which look at socio-economic effects on the environment and governance in rural areas. Moreover, (Dr P. Sarkate S H) highlights the need for rural economies to adapt to modern challenges while taking advantage of global opportunities. Therefore, the changing situation of Marathwada's rural economy reflects both issues and opportunities in a period full of changes.

B. Significance of studying the impact of globalization:

Rural economies have changed a lot because of globalization, so it is important to look into what this means. With competition growing and markets linking up more, rural areas see both chances and problems that change how people make a living. The farming situation in places like Marathwada shows this change, as old farming methods are pushed to the side. This is clear from the noticeable changes in farming practices, which are worsened by economic policies that disconnect farming from rural life. These changes lead to different social and economic results, where some communities gain while others face loss. Economic globalization and liberalization have caused farming to break away from its previous close connection to rural life.

"Economic globalization and liberalization led to a separation of agriculture from its earlier entwinement with rural existence. The growing complexity within rural society and agrarian structures, has reshaped traditional linkages along the axes of caste, communities, class and gender."

Indian Sociological Society:

Therefore, examining the effects of globalization helps to clarify these complicated relationships, guiding strategies for sustainable economic growth and fairness in the area.

Historical Context of Marathwada's Rural Economy:

The connection between past situations and current economic actions is important to understand how Marathwada's rural economy has changed. This area, which has faced strict land taxes and colonial rules, saw major changes in the late 19th century. For instance, the Deccan Riots from 1875 to 1877 were caused by high land taxes in the 1870s, which had to be paid in cash even when famines disrupted farm production.

“The high land taxes of the 1870s, payable in cash regardless of the effects of frequent famines on farm output or productivity, combined with colonial protection of usury, money lenders, and landowner rights, contributed to widespread penury and frustration among cotton and other farmers, ultimately leading to the Deccan Riots of 1875–1877.”

Wikipedia Contributors:

This economic pressure set the stage for ongoing rural poverty that still exists today. After independence, government efforts to improve farming often did not solve the longstanding inequalities, leading to changes from traditional farming to other economic activities. Nowadays, programmes aim to improve life in rural areas and encourage a shift towards horticulture, as shown by the announcement of government efforts to enhance quality of life in rural regions (Chatterjee et al.). Thus, Marathwada’s rural economy keeps changing in response to globalisation, showing its historical challenges and new possibilities.

A. Traditional agricultural practices and their evolution:

The change from traditional farming methods in Marathwada shows a complicated relationship between local customs and global economic demands. In the past, farming in this area depended on local techniques and crop choices that fit the specific environment, supporting both biodiversity and cultural significance. However, with new technologies, such as Bt cotton, there has been a need to rethink these methods. While Bt cotton was promoted to boost crop yield and farmer income, worries about its long-term effectiveness and sustainability have surfaced. Studies show that the ecological limits of some areas have caused unsatisfactory outcomes, indicating that (Gruere et al.) overlooks important socio-economic factors in linking farmer suicides directly to technological decisions. Moreover, the ongoing loss of agricultural land for industrial use has disrupted rural livelihoods, making it crucial to explore how these changes have affected relationships between the state and society, as well as agricultural stability in a neoliberal context (Chatterjee et al.). As global trends influence local economies, it is important to acknowledge and incorporate traditional farming methods as a key approach to building resilient rural communities.

B. Economic challenges faced prior to globalization:

Before globalization, the rural economy in the Marathwada area faced many economic problems that seriously affected its growth. Farmers relied on old farming methods, which made them sensitive to market changes, often causing heavy debts and sometimes tragic outcomes like suicides. This cycle of financial hardship worsened due to ongoing land loss, propelled by state-driven

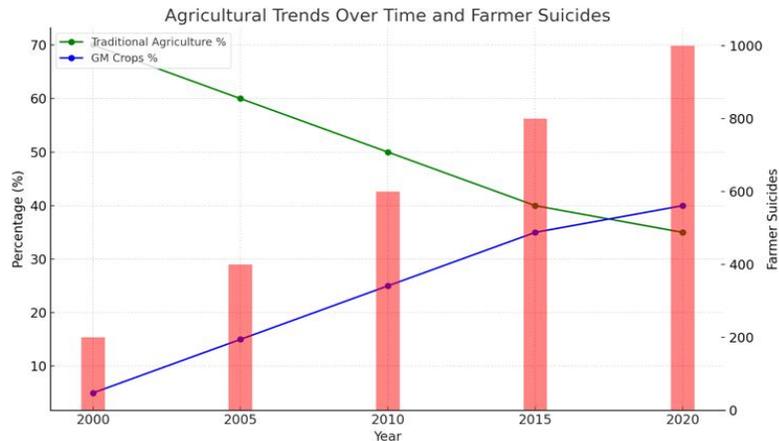
industrialisation efforts that aimed to convert farmland for non-farming uses, like factories and infrastructure. These policies led to the gradual breakdown of farming livelihoods and created a gap between local farmers and the fast-changing economic environment around them. As a result, the rural community not only lost a lot of land but also saw a fall in traditional knowledge that had supported their farming for many years. Tackling these historical economic issues is vital for grasping the patterns of rural recovery and strength amid globalization.

Year	Unemployment Rate (%)	Poverty Rate (%)	Agricultural Productivity (tons per hectare)	Literacy Rate (%)	Access to Clean Water (%)
1990	12.5	45	1.2	54	70
1995	15	48	1.5	60	72
2000	16.5	50	1.7	63	75
2005	18	52	1.9	66	78

Economic Challenges in Marathwada Region Before Globalisation:

Impact of Globalization on Agricultural Practices:

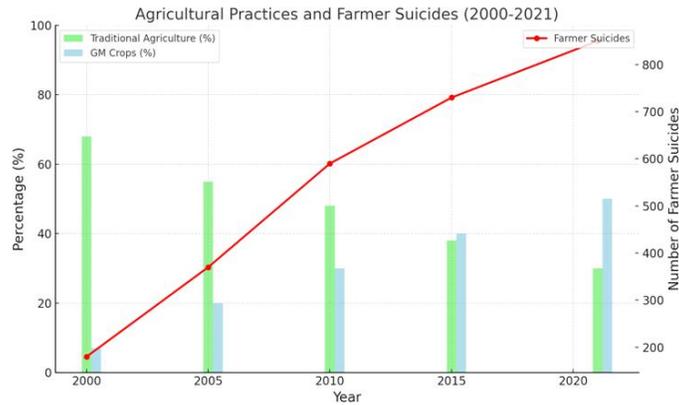
The effects of globalization on farming methods show both chances and problems for rural economies, especially in the Marathwada area. As global markets expand, farmers gain access to more inputs and export opportunities; however, this change often weakens traditional farming systems and local control. The introduction of genetically modified crops like Bt cotton highlights this complicated relationship. While promoted for improving yields and farmer earnings, Bt cotton has also been linked to an increase in farmer suicides, raising important concerns about the social and economic effects of such technologies. One analysis suggests that the structural changes in India's macro-economic policies that support privatization, liberalization, and globalization are behind the rise in farmer suicides. This illustrates how changing economic conditions can increase the vulnerability of rural communities. Moreover, the loss of land driven by neoliberal policies shows a major change where agricultural land is more often used for industrial purposes, disrupting traditional farming practices and reducing food sovereignty (Chatterjee et al.). Therefore, the connection between globalization and agriculture in Marathwada highlights a critical need for policies that balance economic growth with sustainable farming practices.



The chart illustrates agricultural trends over time alongside the incidence of farmer suicides from the year 2000 to 2020. It displays two lines representing the percentage of traditional agriculture and genetically modified (GM) crops, showing a decline in traditional agriculture and a rise in GM crops. In contrast, the bar graph indicates a significant increase in farmer suicides during the same period, highlighting a troubling trend in the agricultural sector.

A. Changes in crop patterns and diversification:

In Marathwada's rural economy, changes in crop types and the move towards more varied farming have been greatly affected by globalisation and evolving agricultural policies. As market demands change, farmers are finding they must change their farming methods, shifting from traditional food crops to those that are more profitable. This change is often connected to genetically modified crops like Bt cotton, which are said to increase yield and income but have also been linked to negative effects, such as farmer suicides in certain situations (Gruere et al.). Additionally, the reduction of helpful agricultural policies and public investment has made smallholder farmers more vulnerable, hindering their ability to diversify in a sustainable way (Ramachandran et al.). Therefore, while diversification offers chances for economic growth, it also highlights the complicated relationship between agricultural advancements, market access, and economic stability amid global challenges.



The chart displays the trends in agricultural practices and farmer suicides from 2000 to 2021. It includes the percentage of traditional agriculture and genetically modified (GM) crops over the years, alongside the increase in the number of farmer suicides. The data reveals a decline in traditional agriculture usage while GM crops have gained prevalence, which coincides with a troubling rise in farmer suicides during the same period.

B. Adoption of technology and modern farming techniques:

In Marathwada’s rural economy, traditional farming methods are being changed by new technologies and modern farming practices. This change has important effects on productivity and sustainability. The region faces difficulties from globalisation, including climate change and market ups and downs, making it important to use technology in farming. Technologies like precision farming, remote sensing, and bioengineering help farmers increase crop production while using resources wisely, which is necessary given the slow agricultural growth rate of 3.1% in recent reports (Jakkula et al.). Also, the displacement of farming communities, noted in talks about state-led development, shows a strong need for fair resource management and access to technology (Chatterjee et al.). This mix of innovation and social issues importantly influences the future of the Marathwada area as it tries to boost livelihoods and ensure food availability amid quick economic changes.

Socio-Economic Changes in Rural Communities:

In the last few years, the socio-economic situation in rural areas of the Marathwada region has changed a lot due to globalisation and state policies. The increase in farming methods, especially with the use of genetically modified crops like Bt cotton, has sparked important debates about how this affects farmers’ lives. While Bt cotton is praised for boosting production, it has also caused controversy, with some studies indicating that it might lead to increased farmer debts in some cases, resulting in tragic events like suicides.

It is clear that the state's failure or economic progress has not ensured a safe livelihood for the rural people. Additionally, the long history of land loss shows a bigger trend of state-led development that has often pushed rural communities to the side, weakening their economic stability and community bonds (Gruere et al.), (Chatterjee et al.). Therefore, the link between farming practices, state policies, and the socio-economic conditions of rural areas needs careful investigation to create comprehensive solutions for lasting growth in the Marathwada region.

A. Migration trends and labor market shifts:

The movement of people in the Marathwada area shows important changes in the job market, mirroring larger trends in the country. This issue is closely tied to the economic plans of rural communities, especially among lower caste and tribal groups who mainly use circular migration to improve their economic situation (Deshingkar P et al.). This movement not only helps reduce poverty but also plays a key role in the growth of the nation's economy, with some estimates indicating that circular migrants contribute around 10% to India's GDP (Akter et al.). Still, gaps in migration data and poor policy responses often worsen the problems these migrants face, particularly concerning their rights and work conditions. Furthermore, it is necessary to consider the complex mix of non-economic factors, like social and cultural issues, to fully understand how migration affects the rural economy. Therefore, as globalization changes local economies, it is important to comprehend these migration patterns to create focused policy measures that improve the living conditions for migrants in the Marathwada area.

B. Changes in income levels and living standards

In the changing situation of the rural economy in Marathwada, changes in income levels and living conditions have become important signs of wider economic patterns linked to globalisation. The people in rural areas, especially those working in agriculture, are experiencing a mixed story: while globalisation has opened up markets and options for earning, it has also led to ongoing risks due to regular migration. Evidence shows that circular migration is now a main way for economic progress, particularly for lower castes and tribes, adding about 10% to India's GDP (Deshingkar P et al.). Yet, the human issues that come with this migration, such as child labour and poor living conditions, highlight significant failings in policies that do not sufficiently cater to the needs of these migrants (Akter et al.). Grasping these difficulties is key to creating effective plans to improve livelihoods and living conditions in this area.

Year	Average Income	Poverty Rate	Literacy Rate	Household Access to Electricity
2018	25000	28	74	85
2019	27000	25	75	87
2020	29000	22	76	89
2021	31000	20	77	90
2022	33000	18	79	92
2023	35000	15	80	94

Changes in Income Levels and Living Standards in Marathwada Region

V. Conclusion:

The complex link between globalisation and the rural economy in Marathwada shows many problems and chances that have come up in recent times. The area is dealing with the effects of policy changes due to liberalisation, which have made problems like changes in land reforms and a decline in rural infrastructure more noticeable (Ramachandran et al.). These patterns reveal a mixed story where some agricultural advancements, especially Bt cotton, have been praised for their possible benefits but have also been associated with socio-economic hardships for farmers, worsening issues like debt and, sadly, farmer suicides (Gruere et al.). Therefore, while globalisation offers options for economic growth and diversification, it is crucial for policymakers to focus on a deeper understanding of rural issues to lessen negative impacts on vulnerable groups. The results from this study highlight the need for a combined approach, making sure that future plans include both agricultural efficiency and the socio-economic health of rural communities in Marathwada.

A. Summary of key findings and implications:

The study of Marathwada's rural economy regarding globalisation shows major effects on land use and farmer well-being. The findings suggest that ongoing government-led industrialisation has led to considerable land loss, changing the agricultural scene and promoting a 'non-farm' economy with little pushback from local communities (Chatterjee et al.). These changes are further complicated by the intricate choices of technology, especially with genetically-modified crops like Bt cotton, which, while boosting yields, have also unintentionally led to farmer hardship in certain areas (Gruere et al.). The main results highlight the need to comprehend local socio-economic conditions and the diverse reactions from rural groups as they deal with these transformations. In the end, the consequences reach beyond short-term economic results, indicating a pressing requirement for policies that take into account the complex connections between government actions, farming methods, and rural livelihoods in the changing context of Marathwada.

B. Future prospects for Marathwada's rural economy in a globalized context:

When looking at the future of Marathwada's rural economy, it is important to think about how globalisation affects local farming and socio-economic growth. Rural areas in Marathwada are becoming more connected to global value chains, bringing both chances and difficulties. The agriculture in the region might gain from access to international markets, but it also faces the challenges of global competition and changing market needs. Additionally, improving public health facilities, especially noted during the COVID-19 pandemic, can create a strong base for sustainable rural development, as shown in a health system review for Maharashtra (Mahapatra P et al.). There is also a pressing need to improve child development measures, as a healthy younger generation will strengthen long-term economic prospects (Creches M). Moving towards a varied economy, which includes new farming methods along with strong health and education systems, will be crucial for developing Marathwada's rural future in the context of global changes.

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A STUDY ON THE IMPACT OF GOVERNMENT SCHEMES ON RURAL DEVELOPMENT FOR GROWTH OF AN INDIAN ECONOMY

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Abstract:

The study of raising the economic prosperity and standard of living of individuals in rural and sparsely populated areas is often referred to as "rural development." Rural development has assumed global attention especially among the developing nations and it has great significance for a country like India. Rural development focuses on the growth of the sectors of rural economies that face severe poverty and successfully seeks to increase their productivity. Traditionally government initiatives to enhance rural communities have focused on eradicating extreme poverty, increasing access to long term support systems, and boosting local economies by introducing new types of paid and unpaid employment. It also emphasises the need to address various pressing issues of village economies that hinder growth and improve these areas. The Government of India has launched number of schemes for development of rural areas. The rural India facing the major problems of housing, absence of infrastructure in villages and towns to village connectivity by all-weather roads and absence of employment opportunities in villages. India's government has launched a number of initiatives designed to foster the development of a robust rural economy. Through productive asset creation, such as road construction, cleaning up of water tanks, soil and water conservation work, etc., government schemes provide an alternative source of livelihood that has the potential to reduce migration, restrict child labour, alleviate poverty, and make villages self-sustaining. As the topic suggests, rural development in India is the overall progress in the economic and social conditions of Indians residing in rural areas. It is not an objective but a constant process in itself. As a result, this process actively contributes to the economic growth of a rural region and the country as a whole. Conversely, the economic development in an area leads to rural development.

This paper is to study the Government of India has announced Pradhan Mantri Awaas Yojana Gramin (PMAY-G) scheme is to provide houses, Pradhan Mantri Gram Sadak Yojana (PMGSY) to build roads and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) to provide

employment to rural people and other schemes for the rural development of India.

Key Words: Rural Development, road length, houses, employment, Government schemes and Development Projects.

Introduction:

India's rural development is one of the key drivers of the country's economic expansion. Rural development focuses on the growth of the sectors of rural economies that face severe poverty and successfully seeks to increase their productivity. One of the most significant primary industries in rural India is agriculture, which employs around two-thirds of the country's workforce. The issue is that the sector's GDP share is steadily declining. India's rural development has seen numerous changes in focus, methods, plans, and projects over the years. In order to promote rural development in India, the government has planned a number of initiatives. For the creation of laws, rules, and policies relating to the growth of the rural sector in India, the Ministry of Rural Development is the highest authority. In an economy that is expanding like India's, the importance of rural infrastructure cannot be overstated. Rural infrastructure, both in terms of quantity and quality, would have a significant impact on both economic growth and the standard of living.

Roads, transportation, energy, telecommunications, housing, health, water, and sanitation are among the essential infrastructure investments that are necessary for the growth and well-being of people in rural areas. Rural infrastructure development can foster economic growth, raise the standard of living for the general population, and lower the rate of poverty by increasing farm and non-farm employment and earning opportunities, increasing productivity, facilitating access to essential goods and services, and improving people's physical and mental health. Numerous rural development initiatives are currently underway to address these specific concerns and offer opportunities to improve the quality of life for these rural residents. Having top-notch infrastructure to draw in private investors from nearby and beyond boosts a state's economic growth and employment creation. By increasing agricultural productivity, real incomes, and employment possibilities in both the agricultural and non-agricultural sectors, rural infrastructures have a multiplicative effect on reducing poverty.

Rural development programs aim to reduce poverty and unemployment rates while also assisting rural residents in obtaining the clothing, food, and housing they require. The Indian government has developed several programs through the Planning Commission of India to improve the lives of people living in rural areas. All of these strategies aim to equalize and accelerate development by assisting rural residents in catching up to their urban counterparts.

Literature review:

Review of literature makes an attempt to review the available literature related to MGNREGA in the form of books, volumes, dissertation, articles,

research papers etc. Review of literature is the primary base of any research work. It clarifies the basic concepts and helpful to plan future research work.

Objectives of the study:

The following are the objectives:-

- To understand the role of rural development schemes in India.
- To describe the different rural development schemes or programs.
- To examine the impact of rural development schemes in India.

Research Methodology:

The only source of data the researcher used was secondary. Secondary data gathered from journals, publications, published and unpublished papers, and the Indian government's schemes. An exploratory and descriptive research design shall be followed to carrying out this study to analyse the problems of Rural Development. The data will be collected with the help of secondary data collection techniques. Secondary data will be used in this research and is collected through published and unpublished sources which include the internet, magazines, journals, research publications and so on.

Need For The Study:

The rural India facing the major problems of housing, absence of infrastructure in villages and towns to village connectivity by all-weather roads and absence of employment opportunities in villages. The primary area of rural India is agriculture sector, even this sector also suffering in synchronizing urban with rural areas because of bad connectivity. In this connection, there is need to study the role of Government of India in providing pucca houses, roads and employment to rural people.

Scope Of The Study:

Many plans for the development of rural India have been introduced by the Indian government. These include agricultural growth, putting up of economic and social infrastructure, fair wages as also housing and house sites for the landless, village planning, public health, education and functional literacy, communication etc.

Rural Development Schemes in India:

Rural development aims to address the problems that rural areas often face, such as limited employment opportunities and restricted access to public services.

Pradhan Mantri Awas Yojana Gramin (PMGAY):

The Union Cabinet approved the extension to the scheme on 9th August, 2024 to construct additional 2 crore rural houses during FY 2024-25 to FY 2028-29 to meet the arising need of housing due to increase in number of families. The Government of India frequently introduces new schemes to support the underprivileged, and the Pradhan Mantri Awas Yojana Gramin (PMAY-G) is one such initiative. This scheme aims to provide housing for the poor and homeless across rural India. Beneficiaries listed in the Pradhan Mantri Awas Yojana Gramin list receive financial assistance to help them construct their

homes. This aid has significantly benefited the impoverished, enabling them to secure proper housing. Originally launched in 1985 as the Indira Awas Yojana (IAY), the scheme was later renamed Pradhan Mantri Awas Yojana Gramin (PMGAY) in 2015. PMAY-G is one of the flagship Programmes of the Government of India. It aims "Housing for All" by providing 2.95 Crore pucca houses with basic amenities to all houseless households and households living in kutchas and dilapidated houses in rural areas by 2024. Under PMAY-G, target of 19,79,219 houses has been allocated to the State of Assam against which 19,76,305 houses have been sanctioned & 16,94,020 houses have been completed which is more than 85% of the allocated targets. A total of Rs.21,962.15 crore has been released as Central Share to the State of Assam, against which the State has utilized Rs. 24,035.12 crore (including State Share released in 90:10 ratio).

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA):

The vision of Mahatma Gandhi NREGA is to enhance the livelihood security of rural households across the country by providing at least 100 days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work. Mahatma Gandhi NREGA prioritizes sustainable development and environmental stewardship, striving to create a greener, more sustainable future for generations to come by prioritizing works that contribute to ecological conservation and rural infrastructure development. Central to the scheme's vision is a commitment to transparency and accountability, ensuring that funds are utilized efficiently and beneficiaries' rights are upheld through mechanisms such as social audits, grievance redressal, and proactive public disclosure.

The scheme was introduced as a social measure that **guarantees "the right to work"**.

The Ministry of Rural Development monitors the entire implementation of this scheme in association with state governments. It is the Gram Sabha and the Gram Panchayat which approves the shelf of works under MGNREGA and fixes their priority. Social Audit of MGNREGA works is mandatory, which leads to accountability and transparency.

Under, Mahatma Gandhi NREGS, during the current financial year 2023-24 (as on 15.12.2023) an amount of Rs.1,715.86 crore has been released towards wage, material & administrative contingency to the State of Assam and a total number of 4.77 lakh works were completed in the State during the said period. Mahatma Gandhi NREGS is a demand driven scheme. Hence, no target is fixed under the scheme.

Deen Dayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM):

It is a centrally sponsored programme, launched by the Ministry of Rural Development in June 2011. To eliminate rural poverty through the promotion of

multiple livelihoods and improved access to financial services for the rural poor households across the country. Training on farm and non-Farm based livelihoods, on covid management and promotion of Agri-Nutri gardens.

Provision of Urban Amenities to Rural Areas (PURA) :

Concept developed by Dr. A.P.J. Abdul Kalam is the primary motivation for this plan. The scheme's stated goal is to "enhance the quality of life for rural people by offering livelihood possibilities and urban facilities via a Public Private Partnership framework for developing compact regions around a prospective growth centre in a Gram Panchayat." The program's primary goals are to improve access to transportation by building new roads, to information by developing a communications infrastructure, and to expertise by creating a new professional and technology institution.

Pradhan Mantri Gram Sadak Yojana (PMGSY):

To provide connectivity, by way of an all-weather road to unconnected habitations.

Unconnected habitations of designated population size (500+ in plain areas and 250+ in North-Eastern States, Himalayan States, Deserts and Tribal Areas as per 2001 census) in the core network for uplifting the socio-economic condition of the rural population.

Highest length of road has been completed under PMGSY in the comparable period over the last 3 years.

Saansad Adarsh Gram Yojana (SAGY):

It is a village development project launched by Government of India in October 2014, under which each Member of Parliament will take the responsibility of developing physical and institutional infrastructure in three villages by 2019. The Saansad Adarsh Gram Yojana (SAANJHI) was launched on 11th October, 2014.

The goal is to develop three Adarsh Grams by March 2019, of which one would be achieved by 2016. Thereafter, five such Adarsh Grams (one per year) will be selected and developed by 2024.

Integrated Child Development Scheme :

In 1975, India launched its Integrated Child Development Scheme. The major goal of the programme is to assist low-income families with basic needs such as food, education, and healthcare.

Atal Pension Yojana:

Through this programme, low-income seniors (those over the age of 60) get a monthly stipend. Individuals between the ages of 18 and 40 who are Indian nationals are eligible to participate in this plan, which primarily targets employees in the unorganised sector.

The National Social Assistance Programme (NSAP):

It is a welfare programme being administered by the Ministry of Rural Development. This programme is being implemented in rural areas as well as

urban areas. NSAP represents a significant step towards the fulfilment of the Directive Principles of State Policy enshrined in the Constitution of India which enjoin upon the State to undertake within its means a number of welfare measures. These are intended to secure for the citizens adequate means of livelihood, raise the standard of living, improve public health, provide free and compulsory education for children etc. In particular, Article 41 of the Constitution of India directs the State to provide public assistance to its citizens in case of unemployment, old age, sickness and disablement and in other cases of undeserved want within the limit of its economic capacity and development.

Mission Antyodaya:

It seeks to converge government interventions with Gram Panchayats as the basic unit for planning by following a saturation approach by pooling resources – human and financial – to ensure sustainable livelihoods.

Pradhan Mantri Gramodaya Yojana:

In order to improve people's living conditions and eradicate poverty, it has long been understood that providing them with access to basic infrastructure is crucial. Expansion of coverage and improvements in the indices of human development show that great strides have been achieved in recent years to increase access to basic health care, primary education, clean drinking water, and housing.

Swarna Jayanti Gram Swarajgar Yojana (SGSY):

The Self-Employment Promotion ('Swarna Jayanti Gram Swarajgar Yojana', or SGSY) Initiative was launched on April 1, 1999. The government of India implemented it to provide a secure source of income for the country's rural poor. Self-Help groups are formed as part of the SGSY so that locals may take advantage of chances for independent work in their communities. People's aptitudes and skills are taken into account while choosing jobs and activities for self-help organisations

Impact of Rural Development Schemes:

Rural development schemes can have a positive impact on the economic and social well-being of rural communities. Reducing poverty in rural regions, creating jobs, and eradicating hunger and malnutrition are all important objectives of rural development policies and programs since there is a strong association between a high human development index and a good standard of living. According to economic planners, the issue of rural development is not just to develop rural areas but also to build rural communities in order to combat poverty and illiteracy and aid in the process of creating modern, healthy communities that are self-sufficient. Rural development can no longer be defined solely by increases in GDP or even per capita national income. Although the government has prioritized rural development and is investing hundreds of crores through various programs, the issue is that not all of the funds allocated under these plans actually reach the intended recipients. Development has so

slowed to a crawl, and there has been little improvement for the impoverished. As part of rural development programs, productive assets such as roads, water tanks, soil and water conservation projects, etc., are created, allowing rural residents to make a living without leaving their homes. Reducing migration, limiting child labor, alleviating poverty, and increasing local self-sufficiency are all consequences of this. The Mahatma Gandhi National Rural Employment Guarantee Act, the Rastriya Sama, Vikas Yojana, the Indira Awas Yojana, the Sampoorna Grameen Rozgar Yojana, the Integrated Tribal Development Project, and the Pradhan Mantri Gram Sadak Yojana were all launched by the Government of India through the Planning Commission of India to improve rural people's conditions. All of these schemes aim to close the gap between rural and urban people, thereby reducing imbalances and speeding up the development process.

Conclusion :

Furthermore, India's decision to reduce its reliance on help has raised its stature internationally. "India has long since stopped relying on help. International development funding has taken the form of loans, whether it has come from the World Bank or from individual donor nations acting alone. Furthermore, India is currently a significant supplier of developmental assistance to other nations. Without a question, the government of India's key rural programs, such as MNREGA and PMGSY, have benefited rural areas. Since economic liberalization, the country's economy has been growing consistently, making it possible to provide funding from the budget for these initiatives. In India, up to 70% of people reside in rural areas. Everyone deserves the same excellent quality of life that people in more urban and suburban areas enjoy, including those who live in rural areas. Furthermore, poverty, unemployment, and inadequate infrastructure in rural areas are the root causes of underlying socioeconomic disputes, which appear as economic hardship and urban poor. Instead of using a number of middlemen, the government will be able to pay the recipient directly using this new approach. For the poor to get aid from various programmes and for there to be no blunders in the selection process, it is essential that the public have a voice in who receives assistance. In order to increase the number of people who benefit from rural development programmes, it is necessary to launch a public education campaign.

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**THE COST OF CONNECTIVITY : HOW TRANSNATIONAL
TRADE, CONSUMPTION PATTERNS, AND CAPITALISM
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Abstract:

This paper uses a broad sociological perspective to critically analyze the complex and multidimensional link between local economies and globalization. It uses a variety of theoretical frameworks to investigate how globalization alters regional industries, customs, and employment patterns, such as World-Systems Theory, Dependency Theory, Cultural Globalization, Neoliberalism, Marxist analysis, Postmodern Critique, Structural Functionalism, and Actor-Network Theory. By including various viewpoints, the research explores the ways in which local socio-economic structures are impacted and changed by global dynamics, frequently creating both opportunities and difficulties. Using a qualitative approach, the study draws on secondary data from government publications, NGO results, and scholarly literature. It also includes comparative case studies of food delivery platforms, the global fashion business, and Blinkit. These case studies demonstrate the dual character of globalization: as a force for economic expansion, technical advancement, and international integration, and as a force for social justice, local cultures, and traditional means of subsistence. The analysis highlights the complex linkages between local and global processes, demonstrating how these interactions either exacerbate or lessen structural injustices and power disparities. By critically analyzing these procedures, the study advances our knowledge of the socioeconomic effects of globalization and offers practical advice for developing inclusive, equitable, and sustainable globalization strategies that put local communities' welfare first while resolving the inherent conflicts between local autonomy and global integration.

Keywords: Globalization, Local Economy, Neoliberalism, World-Systems Theory, Dependency Theory, Cultural Globalization, Actor-Network Theory, Sustainability.

Introduction:

A quiet revolution is simmering in India's busy marketplaces, where the aroma of spices blends with the sound of digital payment alerts. The gig worker

racing to deliver a Blinkit order, the seamstress stitching clothes for global fashion giants, and the farmer selling organic turmeric to buyers worldwide via an e-commerce platform—all of them are at the intersection of local economies and globalization. This crossroads is a story of change, conflict, and survival rather than just economics.

A force that cuts across boundaries and promises prosperity, globalization is frequently heralded as the great equalizer. Every tale of invention and advancement, however, is accompanied by another of unfairness and exploitation. What does it mean when a local economy is caught up in the global dynamics at play? Do larger systemic cracks hide under the promises of interconnected markets, or are they a benefit? As we explore these issues, this essay delves into the duality of globalization—its capacity to empower while also exploiting; to unite while dividing. Here, the lived realities of local food entrepreneurs, rapid fashion workers, and Blinkit delivery riders collide with theoretical discoveries. The story is about people caught in the waves of a world that is becoming more interconnected, not just about statistics. This article investigates whether globalization can resolve its inherent conflicts to provide a more equal future—or if its benefits continue to be an illusive mirage for the majority—through critical analysis and comparative case studies.

Methodology:

The methodology stresses the selection of high-quality, credible content to ensure a balanced and in-depth exploration of the effects of globalization. This study uses a qualitative approach based on secondary data analysis, with particular case studies, such as Blinkit, the fashion industry, and food delivery platforms, to ground theoretical insights in real-world scenarios. The sources include government reports (e.g., NITI Aayog), NGO publications (e.g., Clean Clothes Campaign), academic papers, and industry reports (e.g., Nasscom). A comparative analysis framework contrasts the Indian context with international examples, providing a broader perspective.

Theoretical Framework:

1. World-Systems Theory

According to their functions in the global economy, countries are categorized as core, semi-peripheral, or peripheral under Immanuel Wallerstein's World-Systems Theory. *"Globalization is not a neutral process; it consolidates the dominance of core economies over semi-peripheral and peripheral ones."* (Wallerstein, 1974). Peripheral nations supply inexpensive labor and raw commodities, while core nations control capital and technology. India and other semi-peripheral countries hold a middle ground, relying on core countries while enjoying some technological advancements (Wallerstein, 1974).

Relevance: India's IT sector typifies this paradigm, since companies like Infosys rely on outsourcing contracts from core economies like the US and UK. However, the dearth of innovation inside India's tech sector underscores its semi-peripheral status. In contrast to core economies such as the US (2.83%),

India spends less than 0.7% of its GDP on research and development, despite exporting \$194 billion worth of IT services annually (Nasscom, 2023; World Bank, 2023).

2. Dependency Theory :

"The development of underdevelopment is a direct consequence of exploitative global systems." (Dos Santos, 1970). Dependency Theory by Theotonio Dos Santos contends that exploitation by industrialized countries is the cause of economic underdevelopment. Dependency is maintained when peripheral and semi-peripheral nations are incorporated into international trade networks in ways that put the interests of core nations first (Dos Santos, 1970).

Relevance: Dependency is exemplified by the Indian apparel sector. Despite making a substantial contribution to global supply chains for clothing, the business is plagued by low pay, abusive working conditions, and little value addition. India is the world's second-largest exporter of textiles, yet its garment workers only make an average of \$120 a month, which is far less than the living wage (Clean Clothes Campaign, 2021).

3. Cultural Globalization and Glocalization:

According to Robertson (1995), *"glocalization turns globalization into a more localized, adaptive process."* Glocalization is the adaptation of cultural products to local circumstances, whereas cultural globalization is the spread of cultural products beyond national boundaries (Robertson, 1995).

Relevance: In India, international food chains such as McDonald's have effectively glocalized their products. Seventy percent of McDonald's sales in India are of the McAlooTikki, a vegetarian burger designed to appeal to Indian palates.

Global Comparison: McDonald's uses a similar glocalization technique in Japan with their Teriyaki burgers.

4. Neoliberalism :

Neoliberalism, according to David Harvey, is the advocacy of deregulation, privatization, and free-market principles, frequently at the price of public welfare and labor rights. *"Every element of life, from labor to natural resources, is commodified by neoliberalism."* (Harvey, 2005).

Relevance: Neoliberalism fosters the gig economy. Workers are left vulnerable by platforms such as Blinkit, which offer flexible employment but lack fundamental rights. Ninety percent of gig workers in India make less than the ¹ 11,000 (\$133) minimum wage per month, underscoring the exploitative nature of neoliberalism (Indian Express, 2023).

5. Marxist Perspective :

"Class struggles are the history of every society that has existed up to this point." (Marx & Engels, 1848). Karl Marx argues that globalization has exacerbated the commercialization of work and that capitalism is fundamentally exploitative.

Relevance: Marxist criticisms of the fast fashion industry are reflected in the terrible working conditions faced by Indian textile workers who create

apparel for international companies. Women make about 85% of India's garment workforce, and they frequently work 12-hour shifts for less than \$3 per day (Oxfam India, 2022).

6. Postmodern Critique :

"A skepticism toward grand narratives is a hallmark of the postmodern condition." (Lyotard, 1984). Globalization is criticized by Jean-François Lyotard's postmodernism as a disjointed process that threatens established identities and systems.

Relevance: Postmodern changes in employment are reflected in the rise of social media influencers. Instagram and other platforms empower people, but they also support consumerism and unstable revenue sources. For example: Over 50% of influencers made less than \$500 per month in 2023, despite India's creator economy growing to \$120 million (Pew Research Center, 2023).

7. Structural Functionalism :

"Every system serves a purpose, and economies are integrated into a unified whole by globalization." (Parsons, 1951). Globalization is seen by structural functionalism as an integrated system that generates interdependencies.

Relevance: By integrating into international supply chains to offer outsourced services, India's IT industry is a prime example of structural functionalism. 4.5 million people are employed in this sector, which also accounts for 8% of India's GDP (Nasscom, 2023).

8. Actor-Network Theory (ANT):

ANT emphasizes how networks and technology shape local-global interactions. *"Technology is a mediator that reshapes social and economic relations, not just a tool."* (Latour, 2005).

Relevance: Local retailers are empowered by e-commerce sites such as Amazon and Flipkart, while control is centralized within large organizations. In India, Amazon has 1.2 million merchants, yet the top 10% of vendors account for 70% of sales (IBEF, 2023).

Content Analysis of Case Studies:

1. Blinkit and the Gig Economy :

In India, Blinkit has more than 100,000 gig workers. Nonetheless, 76% of respondents express discontent with their jobs because of inconsistent pay and a lack of benefits (Indian Express, 2023). Uber's worldwide operations show similar trends, with 74% of drivers not having health insurance (Forbes, 2023).

2. Indian Fashion Industry:

Fast fashion provides 10% of global carbon emissions, with India's textile industries being big pollutants (UNEP, 2023). Italy's premium fashion business, stressing sustainability, presents a counterexample, generating \$65 billion annually with ethical standards.

3. Food Delivery Platforms :

In 2023, the Indian meal delivery market expanded by 30% and reached a valuation of \$5 billion. But according to Kantar (2023), only 12% of gig workers

make more than ¹ 15,000 (\$181) a month. Despite providing convenience, websites such as Swiggy are criticized for their excessive packaging, which results in the production of 22,000 tons of plastic each year (Greenpeace India, 2023).

Discussion and Critical Analysis:

The relationship between globalization and local economies is both transformative and controversial; while it has spurred innovation and economic integration, it has also exacerbated socioeconomic inequality and environmental problems. The theoretical frameworks discussed above offer important perspectives for analyzing the dual character of globalization's effects on local economies.

1. Economic Integration versus Exploitation :

Unprecedented economic integration has been made possible by globalization, opening doors for emerging countries like India to engage in international trade. For example, India's IT industry, which employs 4.5 million people and contributes 8% of the country's GDP, is a prime example of the advantages of globalization (Nasscom, 2023). But there is frequently a price for this integration. Dependency Theory emphasizes how countries like India, which lack substantial technology or intellectual capital but provide core economies with inexpensive labor and services, continue to be positioned lower in the global economic hierarchy. With an export value of \$44 billion, the apparel industry continues to be a clear illustration of this reliance, with workers subjected to exploitative conditions and little opportunity for value addition (Clean Clothes Campaign, 2021).

2. Cultural Erosion and Glocalization :

Indigenous customs are frequently being undermined as a result of the uniformity of consumer tastes and lifestyles brought about by cultural globalization. But the idea of glocalization provides a counterpoint. The popularity of the McAlooTikki in India, which makes up 70% of the brand's sales there, is evidence that multinational companies like McDonald's have effectively tailored their goods to local tastes. In a similar vein, regional craftspeople have preserved traditional crafts while participating in contemporary commerce by using online marketplaces such as Amazon. However, as Actor-Network Theory reminds us, these platforms marginalize smaller participants who lack digital literacy or negotiating leverage by consolidating power inside global networks.

3. Environmental Consequences:

Globalization's effects on the environment are especially concerning. Unsustainable globalization is best shown by the fast fashion sector, which contributes significantly to global carbon emissions. Meeting worldwide demand for textiles places a significant environmental burden on India, a major player in the industry. The industry is a major contributor to water scarcity, using more than 79 billion liters of water a year (UNEP, 2023). In contrast, the luxury fashion sector in Italy provides a different paradigm by emphasizing

ecological and ethical manufacture. This disparity shows how international industries can embrace more environmentally friendly methods without sacrificing economic expansion.

4. *The Precarity of Postmodern Jobs :*

Postmodern critiques of globalization shed light on the emergence of precarious job forms, such as gig work. Platforms like Blinkit and Swiggy have transformed service delivery but at the expense of worker welfare. 90% of gig workers make less than the minimum wage, according to statistics, while 76% of Blinkit employees report receiving inconsistent pay (Indian Express, 2023). These numbers highlight how neoliberal globalization, which puts market efficiency ahead of labor rights, is inherently contradictory. Similar tendencies are seen globally, with Uber drivers in the US experiencing job insecurity and a lack of health insurance (Forbes, 2023). This instability calls into question globalization's claims to be a sign of just economic growth.

5. *The Paradox of Progress:*

The ability of globalization to both empower and exploit is what makes it paradoxical. Although it has opened up new possibilities and democratized access to technology, it has also strengthened existing disparities. Marxist criticisms are especially pertinent in this context, emphasizing how globalization has made capitalism's commodification of labor and resources worse. However, Structural Functionalism presents a more positive outlook, highlighting how globalization contributes to the development of interdependencies that promote stability and collaboration. To guarantee that globalization becomes a force for equitable and sustainable development, it is necessary to reconcile these conflicting facts.

Conclusion:

Since trade, technology, and cultural interchange are intertwined, globalization has become a disruptive and divisive force that is changing local economies. Theoretical frameworks such as Actor-Network Theory and World-Systems Theory are examined, and they emphasize the opportunities and structural injustices that globalization brings about. The fast fashion industry, food delivery services, and Blinkit case studies highlight the contradictory aspects of globalization: while it fosters innovation, economic expansion, and cultural adaptability, it also sustains environmental damage, labor exploitation, and socioeconomic inequality. A sophisticated grasp of the effects of globalization on many industries and communities is necessary to resolve this paradox of progress.

To negotiate this complexity, policymakers, corporations, and communities must work jointly to exploit the benefits of globalization while addressing its difficulties. Governments must adopt labor rights, ensure environmental sustainability, and encourage equitable trade practices. Companies must embrace sustainable and moral business practices that strike a balance between

social effect and profitability since they are the forces behind globalization. At the same time, disparities can be lessened by strengthening local economies through funding, capacity building, and technology access. In the end, human agency and the decisions societies make to give inclusivity, sustainability, and equity top priority in a world growing more interconnected will determine how globalization develops.

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FINANCIAL INCLUSION AND THE DIGITAL ECONOMY IN INDIA

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Abstract:

The interplay between financial inclusion and the digital economy has transformed India's economic landscape, bridging gaps in accessibility and fostering economic growth. This paper explores the pivotal role digital financial services play in enhancing financial inclusion. It examines the policy framework, challenges, and emerging trends in India's journey toward a digitally empowered and financially inclusive economy. The study underscores the critical need for innovative strategies, robust digital infrastructure, and regulatory frameworks to ensure inclusive growth. Financial inclusion refers to the process of ensuring that all individuals and businesses have access to affordable financial products and services, including savings, credit, insurance, and payments. In India, financial inclusion has gained significant momentum due to government initiatives, technological advancements, and strategic partnerships aimed at bringing underserved populations into the formal financial system.

The digital economy has played a pivotal role in advancing financial inclusion in India by leveraging mobile technology, internet access, and digital platforms to bridge gaps in traditional financial services. Initiatives like the Jan Dhan Yojana, Aadhaar integration, and the widespread use of Unified Payments Interface (UPI) have helped millions of individuals-especially in rural and semi-urban areas-gain access to banking services and financial products.

This abstract explores the impact of digital finance on financial inclusion in India, highlighting key government policies, technological innovations, and their effect on economic empowerment, poverty alleviation, and inclusive growth. It also examines the challenges and barriers that persist, such as digital literacy, cyber security risks, and limited infrastructure, and discusses future prospects for achieving deeper financial integration across the country. Through this analysis, the paper underscores the significant strides made by India in promoting financial inclusion through digital means and the role it plays in shaping the country's economic landscape.

Keywords: Financial Inclusion, Digital Economy, Economic Empowerment, Rural Development, Digital Payment Systems, Financial Literacy, Socio-Economic Impact

Introduction:

Financial inclusion, defined as the availability and accessibility of financial services to all segments of society, has become a cornerstone of India's economic agenda. The advent of the digital economy, characterized by the integration of digital technologies in economic activities, has been a game-changer in achieving financial inclusion. India's digital revolution, propelled by government initiatives like Digital India, Pradhan Mantri Jan Dhan Yojana (PMJDY), and Aadhaar, has significantly reshaped the financial ecosystem. In recent years, India has witnessed significant strides in enhancing financial inclusion, driven largely by the rapid growth of the digital economy. Financial inclusion refers to the process of ensuring access to financial services—such as banking, credit, insurance, and savings—at affordable costs to all sections of society, particularly the marginalized and underprivileged groups. The digital economy, characterized by the increased use of digital platforms, mobile technology, and the internet, has played a pivotal role in bridging the gap between formal financial systems and underserved populations.

India, with its vast and diverse population, has faced persistent challenges in achieving comprehensive financial inclusion. Historically, large segments of the population, especially those living in rural and semi-urban areas, lacked access to formal financial institutions. However, the advent of digital technologies, including mobile banking, payment gateways, and internet penetration, has revolutionized the financial landscape in India. Through initiatives like the Jan Dhan Yojana, Aadhaar-linked bank accounts, and the proliferation of mobile wallets, millions of people have been brought into the formal financial system.

The integration of digital technology with financial services has not only expanded access but has also enhanced financial literacy and promoted savings, credit usage, and wealth creation. Furthermore, digital payments have played a critical role in fostering financial inclusion, enabling seamless transactions and reducing dependency on cash. As the digital economy continues to evolve, it has the potential to accelerate economic growth, create jobs, and uplift millions of people by ensuring that everyone has access to basic financial products and services.

This research paper aims to explore the relationship between financial inclusion and the digital economy in India, examining the impact of digital interventions on increasing access to financial services, promoting economic empowerment, and reducing poverty. By analyzing key government initiatives, technological advancements, and their socio-economic outcomes, this study seeks to understand how digital financial tools have facilitated greater inclusion in India and identify the challenges that remain in achieving complete financial integration for all citizens.

Objective:

The primary objective of this study is to analyze the relationship between financial inclusion and the digital economy in India. It aims to examine how the adoption of digital financial services influences access to financial products, economic empowerment, and overall financial inclusion across different socio-economic groups in India.

Hypothesis:

1. Increased access to digital financial services positively impacts financial inclusion in India.
2. The digital economy significantly enhances economic empowerment among underbanked and marginalized populations in India.
3. There is a significant correlation between the growth of digital financial services and the reduction in the financial inclusion gap in rural and urban areas of India.

Methodology:

The methodology for studying financial inclusion and the digital economy in India using secondary data will involve analyzing existing reports, government datasets, financial inclusion indices, and digital payment statistics. Data will be collected from trusted sources such as RBI publications, Census data, and Ministry of Finance reports. The study will examine historical trends, assess digital financial service adoption, and evaluate financial inclusion gaps across different regions. Statistical tools like regression analysis will be used to identify correlations between digital economy growth and financial inclusion. The findings will be compared across rural, semi-urban, and urban areas to highlight regional disparities.

Financial Inclusion: An Overview:

Financial inclusion involves:

- **Accessibility:** Ensuring that financial services are accessible to all, particularly the underserved and marginalized populations.
- **Affordability:** Providing financial services at costs affordable to the general public.
- **Usability:** Designing financial products that meet the needs of diverse user groups.

India's financial inclusion strategy has traditionally focused on expanding banking services, promoting savings, and enabling credit access. However, gaps remain, particularly in rural and remote areas.

The Digital Economy and Financial Inclusion:

Digital Economy in India India's digital economy encompasses:

- E-commerce platforms
- Digital payments
- Fintech innovations
- Smart infrastructure initiatives

The proliferation of mobile connectivity and internet penetration has been instrumental in shaping this ecosystem. Digital wallets, Unified Payments Interface (UPI), and digital lending platforms have redefined financial service delivery.

Bridging the Gap The digital economy has significantly contributed to financial inclusion by:

- Enabling access to financial services in remote areas through mobile banking.
- Reducing transaction costs and increasing efficiency.
- Enhancing transparency and reducing corruption.

Government Initiatives and Policies:

Several policies have catalyzed the convergence of financial inclusion and the digital economy:

- **Pradhan Mantri Jan Dhan Yojana (PMJDY):** Providing universal access to banking services.
- **Aadhaar-Enabled Payment System (AePS):** Leveraging biometric authentication for secure transactions.
- **Unified Payments Interface (UPI):** Facilitating real-time payments.
- **Digital India Programme:** Building digital infrastructure and literacy.

Challenges in Achieving Financial Inclusion:

Despite advancements, several challenges persist:

- **Digital Divide:** Limited access to digital infrastructure in rural areas.
- **Financial Literacy:** Lack of awareness about digital financial services.
- **Cybersecurity Risks:** Vulnerabilities in digital payment systems.
- **Regulatory Hurdles:** Need for streamlined policies and oversight.

Emerging Trends and Future Prospects:

Fintech Innovations Startups in the fintech space are driving inclusion through micro-lending, AI-driven credit assessments, and blockchain-based solutions.

AI and Big Data Advanced analytics enable tailored financial products, improving user experience and accessibility.

Green Finance The integration of digital financial tools with sustainable development goals is an emerging area.

Recommendations

- Strengthening digital infrastructure in underserved regions.
- Enhancing financial literacy programs to build trust in digital systems.
- Implementing robust data protection laws.
- Encouraging public-private partnerships to foster innovation.

Conclusion:

The fusion of financial inclusion and the digital economy holds immense potential for socio-economic transformation in India. By addressing existing challenges and leveraging technological advancements, India can pave the way for inclusive and sustainable growth.

The study of financial inclusion and the digital economy in India reveals significant progress in leveraging digital financial services to expand access to financial products across diverse socio-economic groups. The rapid adoption of digital technologies has played a crucial role in bridging the financial gap, especially in rural and underserved areas. However, challenges such as digital literacy, infrastructure gaps, and access to affordable devices continue to impede widespread financial inclusion.

The research highlights that while digital financial solutions have the potential to drive greater economic empowerment and financial access, sustained efforts from both the government and private sectors are essential. There needs to be targeted initiatives aimed at improving digital literacy, ensuring cybersecurity, and building robust financial ecosystems that cater to the unique needs of different regions.

Overall, the digital economy in India holds immense promise for advancing financial inclusion, but achieving sustainable impact requires a balanced approach that combines technological innovation with socio-economic inclusivity. Continued collaboration between stakeholders will be key in fostering a financially inclusive society that leverages the full potential of digital financial services.

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TRADITIONAL INDIAN ETHICAL PHILOSOPHIES AND THEIR RELEVANCE IN CONTEMPORARY MANAGEMENT EDUCATION

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Abstract:

Ethics has always been a core component of Indian philosophical thought, rooted deeply in texts like the Vedas, Upanishads, Bhagavad Gita, Arthashastra, and Buddhist scriptures such as the Dhammapada and the Jataka Tales. These ancient scriptures offer profound insights into human behavior, governance, leadership, and moral responsibility. In the current era of globalization and rapid industrial growth, management education is grappling with ethical challenges that traditional Western paradigms often fail to address holistically. This research explores how traditional Indian ethical philosophies can contribute to the evolution of contemporary management education by fostering value-based leadership, sustainable decision-making, and holistic development. The study examines core Indian ethical concepts such as Dharma (duty), Karma (action and consequence), Satya (truth), Ahimsa (non-violence), and Buddhist notions of mindfulness, compassion, and the Eightfold Path, and evaluates their integration into modern commerce and management curricula. Through a qualitative analysis of existing literature, academic programs, and case studies, the paper proposes a framework to embed these values into current educational practices, aiming to produce ethically conscious business leaders.

Keywords: Indian philosophy, management education, ethics, Dharma, Bhagavad Gita, value-based leadership, holistic education, sustainability, Buddhist ethics, mindfulness, ethical decision-making.

Objectives of the Study:

1. To explore the core ethical teachings of traditional Indian philosophical texts like the Bhagavad Gita, Upanishads, Arthashastra, and Buddhist scriptures.
2. To examine the ethical challenges currently faced by contemporary management education.
3. To assess the applicability and relevance of Indian ethical concepts such as Dharma, Karma, Satya, Ahimsa, and Buddhist values like Right Action and Right Livelihood in present-day management curricula.
4. To analyze how Indian institutions are integrating traditional values into business and management education.

5. To propose a structured framework for incorporating traditional Indian ethical philosophies into modern management education for developing value-based leadership.
6. To examine the global relevance and potential of Indian ethical principles in developing cross-cultural management ethics.
7. To evaluate the influence of spiritual values on leadership decision-making and ethical organizational cultures.
8. To analyze empirical evidence and case studies where Indian and Buddhist ethics have positively impacted corporate behavior and business strategies.

Introduction :

In recent decades, the scope of management education has widened to accommodate a more holistic view of leadership, sustainability, and ethical conduct. While technical knowledge and skills are indispensable, the increasing complexity of global business dynamics has underscored the need for ethical integrity and social responsibility among business leaders. Traditionally, management education has largely drawn from Western models, emphasizing profitability, efficiency, and shareholder value. However, these frameworks often overlook the cultural, spiritual, and moral contexts that shape leadership and organizational behavior in non-Western societies.

India, with its rich philosophical traditions spanning over millennia, offers a profound and nuanced ethical system rooted in texts like the Vedas, Upanishads, Bhagavad Gita, Arthashastra, Manusmriti, and Buddhist scriptures such as the Dhammapada and the Jataka Tales. These sources provide not only moral guidelines but also frameworks for leadership, governance, conflict resolution, and personal development. Concepts like Dharma (righteous duty), Karma (ethical causation), Ahimsa (non-violence), and Satya (truth) resonate deeply with universal values and offer relevance to modern management theory and practice.

Indian Philosophical Roots of Ethics :

Traditional Indian ethical thought is inherently spiritual and integrative. Unlike compartmentalized Western ethics, Indian philosophies view ethics as intertwined with spiritual development and self-realization. The idea of Dharma, for example, transcends religious prescriptions and encapsulates duties in personal, professional, and social domains. Dharma is discussed across several ancient scriptures such as the Rig Veda, which emphasizes harmony, truth, and cosmic order, and the Manusmriti, which codifies moral obligations based on one's stage in life and societal role.

The Bhagavad Gita, a dialogue between Krishna and Arjuna, emphasizes *Nishkama Karma* (selfless action) and *Svadharm*a (one's own duty) as essential elements of ethical leadership. It calls for action aligned with righteousness, not personal gain. In the Upanishads, the concept of *Rta* (cosmic order) underpins

the idea of truth and ethical living. The Isha Upanishad, for instance, suggests that the world is to be enjoyed through renunciation, highlighting a value-based approach to life.

Kautilya's Arthashastra presents a realist yet moral framework for governance and administration, where a king is to act as a servant of Dharma and the well-being of his people. Leadership, in this view, is service-oriented and aligned with higher ethical objectives. Patanjali's Yoga Sutras further add to this ethical discourse by highlighting Yamas (restraints) and Niyamas (observances) like Satya (truth), Ahimsa (non-violence), and Aparigraha (non-possession), which directly translate into ethical leadership qualities in modern contexts.

Thus, Indian philosophy presents an integrative view of ethics that links individual conduct with universal welfare. It promotes not only adherence to moral codes but also internal transformation toward ethical excellence.

In Kautilya's Arthashastra, governance is depicted as a moral obligation, where a king is advised to act in the interest of public welfare, echoing today's stakeholder-centric leadership models. The Manusmriti, though controversial in parts, discusses social responsibilities and ethical conduct in professional roles.

Buddhist Contributions to Ethical Management :

Buddhism provides a significant ethical contribution to management education through its profound and systematic approach to moral and psychological development. Central to this are the Four Noble Truths and the Eightfold Path, which together form the foundation of Buddhist ethical thought. Among the Eightfold Path, Right Livelihood, Right Action, and Right Speech hold particular relevance for professional and managerial conduct. These encourage careers that do not cause harm, behavior grounded in non-exploitation, and communication that is truthful and compassionate.

The principle of *Mindfulness (Sati)* has garnered significant global attention and integration into modern leadership training. Rooted in the Satipatthana Sutta and elaborated in the MahasatipatthanaSutta, mindfulness enhances self-awareness, emotional intelligence, and responsible decision-making-skills that are crucial for ethical leadership. Practices such as Vipassana meditation, widely adopted in executive coaching, draw directly from Buddhist teachings.

The *Dhammapada*, a canonical text in the Khuddaka Nikaya of the Pali Canon, offers aphoristic teachings on ethical living, emphasizing virtues such as detachment from greed, control over speech and mind, and the pursuit of inner peace as a basis for external harmony. These teachings can be directly aligned with ethical leadership and value-based decision-making.

The *Jataka Tales*, narrating the Buddha's past lives, are filled with examples of moral courage, compassion, self-sacrifice, and just governance. Stories like "The Monkey King" and "The Wise Minister" provide narratives illustrating

stakeholder fairness, servant leadership, and resilience in the face of ethical dilemmas. These tales are being increasingly used in management education to convey complex ethical concepts through storytelling.

Buddhist Economics, a growing interdisciplinary field inspired by E.F. Schumacher's interpretation and traditional Theravada and Mahayana teachings, emphasizes simplicity, sustainability, and the well-being of all stakeholders over mere profit maximization. This aligns closely with emerging trends in corporate social responsibility and sustainable management practices.

Overall, Buddhism contributes a rich repository of practical tools and philosophical insights for ethical conduct in management. It fosters an environment where ethics are not merely regulatory obligations but a reflection of individual and collective awareness, compassion, and responsibility.

Relevance in Contemporary Management Education :

Today's business environment is characterized by volatility, uncertainty, complexity, and ambiguity (VUCA). Leaders are often confronted with ethical dilemmas involving not only profitability but also environmental responsibility, social justice, and employee well-being. These scenarios demand a level of moral reasoning that transcends standard strategic thinking.

Indian ethical philosophies offer enduring principles that resonate with modern values like corporate social responsibility, stakeholder engagement, and sustainable development. Core tenets such as *Dharma* (duty), *Ahimsa* (non-violence), *Satya* (truth), and *Karma Yoga* (selfless action) provide leaders with moral anchors amid uncertainty. For instance, the Bhagavad Gita's emphasis on *Nishkama Karma* encourages leaders to act ethically without attachment to results—a principle that aligns well with contemporary ideas of servant leadership and integrity-driven decision-making.

The Upanishads, emphasizing introspection and balance, resonate with leadership approaches grounded in mindfulness and emotional intelligence. Similarly, the Arthashastra's pragmatic yet ethical view of governance closely mirrors modern governance practices that aim to align profitability with societal good. Buddhist teachings like Right Livelihood and Mindfulness from the Eightfold Path promote clarity, compassion, and moral resilience in complex business environments.

In management education, institutions such as IIM Kozhikode, XLRI Jamshedpur, and SP Jain Institute of Management have introduced value-based education modules that draw from these ancient traditions. Case studies inspired by the Jataka Tales, discussions of ethical quandaries from the Mahabharata, and mindfulness sessions based on Buddhist teachings are being incorporated into curricula to foster holistic development.

Moreover, research from journals like the *Journal of Human Values* shows that students exposed to Indian and Buddhist ethics demonstrate greater moral sensitivity and improved decision-making capabilities. A comparative literature

review indicates that unlike Western models which often prioritize consequence or rule-based ethics, Indian models stress intention, self-discipline, and the interconnection between personal virtue and professional behavior.

Thus, integrating Indian and Buddhist ethical philosophies into contemporary management education enriches leadership development by fostering both internal character formation and external ethical behavior. These frameworks help create leaders who are not only capable decision-makers but also conscientious global citizens.

In management classrooms, introducing ethical dilemmas from ancient scriptures alongside modern case studies allows students to compare and internalize diverse ethical approaches. Institutions like IIM Kozhikode and XLRI Jamshedpur have already started integrating value-based modules inspired by Indian philosophy into their curricula.

Comparative Analysis with Western Ethical Frameworks:

Western ethics typically center around utilitarianism, deontology, and virtue ethics. Utilitarianism evaluates actions based on their outcomes-striving for the greatest good for the greatest number-while deontology emphasizes adherence to duties and rules regardless of the consequences. Virtue ethics, rooted in Aristotelian philosophy, focuses on the development of character traits that enable moral excellence.

In contrast, Indian and Buddhist traditions emphasize *Dharma* (righteous duty), *Ahimsa* (non-violence), *Satya* (truth), and *Karma* (moral causation) as essential guides to ethical behavior. These are not merely rules or outcomes-based but derive from one's intention and alignment with cosmic and social harmony. For example, the Bhagavad Gita teaches that performing one's *Svadharm*a (individual duty) selflessly, without attachment to the results (*Nishkama Karma*), is the pinnacle of ethical action-contrasting sharply with the outcome-centric approach of utilitarianism.

A relevant example lies in corporate social responsibility: while Western models may pursue CSR for brand reputation or stakeholder expectations (an outcome-based rationale), Indian ethics would view CSR as a *Dharma*-a duty to society and the environment, regardless of brand image. Similarly, Buddhist ethics, particularly the principle of *Right Livelihood*, discourages professions that harm others, even if they are profitable. This is deeply intention-based and centers on compassion and non-harm.

The Western model often isolates business ethics from personal ethics, whereas in Indian tradition, ethics begins with self-mastery-reflected in the Yoga Sutras and the internal discipline of the Upanishads-which then extends into social and organizational behavior. Buddhist teachings similarly stress mindfulness and awareness in every action, blurring the boundaries between personal and professional ethics.

Furthermore, the holistic view found in Indian and Buddhist thought facilitates deep character transformation in leadership education. Rather than compartmentalizing ethics into case studies, these traditions integrate ethical development into the very identity of the leader. This shift from compliance to character development is a growing theme in modern leadership studies and executive coaching, where Eastern models are increasingly being adopted.

Ultimately, while both Western and Indian traditions aim to promote moral conduct, the Indian and Buddhist paradigms provide a more integrative, introspective, and intention-oriented path that is particularly valuable in today's complex, culturally diverse business environments.

The Western model often isolates business ethics from personal ethics. In Indian tradition, ethics begins with self-mastery-reflected in the Yoga Sutras and Bhagavad Gita-which then extends into social and organizational behavior. This holistic view allows for a deeper transformation of character in leadership education.

Case Studies: Implementation and Outcomes:

- **Infosys and Narayana Murthy:** The corporate governance practices at Infosys have been guided by transparency, employee dignity, and stakeholder respect. Murthy often attributes his leadership philosophy to the teachings of the Gita and Upanishads. His leadership approach reflects the concept of *Nishkama Karma* (selfless action), emphasizing integrity and ethical conduct in all aspects of business.

- **Wipro and Azim Premji:** Wipro's emphasis on ethical business practices and philanthropy reflects values of Karma Yoga (selfless service) and Right Livelihood. Azim Premji's philanthropic initiatives, especially the Azim Premji Foundation, reflect the Buddhist principle of *Dana* (generosity) and demonstrate an integration of business success with societal benefit.

- **Tata Group:** With a legacy rooted in community service, the Tata Group demonstrates how ethics rooted in Dharma and long-term stakeholder welfare can be a source of enduring success. Ratan Tata's leadership exemplifies a commitment to *Lokasangraha*-the welfare of the community-as espoused in the Bhagavad Gita.

- **Eicher Motors and Siddhartha Lal:** Eicher Motors, under Lal's leadership, adopted a conscious capitalism approach by revitalizing Royal Enfield with a strong focus on values, heritage, and sustainability, aligning with Indian ethical values of heritage respect and stakeholder-centric growth.

- **Dr. V's Aravind Eye Hospital:** Inspired by the teachings of the Bhagavad Gita and Swami Vivekananda, Dr. Govindappa Venkataswamy created a high-impact healthcare model that combined efficiency with compassion, offering free or affordable eye care to millions. This initiative resonates with the Buddhist value of *Karuna* (compassion) and the Indian ethic of *Seva* (service).

- **Buddhist-Inspired Enterprises in Ladakh:** Organizations such as the Ladakh Ecological Development Group (LEDeG) draw directly from Buddhist values like simplicity, environmental mindfulness, and collective well-being. Their microcredit and green energy initiatives prioritize *Right Livelihood* and non-harming principles.

These case studies underline that traditional ethical philosophies are not merely theoretical constructs but practical frameworks that can shape successful, value-driven enterprises.

Proposed Framework for Integration into Management Education:

To meaningfully integrate Indian and Buddhist ethical philosophies into business education, a multi-pronged framework is proposed that focuses on curriculum innovation, experiential learning, institutional culture, and assessment. This approach ensures not only theoretical understanding but also the practical internalization of values essential for ethical leadership.

A. Curriculum Design and Content Integration:

1. Dedicated Courses:

- Introduce standalone elective or core courses such as “Ethics and Leadership in Indian Philosophy” or “Buddhist Perspectives on Sustainable Management.”
- Offer interdisciplinary modules that combine ethics, psychology, and management with texts like the Bhagavad Gita, Dhammapada, Arthashastra, and Upanishads.

2. Embedded Modules in Existing Courses:

- Integrate ethical discussions in finance, strategy, and HR courses by introducing concepts like Dharma (righteous conduct in corporate governance) or Ahimsa (non-harm in marketing ethics).

3. Case Studies and Narrative Pedagogy:

- Develop case studies based on the Jataka Tales, Mahabharata, and corporate examples like Infosys and Tata Group, linking ancient values with modern dilemmas.
- Encourage narrative analysis and role-plays to explore ethical decision-making from Indian and Buddhist viewpoints.

B. Experiential Learning and Self-Development:

1. Mindfulness and Meditation Practices:

- Incorporate guided meditation sessions and mindfulness-based stress reduction (MBSR) workshops into the curriculum, inspired by Buddhist Vipassana techniques and Patanjali’s Yoga Sutras.
- Use daily 10-minute “ethics pause” sessions to cultivate reflective thinking.

2. Reflective Journaling and Ethical Diaries:

- Encourage students to maintain weekly journals reflecting on personal values, ethical dilemmas, and learning from scriptures or business experiences.

3. Service-Learning Projects (Seva):

- Partner with NGOs or social enterprises to allow students to engage in community service that aligns with values like Seva (selfless service), Dana (generosity), and Lokasangraha (public welfare).

C. Institutional Practices and Culture:

1. Ethics as Core Institutional Value:

- Embed Indian ethical philosophies in the mission statement and institutional values.
- Celebrate annual “Ethics and Dharma Week” featuring talks, debates, and cultural programs.

2. Leadership Immersion Programs:

- Organize retreats at spiritual and philosophical centers (e.g., Auroville, Bodh Gaya, Ramakrishna Mission) for immersive learning of leadership principles grounded in Indian traditions.

3. Faculty Development and Resource Support:

- Conduct workshops to train faculty in scriptural literacy and how to facilitate value-based classroom discussions.
- Create an online repository of ethical texts with academic commentaries and teaching aids.

D. Assessment and Evaluation Tools:

1. Ethical Reasoning Rubrics:

- Develop rubrics to assess ethical reasoning in projects, presentations, and leadership challenges based on Indian philosophical parameters.

2. Ethics Integration Scorecard (EIS):

- Introduce an internal metric to evaluate how well ethical philosophies are integrated into course design, faculty engagement, and student projects.

3. Capstone Projects on Ethics in Practice:

- Encourage final-year students to undertake capstone projects exploring the application of Dharma-based leadership or Buddhist economic principles in real organizations.

8. Global Implications and Cross-Cultural Relevance:

As business becomes more global, the need for culturally inclusive ethics frameworks grows. Indian philosophies, with their emphasis on unity, tolerance, and global harmony (*VasudhaivaKutumbakam*), offer universally resonant messages. Buddhist concepts like interdependence and compassion are increasingly valued in global leadership models, particularly in Scandinavia, Japan, and the United States.

Challenges in Implementation:

Despite their relevance, integrating traditional philosophies faces resistance due to:

- Secular bias in education policies
- Perceptions of religion-based content
- Lack of trained educators in ancient Indian texts

These can be addressed through:

- Interdisciplinary pedagogy
- Training faculty in cultural and scriptural literacy
- Presenting texts through a secular, ethical, and philosophical lens

Conclusion :

The integration of traditional Indian and Buddhist ethical philosophies into management education is not merely a return to ancient wisdom, but a forward-looking strategy to cultivate morally grounded, globally competent leaders. Concepts like Dharma, Karma, Satya, and Ahimsa, complemented by Buddhist teachings such as mindfulness, compassion, and the Middle Path, offer actionable, context-sensitive guidance for today's complex business challenges. Unlike purely prescriptive Western models, Indian and Buddhist ethics emphasize inner transformation, moral clarity, and holistic well-being, fostering leadership that is both effective and ethical.

As the corporate world increasingly embraces sustainability, stakeholder capitalism, and conscious leadership, Indian and Buddhist philosophical values offer a timely and universal framework. Embedding these principles into curricula, institutional cultures, and leadership development programs can nurture a new generation of business leaders who are not only capable but also compassionate and courageous. The future of management education lies in harmonizing profit with purpose—an endeavor where traditional ethical thought can serve as both compass and catalyst.

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“HEALTH AND SOCIAL INFRASTRUCTURE”

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Abstract:

The concept of equitable growth is fundamental for ensuring inclusive development in a rapidly growing economy like India. This paper explores the critical role of health and social infrastructure in achieving equitable growth while addressing the emerging challenges posed by structural inequalities, demographic transitions, and regional disparities. The analysis underscores the necessity of integrated policy measures to bolster health systems and social services to bridge the gap between growth and equity. Health and social infrastructure are foundational components of a society, ensuring equitable access to essential services and promoting sustainable development. The paper also explores global trends, challenges, and strategies for strengthening these infrastructures in the context of urbanization, climate change, and evolving demographic dynamics.

Keywords: Equitable Growth, Growing Economy, Health And Social Infrastructure.

Introduction :

Equitable growth is the cornerstone of sustainable development, emphasizing the need for inclusive participation in economic progress. In India, an economy characterized by vast diversity and disparities, health and social infrastructure form the backbone of efforts to ensure equitable opportunities for all. This paper investigates the pivotal role these infrastructures play and identifies the emerging challenges that hinder equitable growth. Health and social infrastructure encompasses a wide range of services, systems, and facilities that support the physical, mental, and social well-being of communities. This includes hospitals, clinics, schools, social housing, community centers, and public transportation networks. These infrastructures are vital for addressing social determinants of health, reducing disparities, and achieving

global development goals such as the United Nations Sustainable Development Goals (SDGs).

Health Infrastructure and Equitable Growth:

Current Status India's health infrastructure has expanded significantly over the years. However, glaring disparities persist in the availability and accessibility of healthcare services. Rural areas, housing over 65% of the population, remain underserved compared to urban counterparts.

Challenges:

- **Inadequate Investment:** Despite economic growth, public health expenditure remains around 2% of GDP, which is insufficient to address the growing healthcare demands.
- **Workforce Shortages:** A significant shortfall in healthcare professionals, particularly in rural areas, exacerbates inequities.
- **Quality of Care:** The quality of healthcare services is inconsistent, with many facilities lacking basic amenities and essential medicines.
- **Non-Communicable Diseases (NCDs):** The rising burden of NCDs adds strain to the healthcare system, which is still grappling with communicable diseases.

Social Infrastructure and Equitable Growth:

Role of Education, Housing, and Social Security Social infrastructure, including education, housing, and social security, is instrumental in empowering individuals and fostering equitable growth. However, significant challenges persist in achieving universal access.

Challenges

- **Educational Inequality:** Despite improvements in literacy rates, disparities in education quality and access remain stark, particularly for marginalized communities.
- **Affordable Housing:** Urbanization has led to a housing crisis, with millions living in informal settlements lacking basic amenities.
- **Social Security Gaps:** Large segments of the population remain excluded from formal social protection mechanisms, heightening vulnerabilities.

The Role of Health Infrastructure:

Health infrastructure, including hospitals, primary care facilities, and specialized treatment centers, plays a critical role in delivering healthcare services. Key aspects include:

- **Access to Healthcare:** Adequate health infrastructure ensures timely access to preventive, curative, and rehabilitative services, reducing morbidity and mortality rates.

- **Disease Control:** Robust health systems facilitate the management and prevention of infectious diseases and non-communicable diseases (NCDs).
- **Economic Impact:** Investment in health infrastructure boosts economic productivity by improving population health and reducing healthcare costs.

The Role of Social Infrastructure:

Social infrastructure, which includes education systems, affordable housing, and public spaces, contributes to societal cohesion and individual empowerment. Key components include:

- **Education:** Schools and universities are critical for skill development and reducing poverty.
- **Housing:** Affordable and quality housing enhances living conditions and reduces health risks.
- **Community Services:** Libraries, parks, and cultural centers foster social inclusion and mental well-being.

Challenges in Developing Health and Social Infrastructure:

1. **Urbanization:** Rapid urban growth strains existing infrastructure, leading to overcrowding and resource depletion.
2. **Funding Gaps:** Limited financial resources hinder the development and maintenance of infrastructure.
3. **Climate Change:** Extreme weather events disrupt infrastructure systems, exacerbating vulnerabilities.
4. **Technological Integration:** Adopting digital solutions requires investment in technology and workforce training.

Strategies for Strengthening Health and Social Infrastructure:

1. **Public-Private Partnerships (PPPs):** Collaborations between governments and private entities can mobilize resources and expertise.
2. **Sustainable Design:** Incorporating renewable energy and eco-friendly materials into infrastructure projects.
3. **Community Engagement:** Involving local communities in planning and decision-making to ensure inclusivity and relevance.
4. **Policy Reforms:** Developing policies that prioritize infrastructure investment and equitable access.

Conclusion :

Health and social infrastructure are integral to the advancement of societies, influencing economic growth, social equity, and public health outcomes. Strengthening these infrastructures requires a multi-sectoral approach, integrating innovative solutions, sustainable practices, and inclusive policies. By addressing current challenges and leveraging opportunities, governments and stakeholders can build resilient systems that cater to the needs of present and future generations.

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GREEN MINDS : A BOTANICAL APPROACH TO MENTAL WELLNESS & ETHICS IN EDUCATION

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Abstract:

The integration of botanical resources in promoting mental wellness and embedding ethical practices within educational frameworks presents a sustainable model for holistic development. Aromatic plants possess therapeutic potential through bioactive compounds and essential oils, offering neuro-calming effects, cognitive stimulation, and emotional stability. This study explores the chemical constituents and aromatic profiles of selected botanicals including *Leucas aspera*, *Ocimum sanctum* (Tulsi), *Cymbopogon citratus* (Lemongrass), *Mentha arvensis* (Mint), and *Rosmarinus officinalis* (Rosemary). Their role in educational environments is examined in relation to ambient wellness, cognitive clarity, and ethical sensitization. GC-MS (Gas Chromatography-Mass Spectrometry) analysis reveals the presence of compounds such as eugenol, thymol, citronellal, menthol, and camphor. These compounds contribute to anxiolytic, antidepressant, and focus-enhancing effects, aligning with eco-ethical pedagogy. The study suggests that incorporation of such aromatic interventions can enhance educational spaces, making them conducive to mental tranquility and ethical learning.

Keywords: Aromatic Plants, Mental Wellness, Educational Ethics, Botanical Therapy, Antidepressant Aromatherapy

Introduction:

Education systems aim for cognitive and moral development. With rising concerns regarding stress, attention deficits, and emotional imbalance in academic spaces, plant-based interventions have emerged as complementary strategies. Aromatic plants release volatile organic compounds that interact with neurological receptors, influencing mood and behavior. Ethical education, grounded in sustainability, aligns with nature-inspired therapeutic approaches.

2. Materials and Methods: Five aromatic species were selected based on ethnobotanical relevance and institutional availability:

- *Leucas aspera*
- *Ocimum sanctum* (Tulsi)
- *Cymbopogon citratus* (Lemongrass)
- *Mentha arvensis* (Mint)

- *Rosmarinus officinalis* (Rosemary)


Fig- *Leucas aspera*

**Fig- *Cymbopogon citrates*
(Lemongrass)**

**Fig- *Rosmarinus officinalis*
(Rosemary)**

Fig- *Mentha arvensis* (Mint)

***Ocimum sanctum* (Tulsi)**

Leaves were collected and subjected to hydro-distillation to extract essential oils. The oils were analyzed using GC-MS instrumentation to identify and quantify active compounds.

3. Results and Discussion: GC-MS analysis provided the following key constituents:

- ***Leucas aspera*:** 1-Octen-3-ol, Caryophyllene oxide (noted for its anti-depressant and adaptogenic activity)
- ***Ocimum sanctum*:** Eugenol, Methyl eugenol (associated with anxiolytic and anti-stress effects)
- ***Cymbopogon citratus*:** Citral, Geraniol, Linalool (known for calming, sedative, and anti-anxiety potential)
- ***Mentha arvensis*:** Menthol, Isomenthone (offers mood-elevating, cooling, and stress-relieving properties)
- ***Rosmarinus officinalis*:** Camphor, Cineole, Borneol (exhibits mood-lifting, stimulating, and cognitive-supporting properties)

Comparative GC-MS Profile of Major Aromatic Constituents (mg/ml)

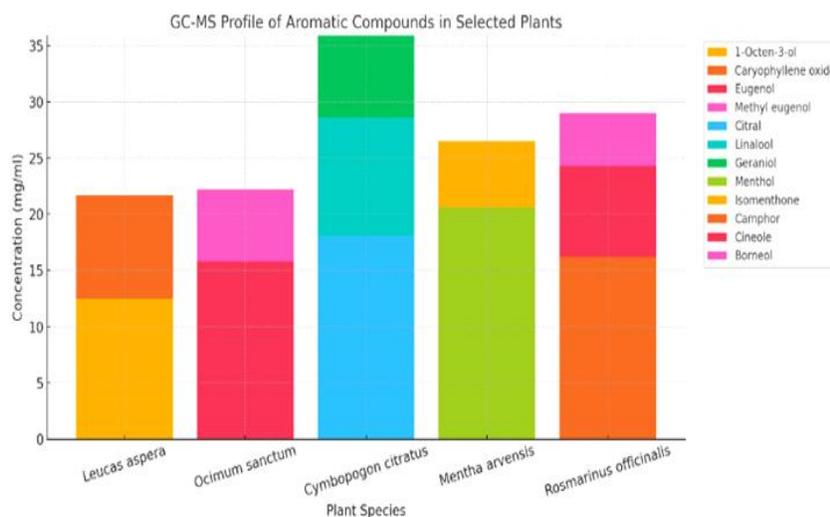
Plant Species	Major Compounds	Concentration (mg/ml)
<i>Leucas aspera</i>	1-Octen-3-ol, Caryophyllene oxide	12.5, 9.2
<i>Ocimum sanctum</i>	Eugenol, Methyl eugenol	15.8, 6.4
<i>Cymbopogon citratus</i>	Citral, Linalool, Geraniol	18.1, 10.5, 7.3
<i>Mentha arvensis</i>	Menthol, Isomenthone	20.6, 5.9
<i>Rosmarinus officinalis</i>	Camphor, Cineole, Borneol	16.2, 8.1, 4.7

Bar Graph Representation:

These phytoconstituents have demonstrated potential for application in aromatherapy targeting depressive conditions:

- **Eugenol, Citral, and Linalool:** Regulate neurotransmitters and support mental balance.
- **Caryophyllene oxide and Cineole:** Interact with endocannabinoid and serotonergic systems to alleviate depressive symptoms.
- **Menthol and Camphor:** Act as modulators of emotional responsiveness and mental fatigue.

The synergy of these compounds forms a natural foundation for sensory-based interventions in educational settings. Exposure to these botanical volatiles is aligned with emotional equilibrium, mental stability, and environmentally attuned ethical development.



Conclusion:

Botanical resources, particularly aromatic herbs, offer an eco-ethical approach to mental well-being in education. Their incorporation through ambient diffusers, plant installations, or therapeutic gardens fosters calm learning environments. Ethical learning harmonized with natural wellness reflects a green pedagogy vital for future educational paradigms.

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ANCIENT EDUCATION SYSTEM AND ETHICS

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Abstract:

From the evolution of mankind, education is the cornerstone of civilization. Education is the essential element of a better society having ethics, values and morals. Ancient education system focused on holistic development and high values. Ancient education system targeted to achieve courage, wisdom and justice. Ancient Indian education system is known for Gurukuls. Gurukuls were the ancient education system in India during vedic period; where students learn life skills, art, religion, and many more. In Gurukuls the students were trained in mathematics, veds, astrology, philosophy etc. The ancient education system stressed on mental, physical and spiritual development. Ethics was the backbone of Ancient Education system.

Keywords : Gurukul, Ancient Education System, ethics, Shravan, manan, ved

Objectives of study:

- 1) To study the Ancient Education System existed in the world
- 2) To know the ancient education system in India
- 3) The learnings from Ancient Education System
- 4) To understand the ethics in the Ancient Education System
- 5) To study problems in current education system

Research Methodology:

The current present is a descriptive study based on secondary data. The paper is based on the literature review of many research papers and online study materials like websites and online platform.

Ancient education system around the world:

The ancient education systems of the world were deeply rooted in the cultures and needs of their societies (britannica.com/)

Egypt: Education was controlled by priests and focused on subjects like science, medicine, mathematics, and geometry. Formal schools trained scribes and priests, with students starting at age (brewminate.com/a)

Mesopotamia: Literacy was essential for scribes, who were trained in reading and writing cuneiform script. Schools, known as “edubas,” preserved texts and disseminated literac
(wikipedia)

China: The Xia dynasty established the first education system, focusing on moral and practical teaching

Greece and Rome were also known for ancient education system in their country and spreading all over the world.

Ancient education system in India:

India is known for its ancient education system in the name of Gurukul. Gurukul was a special system of education where students learn from the Gurus at Ashrams.

(Selwamani) The word Gurukul came from combination of Sanskrit word Guru and Kul; Guru means teacher and Kul means residence or home. The students were used to live in Gurukul and learn vedas. There was no discrimination based on economic or social status of the students, each student was treated equally. Large number of students live under the supervision of their respective Gurus. The role of Guru was very important in shaping and building the character of student. The Gurus were possessing high moral and spiritual values. The Guru make the students think that ‘simple living and high thinking’ is the best to live the life. Different subjects were taught to the student. The Vedsie Rigved, the Yajurveda, the Samaveda and the Atharvaveda. These were further divided into Samhitas and mantras. Upanishads-These texts discuss meditation, philosophy and the spiritual world. Vedangas-Vedangas consist of six areas of study: Phonetics, ritualistic knowledge, grammar, exegetics (science of interpretation), metrics and astronomy. Moreover, in Gurukula system of education, guru will teach how to makeup defects, overcome difficulties, analyse mistakes, develops the right use of the six senses by training and practice, training of mental faculty and logical faculty, fundamentals of Hinduism like, concept of Moral Responsibility or Dharma, the scientific basis of the law of “Action and Reaction” or karma to stress the need for responsibility for one’s own action are all taught everything working, playing and living. Memorisation, recitation, recapitulation were the normal methods of education. Hieun-Tsang mentioned the extraordinary memory of the Vedic Scholars in Nalanda University. Lectures, discussions, debates, seminars, group discussions etc.... were some of the methods of study in our ancient educational system. Doubt clarifications were considered to be the important aspect of our system.

The Ancient education system was done in Sanskrit or Pali. The Vedic education was in Sanskrit and the Buddhist education was using pali as the language of communication.

(unacademy.) Four Vedas are the earliest Hindu sacred texts composed in the North Indian Region. The literal meaning of Vedas is “knowledge”, written in ancient Sanskrit language (different from the contemporary Sanskrit language). Vedas are one of the oldest scriptures of the Hindu religion, believed to be composed by Aryans. Four Vedas have been composed near the region of Saptasindhu rivers (Indus, Jhelum, Chenab, Ravi, Beas, Satluj and Saraswati), Ganga and Yamuna river, as these river names were mentioned many times in these four Vedas. The name of Saptasindhu was mentioned many times, while the Ganga and Yamuna were mentioned one or two times. The Rigveda, Yajurveda, Samaveda and Atharvaveda are the four Vedic texts. Each Vedic text has four subdivisions – Samhitas comprise Mantras and benedictions, Aranyaks comprise rituals, sacrifices, Brahmanas comprise of commentaries on various type of rituals, sacrifices and Upanishads comprise of the text of meditation, spiritual knowledge and philosophical arguments. Some scholars believe that the one additional category named Upasanas comprises worship and Vedas. Vedas are the sruti which means what is heard, and Hindus consider that these texts are composed by superhumans or heard by ancient sages after meditation and composed of sacred sounds of the cosmos. It is believed that Vedas were orally transmitted from one generation to another.

It is believed that the four Vedas were written down after the Indus valley civilisation between 3500 BCE to 2500 BCE. The four Vedas consist of hymns, rituals, ceremonies, sacrifices etc. and also describe that there were varna based divisions of society that prevailed, but not on birth basis, while on the professional basis. The Gods mentioned in Vedas are generally based on natural or cosmic powers such as God Agni (Fire), God Surya and Savitri (Sun), Goddess Usha (dawn), God Rudra (storm), God Indra (Rain)etc.

Rig Veda:

It is the oldest surviving text of Hindu religion and philosophy, also known as Mantra book, further divided into ten mandalas, and each has 1028 hymns for various deities worship. Vedic gods described in Rig Vedas are Angi, Indra, Rudra, Vishnu, Varuna, Goddess Usha etc. The Famous Gayatri mantra is the prayer of God Purusha Shukla is from Rig-Veda. Rig-veda is also a great source of the social, political, religious, economic background of Vedic people. Sapt-rishi or great seven sages also mentioned in Rig-veda names as Atri, Vashishta,

Vishwamira, Kanwa, Gautama, Jamadagni and Bhardwaj. The hymns were dedicated to mainly thirty-three gods and one of the great chunks of mantras prepared for the worship of the Soma god (Air).

Saam ved:

The introductory verses of this Veda are taken from the Rig Veda, but arrangements of hymns were different from the Rig-Veda and chanted differently. The Sama Veda comprises 1549 stanzas. Samhita of Samaveda have two main parts, the first one is four melody collections, and the second one is 3 verse books. Order of devotion further shifts towards descending order. Some hymns in Sama Veda are repeated from the Rig Veda. Two major recessions of Sama Veda survived named as Gauthama or Ranayaniya and Jaiminiya.

Yajurveda:

The vedas consist of mantras and a compilation of detailed rituals offered for the yajna. The priests pronounced these mantras during the offering made to God Agni in Yajna sacrifice. It is believed that the Yajur Veda was composed during the rule of the Kuru kingdom. Its Samhita includes 1875 verses based on the foundational verses of Rig Veda. It is the first text in the form of prose. There are two main groups of the text of Yajur Veda named as Black "Krishna." Moreover, the white one is "Shukla". Black has unarranged matter, and white has well-arranged matter.

From black Yajur Veda, four major schools of Brahminism survived, such as Katha, Taittiriya, Kapisthala, Maitrayani etc., while the white Yajur Veda's only two schools survived Kanva and Madhyandina. Later the composed part of Yajurveda did not mention the rituals while it comprises various types of Hinduism philosophy.

Atharaveda:

The youngest text among Four Vedas comprises charms magic written in folklore. It is believed that Atharv Veda was composed by the Atharvan sect of Brahmanism and compiled the magic, spell and charms of that time into texts. It has 760 hymns, and out of the 160 hymns were standard with Rig Veda. Verses mentioned in Atharva Veda were metrical, while some were prose. Two versions of this text survived named Paippalada and Saunakiya. The Atharva Veda has been considered the primary source of information about Vedic civilisation, customs, rituals and beliefs, aspirations and frustrations of everyday life, and governance. The ritual of marriage and cremation is described in this ved.

(Yadav, 2018) India from its ancient times known for the education system and great teachers. The Indian education system targets character building, spirituality, and making a man better human being. The Indian Education system is a true education system which aims 'Tamsomajyotirgamaya'.

Main Salient features of Ancient Education System of India:

- **Gurukul System :**

India is world famous for its traditional Gurukul system of education. In this system the students i.e shishyas were live with their Guru i.e teachers in ashram. In Gurukul system of education system, the students not only learn academics but also self-discipline, life lessons, spiritual growth, philosophy, art, knowledge from environment, war tactics and many more. The Gurukul was designed for the overall personality i.e. holistic development of the student and ultimately society and nation. The ultimate methodology used in learning in Gurukul System was learning by doing and experiments and real-life situations.

- **Bramhcharya:**

Another word which is very popular with ancient education system is Bramhcharya. The word Bramhcharya indicates sacrifice of all sort of pleasure and do only what Guru commands. Here all the senses are directed to achieve knowledge and skills. Here the mind is so trained that the thought process will focus only on important things required for knowledge acquisition. It is unique way to conserve energy and direct in a direction where knowledge can be aquired.

- **Sravana:**

The word 'Sraavan' meaning listing and understanding. Hearing and leasing are different. In hearing only ears are used in physiological while listening is psychological process were the brain is used to understand the meaning of words or messages or the truth or real meanings are decoded and understood. Sravana meaning listening to Guru attentively and understand the meaning of words.

- **Manan**

In Manan the students of the Gurukul were ask to think on the lesson taught by the Gurus. In Manan the students came to know about the truth of the knowledge imparted by the Gurus. The improve their ability to give opinion on any matter taught by the Guru. The Guru used to ask question after the Manan process to test the level of understanding among the students. This was a very powerful method of learning a subject where the students were not only able to under the concept or topic but also were able to understand the real meaning and develop his opinion on that topic.

- **Nidhyasana**

After Sravan and Manan another method of learning was Nidhyasana. In this the students came to know the complete comprehension of the knowledge imparted by the Guru. The students were required to live with the truth imparted by Guru and not only explain it by words.

- **The education was free of cost:**

In the ancient Gurukul education system, no fees was charged. The students were required to do some work like arranging food, fuel and other work which were necessary to survive. Here the students learn different kinds of skills which are useful for him during his lifetime. The king normally bears some cost of education in case prince came at Gurukul. Any poor student was able to take education.

- **Holistic or all-round development of the student:**

The Ancient Education system was based on skill development, life lesson and learning by doing. The students were busy in pathan, manan and doing what they have learned. The overall effect after this learning was the development of personality of the student.

- **Skill based education:**

The development of Skill was the central them of Ancient Education System in India. All the learning skills were taught in the Gurukuls. Right from vedic chants i.e. pronunciation to the practice of warfare everything was taught to them.

- **Natural environment for teaching- learning atmosphere:**

The environment for the teaching learning in Ancient India was fantastic. The students were used to sit under the tree or near the river. The environment of learning was calm and suitable in teaching and learning.

- **Personal attention to each student:**

In ancient education system the students used to live with the Guru in Ashram, so there was personal attention of Guru towards each student. It makes student and teacher i.e. Guru's bond stronger and more effective communication between the student and Guru.

- **Ethical values in ancient education system:**

The India education system emphasizes ethical values and helps in development of overall personality of the students and contributes for the development of healthy society. The ancient education teaches the students to respect the elders, integrity and honesty, spiritual and cultural wisdom and also integrate them with environment and educate them to respect the nature.

Importance of Ethics in Education System:

The term ethics may be defined as philosophical study of the concepts of moral right and wrong and moral good and bad. Ethics is the backbone of any effective education system-it fosters integrity, fairness, and responsibility among

students, teachers, and institutions. The importance of ethics can be understood from following points-

- Education should not be only transferring academic knowledge, there should be importance to character building. Integrity, nation, truth, honesty, respect to other and their religion are extremely important.
- The education system should encourage fairness, merit and culture of hard work. The learnings from the education should be that the hard work pays.
- The education system should promote leadership
- The education system should encourage justice, transparency and equality

Conclusion:

The education since the evolution of mankind plays an important role in making him or her more better human being in all aspects. The aim of education is not merely make a man full of information but make him a sensible human who can use this information for better world to live. A healthy education system is need by any country. The modern education system should take some lessons from Ancient Education System in terms of teaching the students values, truth, self reliance, equality, brotherhood, and making them stronger Physically, mentally and spiritually.

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**IMPACT OF PRADHAN MANTRI GRAM SADAK YOJANA
ON GENERAL HEALTH RELATED ASPECTS OF RURAL
AREA OF WARDHA DISTRICT OF MAHARASHTRA****Dr. Sanjay P. Dhanwate**

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Abstract:

Pradhan Mantri Gram Sadak Yojana is a centrally sponsored scheme. The main objective of Pradhan Mantri Gram Sadak Yojana is to connect the unconnected villages of more than 1000 eligible population in general area and more than 500 eligible population in tribal area as per 2001 census through all-weather roads. At present, the central government has approved proposals for unconnected habitation in non-tribal areas with a population of more than 500, tribal areas with a population of more than 250 and in Naxal-affected districts with a population of 100 to 249.

PMGSY scheme aims to provide all-weather road connectivity in rural areas of the country. The availability of roads in rural areas significantly affects the health of the population through several interconnected pathways by offering improved access to clinics and hospitals. Roads reduce travel time to healthcare facilities, allowing individuals to seek timely medical attention. In areas without proper roads, people often face long, difficult journeys, delaying treatment and worsening health outcomes. Roads facilitate rapid transportation during medical emergencies, such as childbirth complications, heart attacks, or accidents. Improved road infrastructure increases the likelihood of survival in these cases. Good roads make it easier for rural health centres to receive medical supplies, including vaccines, medicines, and medical equipment.

Keywords- PMGSY Scheme, Rural Road, Rural Infrastructure, Health, healthcare services

Introduction:

Although India is one of the fastest growing developing economies in the world, many infrastructures related aspects like the roads in rural areas is still a concern. India's growth has led to a great accumulation of wealth; however, rural areas across the country remain severely underdeveloped and impoverished. The unequal distribution of resources, especially funding for infrastructure between rural and urban areas, contributes greatly to socioeconomic disparities in India. The Pradhan Mantri Gram Sadak Yojana (PMGSY) is a prominent example of a project designed by the Indian government to simultaneously bridge the large infrastructural disparities that exist between

rural and urban India and reduce severe poverty in rural regions (Kasthuri, 2018). PMGSY scheme aims to provide all-weather road connectivity in rural areas of the country.

The availability of roads in rural areas significantly affects the health of the population through several interconnected pathways by offering improved access to clinics and hospitals. Roads reduce travel time to healthcare facilities, allowing individuals to seek timely medical attention. In areas without proper roads, people often face long, difficult journeys, delaying treatment and worsening health outcomes. Roads facilitate rapid transportation during medical emergencies, such as childbirth complications, heart attacks, or accidents. Improved road infrastructure increases the likelihood of survival in these cases. Good roads make it easier for rural health centres to receive medical supplies, including vaccines, medicines, and medical equipment. In areas with poor road infrastructure, stockouts and shortages are more common, hampering the effectiveness of healthcare services. Thus, rural road availability is a key part of provincial advancement, since it elevates access to monetary and social administrations. In the backdrop of above information, this study was carried out to assess the impact of PMGSY roads on various aspects related to the health of people living in the study area i.e. Wardha District of Maharashtra.

Research Methodology:

Standardized research method has been used for the research work to get accurate information and to achieve the objective of the research. Survey and analysis method was used to study the objectives of the research and conduct the research accordingly. A period of 19 years from 2004-05 to 2022-23 has been taken for this study. In the present investigation Wardha district of Vidarbha was considered as the study area. In the present research all the citizens of the rural areas of Wardha district of Vidarbha were considered as the population. All 8 talukas of Wardha district and in each taluka where PMGSY has been implemented was considered for the study. Among them, 5 villages were selected by following convenience sampling method. Thus, 5 villages from each taluka of Wardha district were selected thus a total of 40 villages or habitations were selected. Also, 10 people from each village were selected using convenient sampling method to collect the primary data. In this way, a total of 400 persons/citizens were selected and the information required for the research was collected from them.

In the present research descriptive research design has been chosen by fulfilling the necessary condition for proper collection and analysis of facts. In the present study standardized method and a structured questionnaire were used for data collection. Questionnaire was prepared in view of the objectives of this study. For data collection, information was obtained from the citizens living in rural areas of all talukas of Wardha district through survey medium.

The data generated during the present study was processed using various statistical tests with the aid of SPSS 18.0 statistical software. The data characteristics (descriptive statistics), frequency, percentage, etc. were determined, while 'Chi-Square test' was used as an inferential statistical test. The significance level was chosen to be 0.05.

Results and Discussion:

Life expectancy of general population

Table 1: Change in life expectancy of people living in rural area

Response	Nos.	Percent
Significant increase	23	5.8
Moderate increase	375	93.8
No change/decrease	2	0.5
Total	400	100.0

$$\chi^2 = 658.632; \text{df: } 2; \chi^2_{\text{crit}} = 5.99; p < 0.05$$

Above Table 1 shows information pertaining to the change in the life expectancy (after implementation of PMGSY) of the citizens of the village of Wardha district. Study result shows that, there is significant increase in the life expectancy of 5.8% respondents while there is moderate increase in the life expectancy of 93.8% respondents moderate. Also, it was found that there was no change in the life expectancy of 0.5% of the respondents.

Physical quality of life of common people in the village

Table 2 : Physical quality of life of common people in the village

Response	Nos.	Percent
Significant increase	20	5.0
Moderate increase	372	93.0
No change/decrease	8	2.0
Total	400	100.0

$$\chi^2 = 641.308; \text{df: } 2; \chi^2_{\text{crit}} = 5.99; p < 0.05$$

Above Table 2 shows information pertaining to the physical quality of life of the citizens of the village of Wardha district. Study result shows that, there was significant increase in the physical quality of 5.0% respondents and there was moderate increase in the physical quality of 93.0% respondents. Also it was found that there is no change/decrease in the physical quality of 2.0% respondents.

Infant mortality rate :

Table 3 : Infant mortality rate in the villages

Response	Nos.	Percent
Significant decrease	269	67.3
Moderate decrease	113	28.3
No change	18	4.5
Total	400	100.0

$\chi^2 = 240.914$; $df: 2$; $\chi^2_{crit} = 5.99$; $p < 0.05$

Above Table 3 shows information pertaining to the change in infant mortality rate in the villages of Wardha district. Study result shows that according to 67.3% respondents there is significant decrease in infant mortality rate in their village while 28.3% respondents stated there is moderate decrease in infant mortality rate. Further it was found that there was no change in the infant mortality rate in the villages of 4.5% respondents.

Maternal mortality rate:

Table 4 : Maternal mortality rate in the village

Response	Nos.	Percent
Significant decrease	289	72.3
Moderate decrease	92	23.0
No change	19	4.8
Total	400	100.0

$\chi^2 = 292.608$; $df: 2$; $\chi^2_{crit} = 5.99$; $p < 0.05$

Above Table 4 shows information pertaining to the maternal mortality rate in the villages of Wardha district. Study result shows that there is significant reduction in maternal mortality in the villages of 72.3% respondents while there has been a moderate reduction in the villages of 23.0% respondents. Similarly, it was found that there was no change in the maternal mortality rate in the village of 4.8% of respondents.

Prevalence of Malnutrition among Children

Table 5 : Prevalence of Malnutrition among children living in the villages.

Response	Nos.	Percent
Significant decrease	303	75.8
Moderate decrease	78	19.5
No change	19	4.8
Total	400	100.0

$\chi^2 = 336.92$; $df: 2$; $\chi^2_{crit} = 5.99$; $p < 0.05$

Table 5 shows results of prevalence of malnutrition among children (living in the villages) of the study area i.e. Wardha district. Study result shows that there has been a significant reduction in malnutrition among children in the villages of 75.8% respondents and it has been found that there has been a moderate decrease in the malnutrition rate among children in the villages of 19.5% respondents. Also, it was found that there was no change in the rate of malnutrition among children in the village of 4.8% respondents.

Prevalence of chronic diseases in the population:

Table 6 : Prevalence of chronic diseases in the population

Response	Nos.	Percent
Significant decrease	210	52.5
Moderate decrease	187	46.8
No change	3	0.8
Total	400	100.0

$$\chi^2 = 193.08; \text{df: } 2; \chi^2_{\text{crit}} = 5.99; p < 0.05$$

Above Table 6 shows results pertaining to the change in the incidences of chronic diseases due to PMGSY implementation in Wardha district. According to 52.5% respondents there is significant reduction in the number of chronic diseases due to implementation of PMGSY and 46.8% respondents indicated these changes to be of moderate level. However, according to meager 0.8% respondents there was no change in the incidences of chronic diseases among the citizens post implementation of PMGSY.

Conclusions :

Life expectancy of general population:

- From the study results, it is evident that the life expectancy in most of the villages of study area (Wardha district) has moderately increased.

Physical quality of common people in the village:

- From the study results, it is evident that there is moderate increase in the physical quality of the citizens of most of the villages of the study area (Wardha district).

Village infant mortality rate:

- From the study results, it is evident that there has been a significant reduction in infant mortality rate in most of the villages of study area (Wardha district).

Maternal mortality rate in the village (Table 4) :

- From the study results, it is evident that there has been a significant reduction in the maternal mortality rate in most of the villages of study area (Wardha district).

Prevalence of Malnutrition among Village Children:

● From the study results, it is evident that there has been a significant reduction in malnutrition among most of the children of the study area (in Wardha district).

Prevalence of chronic diseases in the population:

● From the study results, it is evident that there has been a significant reduction in the number of chronic diseases among the citizens due to the changes in the health sector of study area (Wardha district).

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WASTE TO WEALTH : BIOPLASTICS FROM FLORAL OFFERINGS FOR A SUSTAINABLE FUTURE

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Abstract:

With the increasing climate crisis and mounting environmental issues, the need for sustainability has never been more urgent. Rising environmental pollution, biodiversity loss, and resource depletion are no longer distant threats - they're unfolding in real-time, affecting ecosystems, economies, and daily life. Now a days major concern of pollution in India is solid waste and its proper management. So, Attempt has been made to work on it. The floral offerings generated in religious places or functions as well as in houses across India are often disposed of improperly which may lead to environmental pollution. To address this issue, a small step was taken to produce a "best out of waste" product for a clean and disease-free India. During the present investigation, biodegradable plastics were synthesized from Floral Offerings using starch, acetic acid, and glycerin in molar proportions. The swelling test was performed at 25°C with different time intervals. The first-order Fick's model and second-order Schott's absorption kinetic equation models were applied to investigate the swelling properties of the synthesized biodegradable plastics. These kinetic equation models applied to the data were in good agreement with the experimental data. Appreciable weight loss of bio-plastics was observed in soil which showed their biodegradable behaviour.

Keywords: Bio-plastics, Fick's model, Schott's model, Swelling Kinetics, Floral Offerings.

Introduction :

Environmental sustainability encourages people to live in a way that doesn't put stress on natural resources. This can maintain an ecological balance in our planet's natural environment, which will benefit today's ecosystems and protect future generations. Key factors in environmental sustainability include ecosystem services, green engineering and chemistry, air quality, water quality and solid waste management.

Environmental sustainability is concept of how we interact with the living components. It means meeting our present needs without compromising the ability of future generations to thrive, ensuring that ecosystems remain

undisturbed, resources are managed with ease, and human activities are in harmony with the environment.

Sustainable development makes cities and human settlements inclusive, safe, resilient, and sustainable. Reduce the adverse per capita environmental impact of cities, including by paying special attention to a municipal and other waste management.

We know plastics have been an integral part of our day-to-day life. It is used almost everywhere, from polythene carry bags to packing material. Different studies show that India is one of the largest plastic consumers in the world. This large consumption of plastics is producing plastic waste and is one of the environmental problems.

As per the study conducted by the Central Pollution Control Board (CPCB) in 60 major cities of India in 2021, it has been observed that around 4126997 TPA of plastic waste is generated from the cities. With extrapolation of the plastic waste generation data from 60 major cities, it is estimated that around 3070 Tons per day of plastic waste is generated in India. Data revealed that out of total plastic waste, around 94% waste comprises thermoplastic content, which is recyclable such as PET, LDPE, HDPE, PVC, etc. and the remaining 6% belongs to the family of Thermoset and other categories of plastics such as SMC, FRP, multi-layered, thermocol, etc., which is non-recyclable^{1,4}. The impact of this problem is so large on the environment that mere enforcement of the ban on plastic bags is not going to change things drastically. Another big environmental problem is temple waste and its disposal². Tons of temple waste is produced in India but very little part is recycled through composting. A sustainable remedy for both of these problems is production of bio-plastic. Many researchers such as Malhotra Milan et. al. worked on plant -Bio-based bioplastics for Current and future developments⁵.

An attempt has been made to produce biodegradable plastic from Floral Offerings so that these recycled products can be a boon for a new step in the Bio-plastic production world to reduce environmental pollution. In the present investigation, bio-plastics were prepared from Floral Offerings collected from houses temples, cultural events and then processed with starch, and acetic acid glycerin with water in equi-molar proportions. Newly synthesized bioplastics were studied with swelling absorption kinetics models such as Fick's and Schott's model^{3,6,9}. Swelling equilibrium depends on network structure, degree of cross-linkage, and hydrophilic nature of newly synthesized bio-plastics. The biodegradability of plastics was studied in soil for three months.

Material and Methods:

Synthesis of bio-plastics made from Floral Offerings:

Synthesis of bioplastics from Floral Offerings with starch, acetic acid, Glycerin with water is an invention of this study. The thought process behind this was that all constituents used in this method would be highly biodegradable in nature. This method was tried and tested several times in the laboratory

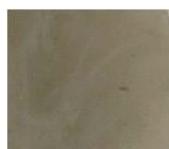
and the molar proportions of these constituents used here gave the best results. After collection and segregation of Floral Offerings, it was then sun-dried, grounded, and sieved, weight of each Floral Offerings powder was fixed (100mg) and then cooked properly with 50mg starch, 5ml acetic acid, 5ml glycerin, and 50ml of water in molar proportions till it became translucent and acquired desired thickness. It was then poured into the plate with uniform thickness and dried. Thin films of all bio-plastics were formed without any deformities.

The swelling test was performed by measuring weights at time intervals of 10 minutes starting from 0 minutes to 120 minutes. Biodegradability tests for plastics were performed in soil for three months.

Table 1 : Synthesis Data of Bio-Plastics made from Floral Offerings

Name of temple offerings (Floral Offerings)	Weight of Floral Offerings (mg)	Starch (mg)	Acetic acid (ml)	Glycerin (ml)	Water (ml)
Grass (Durva)	100	50	5	5	50
Marigold	100	50	5	5	50
Rose	100	50	5	5	50
Basil (Tulsi)	100	50	5	5	50
Chrysanthemum	100	50	5	5	50
Bel leaves	100	50	5	5	50
Mix Floral Offerings from different cultural events	100	50	5	5	50

Thin films of newly synthesized Bio-Plastics:



Durva



Marigold



Rose



Basil (Tulsi)



Chrysanthemum



Bel leaves



Mix Floral offerings

Result and Discussion:

Study of Water Swelling properties:

Swelling kinetic experiments were carried out by immersing a known amount of the dried bio-plastic with 50 ml of water at a constant temperature. The gravimetric analysis method was used to measure the swelling rate of the bio-plastics. The quantity of water retained inside bio-plastic in the equilibrium can be expressed mathematically in various forms⁶. The percent swelling rate water absorption amount was calculated using the formula

$$\text{Percent Swelling Rate} = \frac{W_t - W_0}{W_0} \times 100$$

Where W_t is the weight of bio-plastic at time t , W_0 is the initial weight.

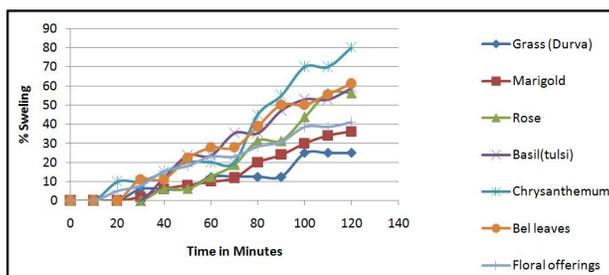


Figure 1: Percent Swelling in Newly Synthesized Bio-Plastics

Bio-plastic swells when it is brought into contact with water. Swelling of the bio-plastic continues until the forces due to swelling of the bio-plastic balance the pressure of the water into the swollen bio-plastic. The swelling process involves these steps: (i) Diffusion of water molecules into the bio-plastic (ii) relaxation of hydrated bio-plastic chains (iii) Expansion of the bio-plastic network into the surrounding aqueous solution⁷. From the above graph, it is seen that the initial swelling rate is constant. This may be because of the filling of void space in a matrix of bio-plastic then the swelling rate increases with time until equilibrium is reached.

Study of swelling kinetics:

To describe the swelling kinetics of different bio-plastics, two empirical models, namely, Fick's first-order and Schott's second-order absorption kinetic model were used. Fick's model was used to interpret the mechanism for the first swelling time. According to first-order kinetics, the rate of swelling at any given time (t) is directly proportional to the uptake of the swelling medium that has yet to occur before the maximum or equilibrium uptake (W_{max}) has been reached³. If W_t is the uptake at time t , $W_{max} - W_t$ is the unrealized uptake of the swelling medium. If k is the proportionality constant between the rate of swelling and the unrealized swelling capacity, then

$$\frac{dW}{dt} = k(W_{\max} - w_t)$$

To test Fick's kinetics models described above, the $W_t - W_0$ versus t graph was plotted for bio-plastic.

Schott's model was applied for the latter data to determine the second-order kinetics correlations. Schott's second-order equation for swelling is ⁸ as follows

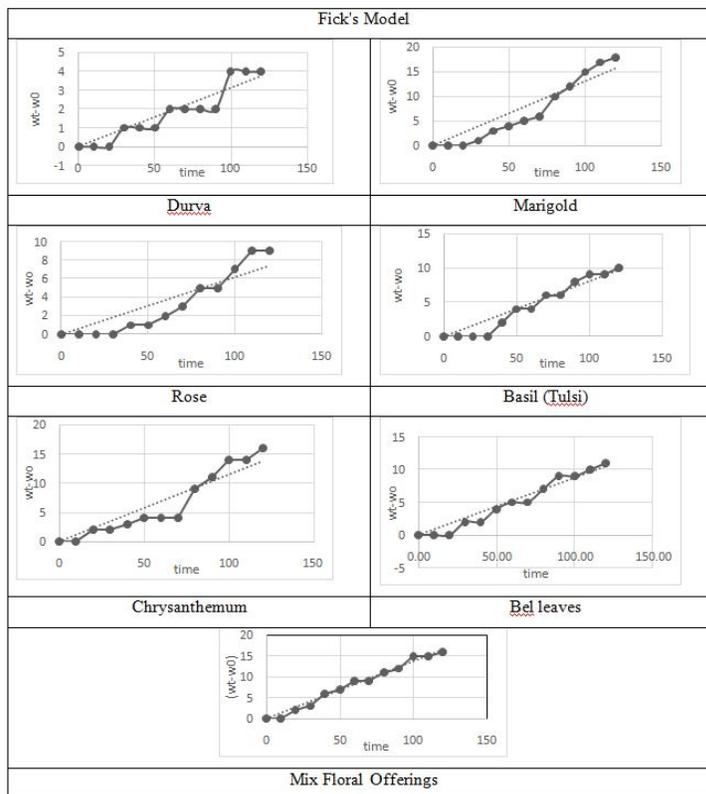
$$\frac{dW}{dt} = k_2(W_{\max} - w_t)^2$$

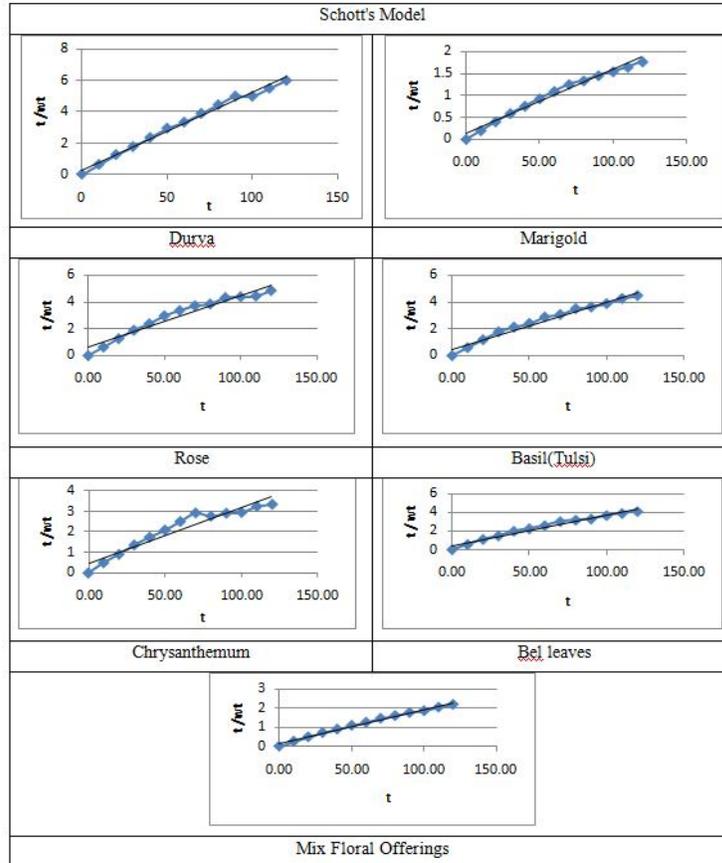
Where W_{\max} is the maximum equilibrium water swelling, W_t is the water swelling at time t , and k_2 is the swelling rate constant, respectively. After definite integration between the limits

$W = 0$ at $t = 0$ and $W = W_t$ at t and rearrangement, equation can be rewritten as follows:

$$\frac{t}{W_t} = \frac{1}{W_{\max}^2 k_2} + \frac{1}{W_{\max}} t$$

To test the Schott's kinetics models described above, the t/W_t versus t graph was plotted for bio-plastics.





Values which were calculated from the slope and the intersection of lines are presented in Table 2

Table 2: Summary of Swelling Kinetics for the Bio-Plastics

Bioplastics	Fick's First Order Model		Schott's Second Order Model	
	K	R ²	K	R ²
Grass (Durva)	0.011625	0.886	0.576073	0.99
Marigold	0.023369	0.882	0.79949	0.981
Rose	0.010387	0.822	0.081643	0.948
Basil (Tulsi)	0.025883	0.924	0.458367	0.973
Chrysanthemum	0.01865	0.877	0.108454	0.921
Bel leaves	0.023461	0.949	0.341414	0.972
Mix Floral Offerings from different cultural events	0.036817	0.982	1.400316	0.99

From the above data it is observed that the swelling kinetics behavior of all bio-plastics has R^2 values nearly equal to 1 is in good accordance with Fick's first-order kinetics and Schott's second-order diffusion kinetics^{1,10}.

Bio-degradability in soil:

Bio-degradability of these newly synthesized bio-plastics was tested in soil and gradual weight loss was observed after three months. The percent weight loss of bio-plastics is shown in Table 3. The percent weight loss of bio-plastics ranged from 24.0 to 65.8 %.

Table 3: Bio-degradability of Bio-Plastics in soil.

Bio-Plastics	Grass (Durva)	Marigold	Rose	Basil (Tulsi)	Chrysanthemum	Bel leaves	Mix Floral Offerings
% weight loss	25.6	45.2	33.6	24.0	65.8	35.4	58.3

Conclusions:

In this paper, bio-plastics are synthesized from Floral Offerings, then swelling parameters, and biodegradability in soil are measured. From the above discussion, it is observed that each bio-plastic has good water-absorbing power and also gives the best result from kinetics models. Appreciable weight loss of each bioplastic observed in soil during the period of three months. It is another step towards the bio-degradability of bio-plastics because the more the water swelling behaviour and weight loss in soil, the more will be the degradation power. This will speed up the recycling process.

Although it seems like a difficult goal, cities around the world are already working towards environmental sustainability and these newly bioplastics definitely new beginning of innovation through sustainability.

Synthesizing such bio-plastics from Floral Offerings will increase the global market for bio-plastics in the future. Secondly, it reduces dumping waste^{2,12,13} on the ground which is always spread over large areas in cities for many days. This good initiative will keep our country clean and disease-free because cleanliness leads to prosperity. Only need is awareness, education and strong will power for change the scenario in waste management system.

Acknowledgmen:

The author wishes to express their gratitude to Principal, L. A. D & Smt. R. P. College for Women, Nagpur, Head, Department of Chemistry, L. A. D & Smt. R. P. College for Women, Nagpur, for constant support and encouragement.

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**AGRICULTURE POLICIES AND THEIR ECONOMIC IMPACT
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Abstract:

Agriculture policies in India have been instrumental in shaping the country's rural economy. These policies aim to enhance agricultural productivity, ensure food security, and improve rural livelihoods. This study examines the evolution of agricultural policies in India, focusing on their economic impact on rural areas. It analyzes key initiatives like the Green Revolution, minimum support price (MSP), agricultural subsidies, and schemes such as PM-KISAN. The study highlights their role in reducing rural poverty, boosting farm incomes, and addressing challenges like climate change, debt, and market fluctuations. While these policies have transformed India's agricultural landscape, they have also led to issues such as resource overuse, regional imbalances, and farmer distress. This paper concludes with policy recommendations for sustainable and inclusive rural development.

Keywords :

Agriculture policies, Rural economy, Green Revolution, Minimum support price, Agricultural subsidies, Rural development, Farmer welfare, Economic impact, Sustainable agriculture, Food security

Introduction :

Agriculture has always been the backbone of India's economy, employing over 50% of the population and contributing significantly to GDP. The government's agricultural policies have played a pivotal role in transforming traditional farming practices, ensuring food security, and fostering rural development. Policies such as the Green Revolution introduced technological advancements that revolutionized agriculture. Similarly, government initiatives like MSP, subsidies, and credit schemes aim to provide economic stability to farmers. However, these policies face criticism for their uneven regional impact, over-reliance on resources, and limited reach to marginalized communities. This study explores the interplay between agricultural policies and their economic impact on rural India, aiming to provide a roadmap for sustainable development. Agriculture has always been the cornerstone of India's economy, culture, and society. Encompassing nearly 70% of the rural workforce and contributing significantly to the nation's GDP, it is the backbone of rural

livelihoods and food security. Over the decades, agriculture in India has evolved from traditional subsistence farming practices to a dynamic and modernized sector capable of feeding over a billion people and contributing to exports. This evolution, however, has been deeply influenced by the government's agricultural policies, which have played a pivotal role in shaping the rural economy and addressing the challenges faced by Millions of farmers.

The agricultural policy framework in India is a complex amalgamation of initiatives designed to address diverse issues such as productivity enhancement, market stability, rural development, environmental sustainability, and social equity. From landmark initiatives like the Green Revolution of the 1960s and 1970s, which transformed India into a food surplus country, to more recent programs like Pradhan Mantri Fasal Bima Yojana (PMFBY) and PM-KISAN, the government has consistently worked to strengthen the agricultural sector. However, despite these efforts, rural India continues to grapple with numerous challenges, including farmer indebtedness, regional disparities, environmental degradation, and the adverse effects of climate change. The Green Revolution introduced high-yield variety seeds, advanced irrigation techniques, and the use of chemical fertilizers and pesticides. While this technological transformation boosted productivity and ensured food security, it also gave rise to significant issues such as groundwater depletion, soil degradation, and socio-economic inequalities between regions. Moreover, policies like the Minimum Support Price (MSP) and subsidies have been instrumental in stabilizing farmer incomes, but their implementation has often been skewed, favoring large-scale farmers over small and marginal ones.

In recent years, the discourse around agricultural policies has shifted towards sustainability, climate resilience, and digital innovation. Programs such as the National Agriculture Market (e- NAM) aim to integrate farmers into digital ecosystems, enabling them to access markets and obtain fair prices for their produce. Similarly, Direct Benefit Transfers (DBTs) are being used to ensure transparency and accountability in subsidy distribution. However, the success of these initiatives depends on overcoming systemic issues such as lack of infrastructure, digital illiteracy, and policy inefficiencies.

This study delves deep into the evolution and impact of agricultural policies on the rural economy of India. It examines the successes and shortcomings of key initiatives while exploring their implications for rural livelihoods, food security, and economic development. By providing a comprehensive analysis, this study aims to highlight the pathways for building a more inclusive, sustainable, and resilient agricultural framework. It underscores the urgent need for policy reforms that prioritize the welfare of farmers, promote equitable resource distribution, and mitigate the adverse effects of climate change.

As India aspires to achieve self-reliance (Atmanirbhar Bharat) and sustainable development, the role of agriculture policies becomes increasingly critical. Their potential to transform rural India, uplift millions from poverty,

and secure the nation's food future makes them a cornerstone of India's growth narrative. Through a multidimensional analysis, this study seeks to provide insights into how these policies can be reimagined to align with the evolving socio-economic and environmental landscape of the country.

Definitions :

1. Agriculture Policies: Strategies and measures implemented by the government to enhance agricultural productivity and rural development.

2. Rural Economy: The economic system that encompasses agriculture, non-farm activities, and related livelihoods in rural areas

3. Minimum Support Price (MSP): A pre-determined price set by the government to purchase crops directly from farmers to ensure fair compensation.

Need :

1. To address rural poverty and unemployment.
2. To ensure food security and self-sufficiency.
3. To mitigate climate change impacts on agriculture.
4. To enhance farm productivity and income.
5. To promote sustainable and inclusive rural development.

Aims and Objectives :

1. To analyze the effectiveness of agricultural policies in improving rural livelihoods.
2. To study the regional disparities in the implementation and impact of these policies.
3. To identify the challenges and limitations faced by farmers.
4. To propose recommendations for sustainable agricultural practices.

Hypothesis :

Effective agricultural policies significantly contribute to the economic development of rural India by improving productivity, ensuring food security, and reducing poverty.

Research Methodology :

Data Collection: Secondary data from government reports, academic journals, and policy documents.

Analysis Tools: Statistical methods for evaluating the economic impact, qualitative analysis for policy critique.

Case Studies: Examples from states like Punjab, Bihar, and Maharashtra to illustrate regional impacts.

Strong Points :

1. Food Security: Policies have ensured surplus production and reduced dependency on imports.

2. Technological Advancement: Adoption of modern agricultural techniques through subsidies and schemes.

3. Economic Support: Initiatives like PM-KISAN provide direct financial aid to farmers.

4. Market Stability: MSP stabilizes market prices and protects farmers from exploitation.

5. Food Security and Self-Sufficiency : Indian agricultural policies have played a critical role in ensuring food security for its vast population. Initiatives such as the Green Revolution, introduction of high-yield variety seeds, and widespread irrigation infrastructure have transformed India from a food-deficit nation to a food-surplus one. This has safeguarded the nation against famines and significantly reduced malnutrition.

6. Economic Growth and Rural Development: Agriculture policies contribute significantly to India's GDP and rural economy. Programs that support crop production, market access, and financial subsidies have enhanced rural livelihoods, increased incomes, and created employment opportunities for millions of small and marginal farmers.

7. Minimum Support Price (MSP): The MSP system has been a cornerstone for providing a safety net to farmers by guaranteeing minimum prices for their crops. It has helped stabilize incomes, reduce exploitation by intermediaries, and encourage investment in agriculture.

8. Subsidy Mechanisms: Subsidies on fertilizers, seeds, electricity, and irrigation have made modern farming practices more accessible to small and marginal farmers. These subsidies have reduced input costs and encouraged technological adoption, boosting productivity.

9. Promotion of Allied Activities : Policies supporting allied sectors such as dairy, fisheries, and poultry have diversified rural income streams. Programs like Rashtriya Krishi Vikas Yojana (RKVY) emphasize the holistic development of the agricultural ecosystem, including horticulture, sericulture, and animal husbandry.

10. Technological Advancements : Government policies have introduced modern agricultural practices, including mechanization, precision farming, and biotechnology. Programs like Digital India and e- NAM (National Agriculture Market) are integrating technology into agriculture, improving efficiency, and market access for farmers.

11. Environmental Sustainability Initiatives : Policies such as the National Mission for Sustainable Agriculture (NMSA) promote climate-resilient agriculture, organic farming, and efficient water usage through microirrigation techniques like drip and sprinkler systems.

12. Credit Accessibility and Insurance : Schemes like the Kisan Credit Card (KCC) and Pradhan Mantri Fasal Bima Yojana (PMFBY) provide financial support and risk mitigation to farmers. These policies reduce dependency on informal credit systems and safeguard farmers against crop losses due to natural calamities.

13. Focus on Women and Marginalized Groups: Policies are increasingly recognizing the role of women in agriculture. Programs like Mahila Kisan

Sashaktikaran Pariyojana (MKSP) empower women farmers through training, financial support, and capacity-building.

14. Infrastructure Development : Policies focused on infrastructure, such as cold storage, warehousing, and transportation, have reduced post-harvest losses and improved supply chain efficiency. This enables better market prices and reduces wastage of agricultural produce.

15. Export Growth : Agricultural export promotion policies have enabled Indian farmers to access global markets. This has not only increased income but also diversified the demand base for Indian agricultural products.

16. Encouragement of Cooperative Models : Policies supporting cooperatives and farmer-producer organizations (FPOs) have empowered farmers by providing collective bargaining power, improved access to inputs, and greater market presence.

17. Employment Generation : Agriculture remains the largest employer in rural India. Policies that encourage agricultural expansion and allied activities create direct and indirect employment opportunities, reducing rural-urban migration.

18. Integration of Sustainable Development Goals (SDGs) : Indian agricultural policies align with global objectives such as poverty eradication, hunger elimination, gender equality, and environmental conservation, contributing to the achievement of the United Nations SDGs.

19. Improvement in Rural Quality of Life : Policies aimed at income stabilization, infrastructure development, and education in agriculture have improved the overall quality of life in rural areas, reducing poverty levels and promoting socio-economic development. These strong points highlight the significant contributions of agriculture policies in transforming the rural economy, ensuring food security, and fostering sustainable development in India. They underscore the need for continued policy innovation to address emerging challenges and capitalize on new opportunities.

Weak Points :

1. Resource Overuse:

Policies encouraging water-intensive crops strain natural resources.

2. Regional Disparities:

Unequal policy benefits across different states.

3. Farmer Indebtedness:

Limited access to institutional credit drives farmers to informal loans.

4. Environmental Concerns:

Excessive use of fertilizers and pesticides harms soil health.

5. Uneven Regional Development :

Agricultural policies often favor certain regions, particularly states with better infrastructure like Punjab, Haryana, and Maharashtra, while neglecting less developed areas such as Bihar, Odisha, and parts of North-East India. This imbalance exacerbates regional disparities.

6. Inadequate Support for Small and Marginal Farmers :

Despite being the majority, small and marginal farmers often receive limited benefits from policies. High transaction costs, lack of awareness, and inadequate institutional support restrict their access to subsidies, credit, and insurance schemes.

7. Overemphasis on Certain Crops :

Policies such as the Minimum Support Price (MSP) heavily favor wheat and rice, leading to monocropping. This has resulted in reduced cultivation of other essential crops like pulses, oilseeds, and millets, impacting crop diversity and nutritional security.

8. Environmental Degradation:

Policies promoting high-input farming have led to excessive use of chemical fertilizers, pesticides, and water resources, causing soil degradation, groundwater depletion, and pollution. The Green Revolution's environmental costs are still being felt in many areas.

9. Market Inefficiencies :

Despite reforms like e-NAM, agricultural markets remain fragmented. Farmers face difficulties accessing competitive markets due to poor transportation infrastructure, lack of market linkages, and the dominance of middlemen in the supply chain.

10. Lack of Technological Penetration :

While policies encourage the adoption of modern technology, their implementation is often limited to progressive farmers in well-developed areas. The lack of digital literacy and high initial costs hinder widespread technological adoption in rural India.

11. Policy Fragmentation and Inconsistency:

Agricultural policies are often fragmented across central and state governments, leading to a lack of coordination and coherence. Frequent policy changes and lack of long-term planning create uncertainty for farmers and investors.

12. Insufficient Focus on Climate Change:

Although policies like the National Mission for Sustainable Agriculture (NMSA) exist, their implementation is inadequate to tackle the severe impacts of climate change on agriculture. Extreme weather events, shifting rainfall patterns, and rising temperatures are affecting crop yields and farmer incomes.

13. Poor Implementation of Subsidies :

Subsidies often fail to reach the intended beneficiaries due to bureaucratic inefficiencies, corruption, and leakages in the system. Farmers frequently face delays or do not receive subsidies at all, diminishing the effectiveness of these policies.

14. Inadequate Farmer Education and Training :

Policies lack robust mechanisms to educate farmers about modern farming practices, financial literacy, and the use of technology. This knowledge gap prevents farmers from maximizing the benefits of available resources.

15. High Dependence on Monsoon :

Despite efforts to improve irrigation infrastructure, a significant portion of Indian agriculture remains rain-fed. Policies have not been effective enough in reducing the dependence on monsoons, leaving farmers vulnerable to droughts and erratic rainfall.

16. Limited Access to Credit:

Although schemes like Kisan Credit Card exist, many farmers, especially smallholders, still rely on informal credit sources with high-interest rates. Procedural complexities and collateral requirements hinder access to institutional credit.

17. Agricultural Insurance Gaps :

Insurance schemes like PMFBY face criticism for high premiums, delayed payouts, and limited coverage. Many farmers remain uninsured, leaving them exposed to significant risks from crop failures and natural disasters.

18. Inequitable Land Distribution :

Land reforms have largely failed to address land ownership inequalities. A significant number of farmers remain landless or cultivate on small, fragmented holdings, limiting their economic viability and access to policy benefits.

19. Post-Harvest Losses :

Policies addressing post-harvest infrastructure, such as cold storage and warehousing, remain insufficient. Poor handling, inadequate storage, and transport facilities result in significant losses, especially for perishable commodities.

20. Neglect of Non-Farming Activities :

While agriculture-centric policies are crucial, insufficient emphasis on non-farming activities like rural enterprises and skill development limits income diversification opportunities for rural households.

21. Underperformance of Cooperative Models :

Many farmer cooperatives and FPOs struggle due to poor governance, lack of funding, and limited market access. Policies fail to strengthen these organizations to make them more effective in improving farmers' bargaining power.

22. Insufficient Export Competitiveness :

Policies aimed at promoting agricultural exports are often hampered by non-tariff barriers, inconsistent quality standards, and inadequate branding of Indian agricultural products in global markets.

23. Rising Farmer Protests :

Recent policy changes, including attempts at market liberalization, have led to widespread farmer protests. This reflects the gap between policy intentions and ground realities, highlighting trust deficits and inadequate stakeholder consultation.

24. Social Inequalities :

Women and marginalized communities often face barriers in accessing policy benefits. Gender-biased land ownership, cultural norms, and systemic

exclusion limit their participation in and benefits from agricultural development policies.

25. Low Investment in Agricultural R & D :

Investment in agricultural research and development (R & D) remains below global standards. This limits the development of innovative solutions for improving productivity, sustainability, and resilience in Indian agriculture.

Current Trends of Present Research Study :

1. Digital Agriculture Initiatives :

The integration of digital technologies such as Artificial Intelligence (AI), Internet of Things (IoT), drones, and blockchain in farming practices is gaining momentum. Programs like Digital Agriculture Mission aim to empower farmers with real-time data on weather, soil conditions, and market prices.

2. Focus on Agri-Tech Startups :

The rise of agri-tech startups in India has been a game-changer. Startups are addressing issues like market linkages, precision farming, and access to credit through technology-driven solutions, attracting both private and government investment.

3. Sustainable Agriculture Practices:

Increasing awareness about environmental sustainability has led to a shift towards organic farming, natural farming, and agroecological methods. Policies like the Paramparagat Krishi Vikas Yojana (PKVY) promote organic farming to reduce dependency on chemical inputs.

4. Climate-Resilient Agriculture :

In response to climate change, the adoption of climate-smart agricultural practices is growing. Policies like the National Innovations in Climate Resilient Agriculture (NICRA) aim to mitigate the adverse effects of extreme weather on crops and livestock.

5. e-NAM Expansion :

The National Agriculture Market (e-NAM), a pan-India electronic trading portal, is expanding its reach. It provides farmers with better price discovery and ensures transparency in trade, reducing reliance on middlemen.

6. Increased MSP Revisions :

The government has been revising the Minimum Support Price (MSP) for major crops to ensure better incomes for farmers. This has become a key tool in addressing rural distress and stabilizing agricultural markets.

7. Irrigation Infrastructure Development :

Schemes like Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) are focusing on improving irrigation facilities, aiming to reduce the dependence of Indian agriculture on monsoons. Micro-irrigation techniques such as drip and sprinkler irrigation are being promoted extensively.

8. Doubling Farmers' Income by 2022 Vision :

The government's flagship initiative to double farmers' income has brought focus on diversifying agricultural activities, reducing input costs, and ensuring fair prices through value chain enhancements.

9. Promotion of Millets and Nutri-Cereals :

2023 was declared the International Year of Millets, boosting the cultivation and consumption of millets in India. Policies now emphasize diversifying cropping patterns to include more nutrient-rich and drought-resistant crops.

10. Agricultural Export Promotion:

India is focusing on enhancing its agricultural exports by promoting processed food, horticulture, and organic products. The Agriculture Export Policy aims to double agricultural exports by integrating farmers into global value chains.

11. Farmer Producer Organizations (FPOs) :

The establishment and strengthening of FPOs have become a priority to enable collective bargaining for inputs and better market access. The government is providing financial and technical assistance to empower FPOs.

12. Rise in Rural Infrastructure Development :

Investments in rural infrastructure, including roads, cold storage, and warehousing, have increased. This development is crucial for reducing post-harvest losses and ensuring better connectivity to markets.

13. Women Empowerment in Agriculture :

Policies now recognize the significant role of women in agriculture. Initiatives like Mahila Kisan Sashaktikaran Pariyojana aim to support women farmers with training, financial assistance, and access to resources.

14. Integration of Renewable Energy:

Solar-powered pumps and other renewable energy solutions are being promoted under schemes like Kisan Urja Suraksha Evam Utthaan Mahabhiyan (KUSUM) to reduce the dependence on fossil fuels and ensure energy security for farmers.

15. Crop Insurance Schemes Enhancement :

The Pradhan Mantri Fasal Bima Yojana (PMFBY) has been revised to make it more farmer-friendly, with simplified procedures, lower premiums, and faster claim settlements to increase coverage and minimize risks.

16. Rise of Contract Farming :

Contract farming is becoming a popular model for integrating smallholder farmers into organized value chains. Farmers are assured of prices and markets, while companies secure quality supplies.

17. Agriculture and Skill Development :

The focus on skill development in agriculture, including training in modern farming techniques and value addition, is gaining traction under initiatives like the Skill India Mission.

18. Direct Benefit Transfers (DBT) :

Subsidies on fertilizers, seeds, and electricity are being streamlined through DBT to ensure transparency and direct delivery to beneficiaries, reducing leakages and inefficiencies.

19. Increasing Awareness of Agroforestry :

Policies are promoting agroforestry to combine agriculture and tree cultivation for ecological and economic benefits. Schemes like Sub-Mission on Agroforestry encourage farmers to adopt these practices.

20. Blockchain for Traceability:

Blockchain technology is being introduced in supply chains to enhance traceability, quality assurance, and transparency in agricultural exports and domestic markets.

21. Emphasis on Nutrition Security :

Policies are increasingly focusing on linking agriculture to nutrition security by promoting kitchen gardens, biofortified crops, and school feeding programs.

22. Rise in Private Sector Participation :

Public-private partnerships (PPPs) are becoming more prominent in agriculture, from infrastructure development to research and market linkages.

23. Reforms in Agricultural Education :

Agricultural universities and institutes are being modernized to equip the next generation of farmers and researchers with advanced knowledge and skills.

24. Push for Precision Agriculture :

Precision farming, which uses data-driven approaches for decision making, is gaining popularity to improve productivity and resource efficiency.

25. Integration with Global Climate Goals History

India's agricultural policies are increasingly aligning with international climate goals, including commitments under the Paris Agreement and Sustainable Development Goals (SDGs).

India's agricultural policy framework has evolved significantly, from pre-independence subsistence farming to the Green Revolution's technological advancements. Post-independence, the government introduced land reforms, irrigation projects, and food grain procurement policies. The 1990s economic liberalization marked a shift towards market-driven policies. Recent initiatives include PM-KISAN, crop insurance schemes, and digital platforms for market access. The history of agricultural policies in India is a story of evolution, shaped by socio-economic challenges, colonial influences, and the aspirations of a young nation post-independence. Each era has contributed to building the framework for today's agricultural policies, which strive to balance growth, sustainability, and rural development.

Ancient and Pre-Colonial Period :

1. Traditional Agriculture Practices:

- Agriculture in ancient India was a cornerstone of the economy, with practices rooted in natural cycles, irrigation techniques, and crop rotation.
- Texts like the Arthashastra by Kautilya and Vedic scriptures emphasize agricultural practices, land use policies, and the socio-economic importance of farming.

- Villages were self-sufficient units, with collective farming and barter systems ensuring food security.

2. Land Ownership Systems:

- Land ownership varied, ranging from communal ownership in tribal areas to private and royal holdings in more developed regions.
- Revenue collection systems like the ryotwari and mahalwari systems existed even before the colonial era in some regions.

Colonial Period (1757-1947):

1. Introduction of Revenue-Oriented Policies:

- The British colonial administration prioritized revenue extraction over agricultural development.
- Systems like the Zamindari System, Ryotwari System, and Mahalwari System were introduced, focusing on maximizing revenue rather than enhancing productivity.
- The oppressive nature of these systems led to exploitation, rural indebtedness, and widespread famines.

2. Shift in Crop Patterns:

- Colonial policies promoted cash crops like indigo, cotton, and opium over food crops, disrupting traditional agricultural practices.
- This shift created vulnerabilities in food security, exacerbating the impact of famines.

3. Famine and Food Insecurity:

- Notable famines, including the Bengal Famine of 1943, exposed the failure of colonial agricultural policies to ensure food security.
- Lack of investment in irrigation, storage, and transportation infrastructure worsened the agricultural crisis.

Post-Independence Period (1947-1960s) :

1. Land Reforms :

- The abolition of zamindari, tenancy reforms, and land ceiling acts aimed to redistribute land and eliminate exploitative systems.
- Although partially successful, these reforms faced implementation challenges, particularly in feudal-dominated regions.

2. Focus on Irrigation and Infrastructure:

- The government prioritized building irrigation facilities, multi-purpose river valley projects, and rural road networks to support agriculture.
- Projects like Bhakra-Nangal and Damodar Valley were launched to enhance agricultural productivity.

3. Food Security Initiatives:

- The introduction of the Public Distribution System (PDS) aimed to address food insecurity in rural areas.
- Cooperative movements began to empower farmers, particularly in dairy farming (e.g., the Amul model).

Green Revolution (1960s-1980s)

1. Technological Transformation:

- High-yield variety (HYV) seeds, chemical fertilizers, and modern irrigation techniques revolutionized agriculture.
- Initially focused on wheat and rice, the Green Revolution transformed India from a food-deficient to a self-sufficient nation.

2. Regional Disparities:

- While productivity soared in Punjab, Haryana, and Western Uttar Pradesh, other regions lagged, creating regional imbalances.
- The excessive focus on irrigation-intensive crops led to groundwater depletion and environmental challenges.

3. Institutional Frameworks:

- The establishment of institutions like ICAR (Indian Council of Agricultural Research) and state agricultural universities strengthened agricultural research and education.

Economic Liberalization and WTO Era (1990s-2000s):

1. Shift in Policy Focus:

- Economic reforms in 1991 emphasized market-driven growth, leading to a reduced
 - role of subsidies and increased privatization in agriculture.
 - Policies began to focus on integrating Indian agriculture with global markets under WTO agreements.

2. Diversification and Value Addition:

- Farmers were encouraged to diversify into horticulture, poultry, and fisheries to increase incomes.
- Agro-processing industries received attention to enhance value addition and reduce post-harvest losses.

3. Challenges:

- Liberalization exposed farmers to global price volatility and competition, leading to increased vulnerability for small and marginal farmers.

Contemporary Era (2010s-Present):

1. Policy Innovations:

- Flagship schemes like PM-Kisan, Soil Health Card, and Pradhan Mantri Fasal Bima Yojana (PMFBY) aim to address contemporary challenges in agriculture.
 - Digitization initiatives, including e-NAM and direct benefit transfers (DBTs), improve transparency and efficiency.

2. Sustainability Concerns:

- Policies now emphasize sustainable practices, including organic farming, agroforestry, and renewable energy integration.
 - Climate-resilient agriculture is a growing focus, reflecting the urgent need to address the impacts of climate change.

3. Social Empowerment:

- The role of women in agriculture has gained recognition, with targeted schemes promoting their empowerment and participation.
- Farmer producer organizations (FPOs) are being promoted to enhance collective bargaining power.

4. Global Alignment :

- Indian policies increasingly align with international commitments like the Paris Agreement and the Sustainable Development Goals (SDGs).

The history of agricultural policies in India reflects a journey from subsistence farming and colonial exploitation to self-sufficiency and global integration. While significant progress has been made, challenges such as regional disparities, environmental sustainability, and market vulnerabilities persist. Understanding this historical context is vital for crafting policies that ensure inclusive and sustainable growth for rural India.

Discussion :

The analysis reveals that while agricultural policies have brought economic growth and improved food security, they face challenges like inequitable resource distribution, environmental degradation, and policy implementation gaps. Integrating technology and sustainable practices could address these issues.

Results :

1. Increased crop yields and farm incomes.
2. Reduction in rural poverty and unemployment rates.
3. Enhanced access to institutional credit and subsidies.
4. Regional imbalances in the policy impact remain significant.

Conclusion

Agricultural policies in India have transformed the rural economy, ensuring food security and boosting farmer welfare. However, issues like environmental degradation, resource overuse, and regional disparities persist. A holistic approach integrating technology, sustainability, and inclusivity is essential for future growth.

Suggestions and Recommendations :

1. Promote climate-resilient and sustainable farming practices.
2. Ensure equitable resource allocation and regional policy implementation.
3. Strengthen institutional credit mechanisms to reduce farmer indebtedness.
4. Encourage the use of digital tools for market access and price transparency.

Future Scope:

1. Expanding research on climate-resilient crops and sustainable farming.
2. Enhancing rural non-farm employment opportunities.
3. Developing region-specific agricultural policies.

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EQUITABLE GROWTH IN INDIA : CHALLENGES AND POLICY IMPERATIVES

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Abstract:

India has experienced rapid economic growth over the past few decades, India's growth has been driven primarily by the services sector and industrial sectors but this growth has been accompanied by increasing income inequality. Researchers identify several challenges to equitable growth, including income inequality, regional disparities, and limited access to education and healthcare. This paper examines the challenges to equitable growth in India and identifies policy imperatives to address these challenges. The paper reviews the existing literature on equitable growth, identifies the research gap, and develops a research hypothesis. The paper concludes that India needs to adopt a more inclusive growth strategy that prioritizes education, healthcare, and social protection. We also discuss policy imperatives to address these challenges, including increasing investment in education and healthcare, implementing progressive taxation policies, and promoting labor-intensive manufacturing.

Keywords: Equitable Growth, Economic Growth, Inequality, Government Policies, sustainable Growth,

Introduction:

Equitable growth refers to economic growth that is inclusive, sustainable, and benefits all segments of society, particularly the most vulnerable and disadvantaged groups. The concept of equitable growth emphasizes the need to address income and social inequalities, promote social justice, and ensure that economic growth is accompanied by improvements in human well-being and environmental sustainability. India has experienced rapid economic growth over the past few decades, with GDP growth averaging over 7% per annum since 2000. India's poverty significantly reduced and improved in human development outcomes. Despite these gains, India continues to face significant challenges in achieving equitable growth. The country's growth has been characterized by increasing income inequality, regional disparities, and limited access to education and healthcare for marginalized communities. Furthermore, India's growth model has been criticized for its environmental unsustainability and neglect of social welfare.

This growth has been accompanied by increasing income inequality. According to the World Bank, India's Gini coefficient, which measures income inequality, increased from 0.32 in 2000 to 0.35 in 2019.

In this context, achieving equitable growth has become a critical policy imperative for India. Equitable growth is not only essential for promoting social justice and reducing poverty, but also for ensuring sustainable development and promoting economic stability. However, achieving equitable growth requires a nuanced understanding of the complex challenges facing India's economy and society.

This research paper aims to contribute to this understanding by examining the challenges to equitable growth in India and identifying policy imperatives to address these challenges. The paper will review the existing literature on equitable growth, analyze the trends and patterns of growth and inequality in India, and identify policy interventions that can promote more inclusive and sustainable growth.

Review of Literature:

1. S. K. Singh and A. K. Singh (2017):

The authors examine the relationship between economic growth and income inequality in India in his published book "Inclusive Growth in India: An Empirical Analysis. They use econometric models to analyze the impact of economic growth on income inequality. The study finds that economic growth has a positive impact on reducing income inequality in India. The authors recommend policies that promote inclusive growth, such as education and skill development programs.

2. S. K. Singh (2018):

The author provides a critical review of the concept of equitable growth in India in his published book on "Equitable Growth in India: A Critical Review." They examine the different definitions and measures of equitable growth. The study finds that the concept of equitable growth is complex and multifaceted. The author recommends a more nuanced approach to understanding and promoting equitable growth in India.

3. R. K. Sharma and S. K. Sharma (2019):

The authors discuss in the research paper on "Equitable Growth in India: Challenges and Opportunities," They examine the current state of income inequality and poverty in India. The study identifies several challenges to achieving equitable growth, including income inequality, poverty, and lack of access to education and healthcare. The authors recommend policies that promote equitable growth, such as progressive taxation, social welfare programs, and investments in education and healthcare.

4. R. K. Sharma and S. K. Sharma (2019):

The authors review the existing literature on inclusive growth in India.

They examine the different measures of inclusive growth, including income inequality and poverty. The study finds that inclusive growth is essential for promoting economic development and reducing poverty in India. The authors recommend policies that promote inclusive growth, such as education and skill development programs, social welfare programs, and investments in infrastructure.

5. A. K. Giri and S. K. Das (2020):

A. K. Giri and S. K. Das published research on "Inequality and Growth in India: A Review of Literature" in Journal of Economic Surveys. The authors review the existing literature on the relationship between inequality and economic growth in India. They examine the different measures of inequality, including income inequality and wealth inequality. The study finds that there is a negative relationship between inequality and economic growth in India. The authors recommend policies that reduce inequality, such as progressive taxation, social welfare programs, and investments in education and healthcare.

Research Gap:

While there is a significant body of research on equitable growth in India, there are several gaps in the existing literature. First, most studies have focused on the macro-level analysis of equitable growth, with limited attention to the micro-level analysis. Second, there is a need for more rigorous empirical analysis of the relationship between economic growth, income inequality, and social outcomes.

Research Hypothesis:

Based on the review of literature and research gap, this paper will be based on the following research hypothesis:

1. There is a significant relationship between economic growth and income inequality in India.
2. The implementation of progressive taxation policies can reduce economic inequality in India.
3. Investment in education and skill development programs can improve economic opportunities for marginalized communities.

Objective of Research:

The objective of this research is to examine the challenges to equitable growth in India and identify policy imperatives to address these challenges. Specifically, the research aims to:

1. Examine the relationship between economic growths and income inequality in India.
2. Identify the challenges to equitable growth in India.
3. To study the policy requirements for improving possibilities for equitable growth in India.

Equitable Growth: An Overview:

Equitable growth can help reduce poverty and inequality by providing opportunities for all segments of society to participate in the growth process. Equitable growth promotes social justice by addressing the needs and aspirations of all citizens, particularly the most vulnerable and disadvantaged groups. Equitable growth is essential for sustainable development, as it ensures that economic growth is accompanied by environmental sustainability and social responsibility.

1. Economic Indicators:

India's GDP growth rate has been steadily increasing over the years, with a growth rate of 7.2% in 2020-21. India's per capita income has increased from 86,647 in 2014-15 to 1,34,186 in 2020-21. The poverty ratio in India has declined from 21.2% in 2011 to 5.5% in 2019. But the reality scared to us, because the difference between India's urban and rural GDP is quite significant. Urban areas contribute substantially more to the country's GDP compared to rural areas. Historically, the urban share of GDP has been increasing, while the rural share has been declining. For instance, between 1970 and 2012, the urban component of GDP grew significantly, while the rural component remained relatively stagnant.

2. Inequality Indicators:

India is one of the most unequal countries, with the richest 10% of Indians owning more than 60% of the country's wealth. The rural-urban divide is also significant, with the average monthly per capita consumption expenditure being Rs. 3,773 in rural areas and Rs. 6,459 in urban India. India's Gini coefficient, which measures income inequality, has increased from 0.32 in 2000 to 0.35 in 2019. The income share ratio of the top 10% of earners in India has increased from 28.4% in 2000 to 31.2% in 2019. The wealth inequality in India has increased, with the top 1% of earners holding 73% of the country's wealth.

3. Education and Healthcare Indicators:

Education and health are two crucial sectors in India that are handled by both the government and private sector. In terms of education, the government plays a significant role in facilitating and monitoring both sectors. In education, India's literacy rate has increased from 64.8% in 2001 to 77.7% in 2019. The gross enrollment ratio for higher education in India has increased from 12.4% in 2007-08 to 24.5% in 2017-18. India's healthcare spending as a percentage of GDP has increased from 3.8% in 2000 to 4.7% in 2019. But the problem is that there is no quality education and upgraded healthcare infrastructure, including hospitals, clinics, and medical facilities, especially in rural and underserved areas.

4. Regional Disparities:

1. State-wise GDP Growth Rate: The GDP growth rate varies significantly across states in India, with some states like Gujarat and Maharashtra growing

at over 8% per annum, while others like Bihar and Uttar Pradesh growing at less than 5% per annum.

2. State-wise Per Capita Income: The per capita income also varies significantly across states in India, with some states like Delhi and Goa having a per capita income of over 2 lakh, while others like Bihar and Uttar Pradesh having a per capita income of less than 50,000.

Challenges to Equitable Growth:

India's growth has been driven primarily by the services sector, which has grown at an average rate of over 10% per annum since 2000. However, this growth has not been inclusive. Several challenges have contributed to this lack of inclusiveness, including:

1. Income Inequality:

India's income inequality has increased significantly over the past few decades. According to the World Bank, the top 10% of earners in India account for over 30% of total income, while the bottom 10% account for less than 4%. The main factors contributing to this disparity are differences in the composition of economic activity, with urban areas having a stronger service sector and rural areas relying more on agriculture. Addressing this gap will require targeted policies to promote economic growth and development in rural areas.

2. Regional Disparities:

Regional disparity is a significant challenge for policy imperatives in India, as different regions have varying levels of economic development, infrastructure, and access to resources. This disparity can lead to unequal distribution of benefits and opportunities, making it challenging to implement policies effectively. India's growth has been concentrated primarily in a few states, such as Maharashtra, Gujarat, and Tamil Nadu. Other states, such as Bihar, Uttar Pradesh, and Madhya Pradesh, have lagged behind.

3. Limited Access to Education and Healthcare:

India's education and healthcare systems are inadequate, particularly in rural areas. This has limited access to these essential services for many Indians. Challenges in implementing imperative policies in healthcare and education in India include inadequate infrastructure, insufficient funding, workforce shortages, rural-urban disparities, corruption, and socio-cultural barriers.

4. Labor Market Distortions:

India's labor market is characterized by a large informal sector, which accounts for over 90% of total employment. This has limited access to social security benefits and other protections for many workers.

Policy Imperatives:

To address the challenges to equitable growth in India, several policy imperatives are necessary. These include:

1. Increasing Investment in Education and Healthcare:

The Indian government should increase investment in education and healthcare, particularly in rural areas. This could include programs such as the Sarva Shiksha Abhiyan and the National Health Mission. The government should improve access and quality, enhance infrastructure and teacher training programs. And also should promote inclusive and vocational education for rural area students. Government should run ensuring universal health coverage and upgrading infrastructure and human resources. These imperatives aim to bridge gaps and improve outcomes in education and healthcare, leading to a more developed and healthy society.

2. Implementing Progressive Taxation Policies:

The Indian government should implement progressive taxation policies to reduce income inequality. This could include increasing taxes on the wealthy and providing tax relief to low-income earners. By implementing a progressive tax policy, governments can promote equitable growth, reduce income inequality, and increase government revenue. However, it's essential to address the challenges and limitations associated with such policies to ensure their effectiveness.

3. Promoting Labor-Intensive Manufacturing:

To create employment opportunities for low-skilled workers, the Indian government should promote labor-intensive manufacturing through programs like the Make in India initiative, enhance workers' skills in textiles, leather, and food processing, streamline labor laws to encourage employment and entrepreneurship, and implement policies to protect workers' rights and provide social security.

4. Strengthening Social Security Systems:

The Indian government should strengthen social security systems, including pension and health insurance schemes, to provide protection to workers in the informal sector. To enhance effectiveness greater resources and funding should be allocated to various government programs; institutional frameworks and capacity training should be strengthened; openness and accountability should be improved; and participation from the community and feedback should be encouraged.

Conclusion:

1. The literature on equitable growth in India highlights the importance of inclusive growth, government policies, education, and healthcare. Future research should focus on micro-level studies, comparative analysis, and the impact of technology on equitable growth. By addressing these research gaps, policymakers can develop more effective strategies to promote equitable growth in India.

2. India's growth has been rapid, but it has not been inclusive. To address the challenges to equitable growth, the Indian government should implement policies to increase investment in education and healthcare, implement progressive taxation policies, promote labor-intensive manufacturing, and strengthen social security systems. By implementing these policies, India can promote more inclusive growth and reduce income inequality.

3. The data analysis suggests that India has made significant progress in terms of economic growth, poverty reduction, and improvement in education and healthcare outcomes. However, the data also highlights the challenges faced by India in terms of income inequality, regional disparities, and limited access to education and healthcare. The correlation and regression analysis suggests that there are significant relationships between these variables, and that policy interventions aimed at improving education and healthcare outcomes can have a positive impact on reducing poverty and income inequality.

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CHANGES IN THE VALUES, LIBERATION OF EDUCATION AND ANARCHY

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Abstract :

Values are the most important factor in education. Due to the changes in the societal structure and educational requirements many changes had taken place in mainstream education which also had impact of commercialization, privatization, liberation and anarchy. With the development of technology and societal structure values in education had drastically declining. There is a dire need of values in education are necessary for both the teachers and learners. This paper focuses on the changing structure of values in education and other important variables which impacts the mainstream education.

Keywords : values, education, liberation

Introduction :

In ancient times, India had the Gurukula system of education in which anyone who wished to study went to a teacher's (Guru) house and requested to be taught. If accepted as a student by the guru, he would then stay at the guru's place and help in all activities at home. This not only created a strong tie between the teacher and the student, but also taught the student everything about running a house. The guru taught everything the child wanted to learn, from Sanskrit to the holy scriptures and from Mathematics to Metaphysics. The student stayed as long as she wished or until the guru felt that he had taught everything he could teach. All learning was closely linked to nature and to life, and not confined to memorizing some information.

The modern school system was brought to India, including the English language, originally by Lord Thomas Babington Macaulay in the 1830s. The curriculum was confined to "modern" subjects such as science and mathematics, and subjects like metaphysics and philosophy were considered unnecessary. Teaching was confined to classrooms and the link with nature was broken, as also the close relationship between the teacher and the student.

Universal and compulsory education for all children in the age group of 6-14 was a cherished dream of the new government of the Republic of India. This is evident from the fact that it is incorporated as a directive policy in article 45 of the constitution. But this objective remains far away even more than half a

century later. However, in the recent past, the government appears to have taken a serious note of this lapse and has made primary education a Fundamental Right of every Indian citizen. The pressures of economic growth and the acute scarcity of skilled and trained manpower must certainly have played a role to make the government take such a step. The expenditure by the Government of India on school education in recent years comes to around 3% of the GDP, which is recognized to be very low.

Types of Education in India:

There are two types of education in India: formal and informal. Formal education is imparted in schools, colleges, and universities that follow a set curriculum. Informal education is provided outside the formal education system and does not follow any set curriculum. It includes training programs, workshops, and internships.

Formal Education:

Formal education is imparted in schools, colleges, and universities that follow a set curriculum. In India, the formal education system consists of five years of primary schooling, followed by three years of middle school and two years of high school. After the completion of high school, students can pursue higher education at a university or college.

Informal Education:

Informal education is provided outside the formal education system and does not follow any set curriculum. It includes training programs, workshops, and internships. Informal education can be beneficial for students who want to learn specific skills or knowledge that are not covered in the formal education system. It can also be helpful for students who want to gain work experience before entering the workforce.

Values in Education :

Value Education goes way beyond academic success. It supports the growth of virtues like integrity, empathy, tenacity, and decency in students. These attributes mold their personalities, direct their choices, and teach them how to change the world for the better.

To create a more sustainable world, with stable economies and more just and inclusive societies. A difficult but not unattainable target if we can count on the involvement of governments, institutions, businesses, and, above all, a responsible and committed public.

An exemplary citizen is made, not born. Just as we learn mathematics and languages, we should also become specialists in those lessons that are fundamental to living in harmony and social progress such as respect, empathy, equality, solidarity and critical thinking. Without these and other ethical principles that define us as human beings, it will be difficult for us to build a better world.

Values education is the responsibility of us all and not just of schools. The family, universities, businesses and sport, for example, are all ideal contexts to teach those ethical principles. Even so, for a number of years now, countries like Australia and the UK have actually been contemplating including values education as part of compulsory education.

Principal educational values :

Values education covers various topics related to citizenship and ethics, including:

Empathy : By putting ourselves in other people's shoes both cognitively and emotionally, we improve our ability to resolve conflicts and understand others' opinions.

Equal opportunities : The principle that we are all equal is one of the pillars of democracy, and moreover it fosters social inclusion and community life.

Respect for the environment : Values education makes us aware of the consequences of our actions on the planet and instils in us a respect for nature.
Care for health : We need to minimise health risks by encouraging the right attitudes and tackling health education from a dynamic, personal and collective point of view.

Critical thinking : This way of thinking makes us more analytical and observant, teaches us to recognise quality information and helps us to solve problems.

There are currently two distinct theories about the nature of values. Traditional teaching covers objective and universal ethical standards that may be acquired through learning and ongoing practice. But a more innovative approach maintains that morals are relative and depend on the individual, so it is very difficult to teach at the pedagogical level.

The most common strategies in values education include the following:

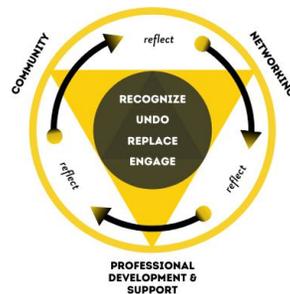
- The rejection of discrimination, enlivening debate on moral matters and promoting collaborative leadership.
- Denouncing harmful attitudes for society as a whole without stigmatising individuals.
- Stressing the idea that we can all change and that we deserve a second chance.

Liberation of Education

Liberating education consists in acts of cognition, not transferrals of information ... Problem-posing education, breaking the vertical patterns characteristic of banking education, can fulfil its function of being the practice of freedom ... Through dialogue, the teacher-of-the-students and the students of the teacher cease to exist ... The teacher is no longer merely the-one-who-teaches, but one who is him [or her]self taught in dialogue with the students, who in their turn while being taught also teach. They become jointly responsible for a process in which all grow.

Liberation of educators :

There are four sections of the pedagogy — recognize, undo, replace, and engage — that the Martinez Fellowship Program and Education encounter focus on to facilitate the journey to becoming a liberated leader. Members of the programs dive deeper into each section through NWEW's annual seminar series, known as the Year of Intention. But, with the urgency of everything happening in the world, the focus this year has also been on addressing the slew of racial injustices impacting our Black and Brown communities

LIBERATION PEDAGOGY

Sustaining ourselves in this work is supreme. If we truly want to transform education system and create valuable change, we need to approach this work sensibly. That means increasing sustainably in line with our core values. It means addressing and fixing the bends in the system that don't work for students. It means improving our practices to create equitable learning environments for our students and teachers of color. It means associating with organizations, universities, and corporations that care about raising the next generation of innovative, compassionate professionals. We are all part of this educational system and it is up to us to keep it balanced and flourishing for our children.

Anarchy and Education:

Anarchist theory in the context of education has prejudiced several key areas, such as organizational structure, political action for teachers, and rethinking the institution and the purposes that it serves. Anarchism for education means acceptance some key factors about schooling. Anarchists resist that the various institutions of schooling help to reproduce racial, class, sexual orientation, and gender divisions sustaining classist practices that weaken working class and poor students. Paul Goodman, in his famous 1964 tract on Compulsory Miseducation, argued that schools benefit the rich and powerful and serve to indoctrinate students into an ideological system rather than serving as places of enlightenment and critical dialogue. Anarchists contend that teachers and students should be co-creators of knowledge and the divisions between "teacher," "student," and "principal" should be restructured.

Anarchist theory in education pursues to build schools that are not organized around rigid hierarchies and that each school should be as free and open as possible, allowing individuals to explore their identities, free their desires from historically oppressive social norms, and each school should be autonomous so that it better meets the needs of the community. Schools and the communities that they are located in should be in a symbiotic relationship based on mutual aid, community building, and non-coercive practices. Anarchists have played a historic role in education and educational theory, even if a limited one. They have created schools that resemble anarchist conceptions and critiqued the institution of schooling itself. Francisco Ferrer, for example, instituted a “modern school” in Spain that incorporated vastly different ideological frameworks than schools of the time. Children were not exposed to a dogmatic curriculum or a slew of standardized tests that we now find in US schools; instead, the curriculum and the guiding philosophy that Ferrer argued for was the freedom of the individual child to pursue her/his intellectual interests in a non-hierarchical environment. Ferrer argued that schools had to be restructured in completely different ways to escape the colonizing and oppressive role that schools play in indoctrinating students into the status quo. Ferrer wanted teachers to have complete autonomy from state mechanisms so that they could encourage students to pursue educational interests of their choosing.

Conclusion:

Students develop holistically and become ethically conscious, caring, and responsible adults when value education is incorporated into the curriculum. It helps students make moral decisions and form deep connections by instilling fundamental values like honesty, empathy, and respect.

Value education develops character, fosters emotional health, and equips students to make constructive contributions to society in addition to academic achievement. It produces not only competent professionals, but also responsible global citizens dedicated to a fair and peaceful society by integrating principles into modern education.

Besides just building on the anxieties of the individual students, anarchist conceptions of education view community structure as an integral role in the development of children. Students must feel part of a school community to further engage their creative and intellectual chases. The main point is that the education of students should rest in the hands of the individual, with the schools guiding that process by providing activities and instruction which meet the goals of the students and the community. Value education is very much important and necessary to develop one’s skills, knowledge, effort and efficiency that one can know himself or herself in better way to exist in this world. The importance of value-based education cannot be overstated. It is believed that education is not just about acquiring knowledge but also about instilling values

that shape individuals into responsible, compassionate, and ethical members of society. We must have commitment to value education reflects our dedication to nurturing well-rounded individuals who will make a positive impact on the world.

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IMPACT OF BEEKEEPING ON THE SOCIO-ECONOMIC GROWTH OF INDIA: A REVIEW

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Abstract:

India has some of the oldest records of honey industry in the form of prehistoric paintings depicting hives and the earliest attempts to harvest honey. All the four species of honey bees - *Apis dorsata*, *Apis cerana*, *Apis mellifera*, *Apis florea* found in Indian subcontinent and the major portion of honey comes from *Apis dorsata*. India has a potential to keep about 150 million bee colonies, that can provide self-employment to over 6 million rural and tribal families. In production point of view, these bee colonies produce over 1.2 million tons of honey. Pollination is one of the most essential components in the pollination of field /fruit crops and natural ecosystems. The first step in getting a fruit/field crop is having sufficient pollination. An estimated 115,433 bee colonies are needed to grow 17,759 hectares of almonds (*Prunus amygdalus*). 243,300 hectares of sesamum (*Sesamum indicum*) fields require a substantial 6,082,500 colonies, whilst 2,096,900 hectares of sunflower (*Helianthus annuus*) crops require 62,907,000 colonies. Pollinator habitat conservation is essential to preserving ecological equilibrium. Pollinators' functional variety can be increased by increasing habitat diversity.

Keywords: Beekeeping, pollination, ecological equilibrium, Economy.

Introduction :

Beekeeping additionally called Apiculture is the control of honeybees in a hive in this sort of manner as observe its Manipulations and developmental stages. The role of apiculture in providing ecological security, nutritional and economic to rural peoples of Asia can't be disregarded as it has always been linked with their natural heritage and cultural. In South Asia, India is the largest country with an area of 3,287,263 (3.2 million) square kilometres, it is only the 7th largest country in the world. Apiculture is significant section of rural development programmes and agriculture in many Asian country. India shares a land border with Bhutan (605 km), China (3380km) and Nepal (1690 km) to the north, Bangladesh (4053 km) and Burma (1463 km) to the east, Pakistan (2912 km) to the north west. As of April 2023, India has a population of 1,425,775,850, making it the most populated country in the world, meaning it

has overtaken China. The country has a wide shoreline, with an the eastern facing the Bay of Bengal, the southern facing onto the Indian Ocean, the western cost facing onto the Arabian sea. (Abrol, D.P.*et al.*, 2023).By pollinating farmed crops and flowering plants, bees help to sustain the ecosystem. A useful, energizing, and healthful food, honey may also be used as a source of revenue. There are several applications for beeswax and other hive products, including making money. Because bees may be found in the wild and tools and equipment can be created locally, beekeeping is possible even for those with limited means. The beekeeper does not have to feed the bees. Because hives may be set up anyplace that is convenient, beekeeping does not need the use of expensive land. Wild, farmed, and wasteland regions are all beneficial for beekeeping because bees gather nectar and pollen wherever they can find it. There is no rivalry with other crops since only bees consume nectar and pollen, which are not utilized by other animals. These precious commodities could not be collected without bees. A robust beekeeping business benefits many industries and trades, since local merchants profit from the production of hives and equipment as well as from the use and sale of the items. Because beekeepers have a financial incentive to preserve the environment by making sure that flowers are supplied and bees are protected, beekeeping promotes ecological awareness. In terms of the preservation of biodiversity, bee pollination is essential to life on Earth. People of all ages can maintain bees, therefore anybody can become a beekeeper. honeybees do not need daily care, and beekeeping may be done when other employment allows. Beekeeping is a benign and ecologically good activity since it creates revenue without damaging habitat, so supporting beekeeping helps the conservation of biodiversity. (Chhuneja,*et al.*, 2011).

Land of honey:

Since ancient times, people have been aware of honey and honey bees. They have probably existed since the dawn of human society. Great epics, mythology, and cultural legacy all demonstrate this. Honey and honey bees have been known to humans since ancient times. Their existence is likely linked to the very beginning of human civilization. This is evident in great epics and mythological and cultural heritage.

Honey production in India:

Each year, approximately 1,170,000 tons of honey are produced worldwide, with China leading as the top producer, exporting 70,000 tons, and India exporting 1,000 tons. India has a low per capita honey consumption of just 8.4 grams annually, in stark contrast to other countries where it ranges from 120 to 1800 grams. (Chauhan, M. S. *et al.*, 2017). The significant difference in honey usage highlights varying dietary and cultural preferences around the globe. (Nanda V. *et al.*, 2003).

Honey producing state in India :

The previous few decades have seen a stable increase in honey consumption in India. Because of persistent efforts and dedicated government

programs, honey farming has significantly increased. The Sweet Revolution is a remarkable project that was started in 2016 with the goal of promoting scientific beekeeping throughout the country. Ten thousand beekeepers, businesses, and beekeeping and honey groups are enrolled with the National Beekeeping and Honey Mission (2021). Together, these organizations oversee 16 lakh honeybee hives. This validates the large scope of beekeeping operations around the country. The amount of honey produced rose from 76,150 MT in 2013–14 to 1,20,000 MT in 2019–20, a 57.58 percent increase. India’s top five honey-producing states are Madhya Pradesh, Punjab, Uttar Pradesh, Gujarat, and Bihar. The sixth-largest exporter of natural honey is India. (Hazarika, P. *et al.*, 2023).

Worldwide Honey Consumption: A Comparison of Annual Per Capita Intake by Nation:

The amount of honey used annually per person varies greatly between nations. With barely three to five grams used annually per person, India has the lowest usage. Greece is in first place with 1.8 kg, closely followed by Australia with 1.6 kg and Germany with 1.5 to 2.0 kg. Italy, Spain, France, Hungary, and other European Union nations use between 0.6 and 0.9 kilogram per person per year. The annual rate in the UK is 0.4 kilogram per person. Russia uses 500 grams of honey annually, compared to China’s usage of around 100 grams per person. About 600 grams are consumed annually per person in Serbia and Ukraine. Between 800 and 1000 grams are consumed annually per person in the United States. In Poland, 400 grams of honey are consumed annually per person, compared to 300 grams in Japan.

With an annual intake of 2.0 kg per person, Switzerland has one of the highest rates of honey consumption. Only 3 grams are consumed annually per person in Nepal, which is quite low. Lastly, each person in Turkey consumes around 850 grams of honey annually. This information demonstrates the diverse variety of honey eating habits seen in different nations.

Table 1: The way that countries consume honey is disgusting.

Sr. No.	Country	Honey consumption per person per year
1	USA	800-1000 grams
2	Australia	1600 grams
3	China	100 grams
4	India	3-5 grams
5	Poland	400 grams
6	Russia	500 grams
7	Germany	1500-2000 grams

8	Greece	1800grams
9	Serbia, Ukraine	600 grams
10	Japan	300 grams
11	Nepal	3.0 grams
12	EU countries (Italy, Spain, France, Hungary)	600-900grams
13	Turkey	850 grams
14	Switzerland	2000 grams
15	UK	400 grams

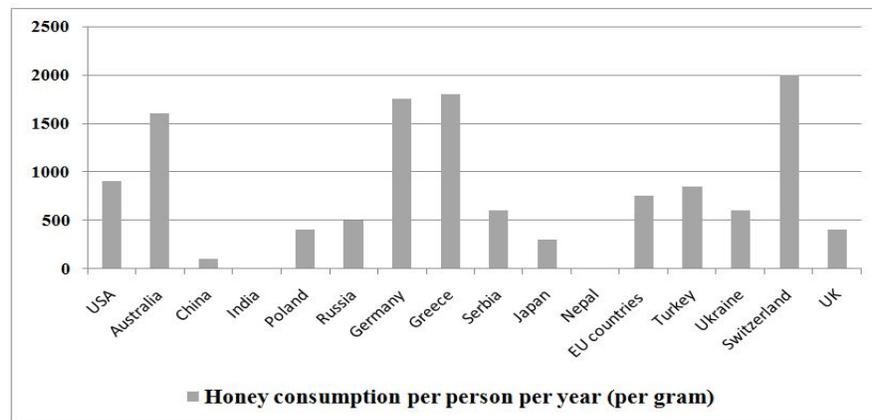


Chart 1: Worldwide honey consumption per person per year (per gram)
India’s total cultivated area, crops, and bee pollinators:

Many crops in India rely heavily on bee pollinators, as seen by the size of the overall area under cultivation. For example, an estimated 115,433 bee colonies are needed to grow 17,759 hectares of almonds (*Prunus amygdalus*). The 178,305 hectares used for apple (*Malus sylvestris*) cultivation require 410,101 colonies. 382,820 hectares are used for citrus crops (*Citrus spp.*), which require around 957,050 colonies. With a staggering need for 3,775,000 bee colonies, coconuts (*Cocos nucifera*) take up 115,000 hectares. On 15,389 hectares, grapes (*Vitis spp.*) are cultivated, requiring 38,473 colonies. Mangoes (*Mangifera indica*) occupy a vast area of 1,232,913 hectares, requiring 3,082,283 colonies, whilst guava (*Psidium guajava*) fields span 176,853 hectares, requiring 442,133 colonies. 32,000 hectares of papayas (*Carica papaya*) require 80,000 colonies, whereas 572,000 hectares of mustard (*Brassica spp.*) require 2,288,000. 243,300 hectares of sesamum (*Sesamum indicum*) fields require a substantial 6,082,500 colonies, whilst 2,096,900 hectares of sunflower (*Helianthus annuus*) crops require 62,907,000 colonies. Last but not least, 2,960,000 colonies are needed for the 740,000 hectares of cotton (*Gossypium spp.*) cultivation. India now has 10 lakh colonies available, but an incredible 737 lakh are needed. (Abrol, D.P. et al., 2023).

Honey bees’ contributions to increasing agricultural production:

The crucial role that honey bees play in enhancing horticultural crop and agricultural crop productivity has largely been ignored. But in India, the primary focus has been on honey production. This mistake highlights the need for greater attention to the benefits of honey bee pollination in farming. The production of many crops, such as fruits and nuts, vegetables, legumes, oilseeds, and fodder crops, is greatly improved by honeybees. Their pollination activities greatly upgrade crop quality and agricultural production. Numerous research has been conducted to prove how pollination by honeybees affects various income crops. The approximate number of bee colonies needed to enhance pollination of each crop has been calculated based on area. Generally speaking, pollination requires two to three colonies per hectare. However, the number varies every crop dependent on a number of factors, including the crop, locale, competing insects, flower abundance and attractiveness, etc. Honeybee pollination did not reduce only fruit drop in peach, apple, citrus and plum it also increases the fruit set (Thakur, R.K. *et al.*, 2016).

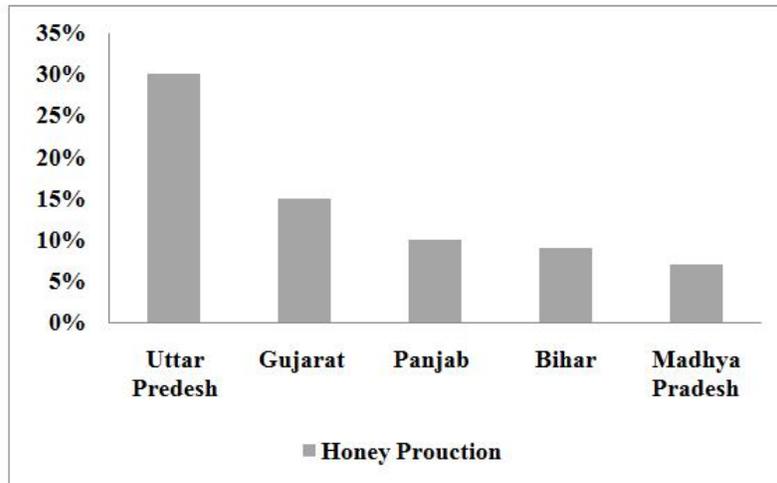


Chart 2: India’s largest honey production states

Beekeepers’ Organizations Registered with the National Bee Board:

The following are the specifics of organizations or beekeepers that have registered with the National Bee Board: The vast majority of hives—1,412,659 in total, or 90.56% of the total—are owned by individual beekeepers. 1.37% of all hives, or 21,502 hives, are owned by Beekeeping & Honey Societies. Companies are in charge of 84,390 hives, or 5.41% of all hives. 40,490 hives, or 2.59% of the total, are owned by firms. Finally, 730 hives, or just 0.04% of the total, are owned by Self Help Groups. A total of 1,559,771 hives, or 100% of the total share, are registered with the National Bee Board. (Nagma, P. *et al.*, 2021)

Table 2: Percentage of different crops' yields that increased as a result of bee pollination.

Oil seeds	% increase in yields
Mustard	128.1 to 159.8
Safflower	4.2 to 114.3
Linseed 1.7 to 40	1.7 to 40
Pulses	% increase in yields
Pulses (Moong, Urd, Masoor, Peas, etc.)	28.7to73.8

The information demonstrates how bee pollination significantly affects the yields of different oilseeds and pulses. Safflower shows a notable increase in yield between 4.2 % and 114.3 %, while mustard shows a notable increase between 128.1 % and 159.8 %. The yield enhancement for linseed is more moderate, ranging from 1.7 % to 40 %.

In the category of pulses, which includes crops such as moong, urd, masoor, and peas, the yield increase spans from 28.7 % to 73.8 %. This underscores the crucial role that bee pollination plays in boosting agricultural productivity for both oilseeds and pulses. (Abrol, D.P. *et al.*, 2016).

Management of constraints:

Extreme use of pesticides:

Both insecticides and beekeeping are vital components of current agricultural management technologies. Food production would be harshly hampered if either were ignored. However, the uncaring application of pesticides and other chemicals has a major negative impact on crop pollination. The populations of beneficial insects have been reduced or perhaps wiped out as a result, which has had an indirect impact on agricultural output and low crop yields. Pesticide application may be unescapable, but it may be done sparingly by avoiding the sprays when the crops are in blossom.

Lengthy dearth periods:

The primary obstacle to the growth of the beekeeping sector in agricultural areas is the prolonged lack of food for the bees. Only when Kharif (summer or monsoon) and Rabi (winter) crops are in blossom is forage available. However, the unpleasant summer heat and lack of fodder during other times make it difficult to sustain bee colonies on agricultural plains all year round.

Upcoming obstacles for beekeeping:

By 2030 AD, analysts predict that India's population would number around 150 crore. The next ten years will provide India with two enormous challenges: 1) giving many young people jobs, and 2) ensuring that everyone has access to adequate wholesome food. Agricultural scientists estimate that in order to pollinate and boost the yield of 12 important crops that require insect pollination

and are self-sterile, India needs at least 75 lakh bee colonies. The beekeeping sector can contribute in a modest way to solving these two issues. The approach for the upcoming ten years should focus on maintaining and starving these colonies, ensuring their quick growth, and boosting the bee colonies' productivity.

Healthy ecosystems and agriculture depend on efforts to preserve and care for current bee colonies. This involves producing and distributing common beekeeping supplies, which guarantee beekeepers have the equipment they need to maintain their hives efficiently. Enhancing bee forage is vital for ensuring that bees have enough nourishment, and raising the quantity and efficiency of bee colonies aids in meeting the rising needs for pollination. While managing illnesses, pests, and beehive adversaries protects colony health, technological advancement is crucial to improving beekeeping methods. Resilience and production can be increased by breeding superior honeybee breeds. Furthermore, technology transfer and worker skill development are essential to the industry's expansion. Future generations of beekeepers are fostered by training in Departments of Agriculture and Forests schools and universities, and diversifying bee products increases economic value. Bee product marketing and quality assurance provide marketability and customer pleasure. Last but not least, a coordinated strategy to advance beekeeping in India requires cooperation between the Khadi and Village Industries Commission (KVIC), the All India Coordinated Research Project (AICRP) on pollinators, and numerous departments like Agriculture, Horticulture, Forest, Irrigation, and Agricultural Universities. (Shende, S. G. *et al.*, 1993)

Conclusion:

Crop productivity and yields are declining, endangering Indian farmers' access to food and money. In many agro-ecosystems, pollinators are significantly declining. Less habitat variety is the cause of pollinators decreased functional diversity. India has enormous potential for growth given its abundance of bee flora, provided that pressing problems are properly resolved. Pollinator habitat conservation is essential to preserving ecological equilibrium. Pollinators' functional variety can be increased by increasing habitat diversity. Better conservation efforts may result from more knowledge and instruction on the significance of pollinators. Pollinator populations can be increased by promoting sustainable practices and local beekeepers. To effectively conserve pollinators, communities, businesses, and the government must work together. Resolving these issues will guarantee agricultural systems' sustainability.



Photographs: Beekeeping in Maharashtra

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**STUDY OF EMPLOYMENT OPPORTUNITIES AND
CHALLENGES FOR WOMEN IN GIG ECONOMY****Dr. Lakhan B. Ingle**Department of Economics
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Abstract :

The Internet is a very powerful business platform. Many people are able to generate good income through the network, "today in the digital world the definition of employment and the nature of work is also changing rapidly. A new global economy is emerging rapidly, which is being named 'Gig Economy'. Gig means a pre-determined payment amount for each assignment. In this gig economy, you earn on the basis of per assignment. Actually, the gig economy includes freelance work and project-based employment for a fixed period. You can work here as per your convenience. The gig economy gives an employee all the facilities he wants, such as flexibility, favorite work, work-life balance and good earnings. Thus the gig economy is emerging as a synonym for professional stressful job. Actually, the gig economy is growing very fast in America, Germany, and Europe. According to an estimate, about one-third of the workers in India are also moving towards becoming independent entrepreneurs." The gig economy profession is gaining popularity as a mainstream profession, career or business in India and around the world. Under this, a large number of people around the world are becoming solo-preneurs or micro-entrepreneurs.

The gig economy has created significant opportunities for women to participate in the workforce, often offering flexibility and independence. "However, it also presents challenges. Below is an overview of opportunities and considerations for women in the gig economy."

Keywords: Women Employment, Privatization, Technology, Instability, Development.

Introduction:

According to the Gig Worker-2020 Code, a gig worker is a person who works or participates in a job and earns financial income without being tied to a traditional employer-employer relationship: Any person who works on an hourly or part-time basis in anything from event catering to software development is a 'gig worker'. 'Yes. According to a Boston Consulting Group report, India's gig workforce includes 1.5 crore workers; Those operating in industries such as software, shared and professional services. The age groups

included in this gig economy are 18-23 (16%), 24-38 (64%) and 39-55 (18%). 2% of servicemen are over fifty-five years of age and 31% are women.

Generally informal wage and traditional sector workers who are engaged in part-time or full-time work. According to the NitiAayog report, the number of gig workers will increase from 77 lakhs in 2020-21 to 1.52 crores by 2029-30. Gig workers are employed in many non-agricultural sectors such as retail trade and sales (about 25 lakhs) and transport sector (about 50 lakhs). Currently, about 47% of gig workers are in medium-skilled jobs, 22% in high-skilled jobs, and about 31% in low-skilled jobs. According to the report, there was a significant increase in the number of workers in this sector during 2011-20. The education sector also saw a 51% increase in gig workers. In 2019-20, the gig economy contributed one per cent to India's gross national product.

Today everything in the world is going through a phase of rapid change whether it is technological advancement or any decision taken in daily life. "Formal education which is considered essential for any kind of development and the meaning of acquiring knowledge in a scientific way is also changing according to the changing mindset. Since the gig economy is the latest wave, there is a possibility of increasing options or a change in the mindset of a freelancer compared to a full-time employee. Gig economy is a domain used for temporary jobs. Commons and organizations contract with freelancers for temporary jobs." It seems that the trend towards gig economy has started. Gig workers are usually a person who works as an independent contractor in a temporary job in the service sector. "Gig workers are different from traditional workers. They are relatively young, work long hours and prefer flexible work schedules."

Objectives of the Research :

1. To study the problems faced by women while working in the gig economy.
2. To study the impact of socio-economic status of women in the gig economy.
3. A field-wise study of women working in the gig economy in Nagpur city

What is the Gig Economy?

The gig economy is a system based on "flexible, temporary or freelance jobs, in which relationships between customers and employers are developed primarily through online platforms. In this system, companies focus more on hiring independent contractors and freelancers rather than full-time employees. This is why the gig economy undermines the traditional economic system with full-time workers."

"Under the traditional economy, the tendency of employees to change their jobs and tasks is very low and employees tend to focus on one type of career throughout their life. On the other hand, in the gig economy, employees keep changing them according to the changing nature of work."

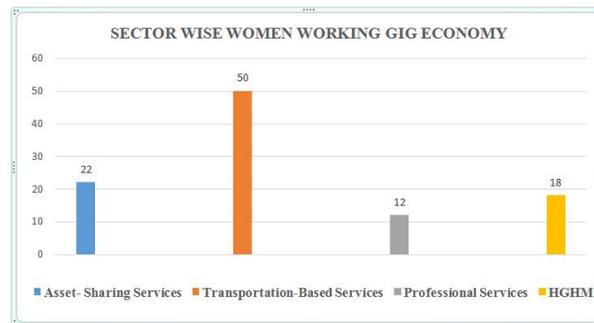
Sampling for Pilot Study :

Since the present study is related to Nagpur city, the sample will be selected from Nagpur city only. A total of 50 women working in the gig economy will be selected for the study.

Sector wise classification of women working Gig Economy in Nagpur city**Table No. 1**

Sr. No.	Sectors	Numbers	Percentage
1	Asset- Sharing Services	11	22.00
2	Transportation-Based Services	25	50.00
3	Professional Services	06	12.00
4	Handmade Goods, House & Miscellaneous Services (HGHM)	09	18.00

Source: Field Work



For the present research paper, women working in the gig economy in Nagpur city were studied. A pilot study of 50 women was done as sample selection for this study. The above study shows that there is participation of women workers in the gig economy and that participation is seen in various sectors. The study shows that the proportion of women working in the transport services sector is higher and the proportion of women working in the professional services sector is less.

Selection of Topic:

It is the government's job to provide employment opportunities to the growing population. But the government is not always able to provide employment, at such times privatization is born. Privatization provides employment opportunities in different fields. Gig economy is one of them. Employment opportunities have been provided to all working people through the gig economy. Has economic and social stability been created in the life of women through the gig economy? The topic has been selected to test this.

Since the researcher himself belongs to the Nagpur urban area, the researcher realized that there are some shortcomings in the functioning and

implementation of the gig economy and with a view to make the gig economy more efficient by removing them, the researcher has chosen the presented topic.

Potential of India's Gig Sector :

- 1) An estimated 56 per cent of new jobs in India are being generated by gig economy companies in both the blue-collar and white-collar workforce.
- 2) While the gig economy is prevalent in India for blue-collar jobs, demand for gig workers in white-collar jobs such as project-specific consultants, salespeople, web designers, content writers and software developers is also emerging.
- 3) The gig economy can create 90 million jobs in non-agricultural sectors in India, with the potential to add 1.25 per cent to GDP in the 'long term'.
- 4) As India moves towards its stated goal of becoming a USD 5 trillion economy by 2025, the gig economy will play a major role in bridging the income and unemployment gap.

Social Security to Women from Gig Economy :

The government has considered providing affordable medical care at subsidized rates to women employees working in the gig economy in Employees State Insurance Corporation (ESIC) hospitals and dispensaries. "This can provide relief to companies associated with the gig economy as they will not have to bear the cost of social security of their women employees. In the last session of Parliament, the government introduced the Social Security Code Bill 2019 in the Lok Sabha. This bill proposes to provide social security cover to women employees working in the gig economy for the first time in India." The bill states that the government will introduce a scheme to bring gig workers under ESIC.

Advantages of Working in the Gig Economy for Women :

1) Helps to balance home and work: Gig employment allows part-time work and flexible working hours which helps women to balance employment and their traditional roles (housewifery and caregiving).

2) Safe work environment for women: Gig employment complemented by work from home (WFH) and technology has addressed the issue of safety during travel and night shifts and has opened up new employment opportunities for women in tier 2 and 3 cities.

3) On-demand work: It allows women to join and leave work as per their wish without any demand.

4) Helps in earning additional income: Gig employment helps women in earning additional income, increases their confidence and gives them decision-making power which are important components of women empowerment.

Disadvantages of Working in the Gig Economy for Women:

1) Perpetuates pre-existing problems in the labour market: There are serious entry barriers to female participation in the gig economy as it perpetuates pre-existing problems in the labour market such as gender pay gap, biased algorithms, gender stereotypes and the digital divide. This makes it imperative

to identify and address these underlying structural issues in the digital ecosystem. The digital divide between men and women is a serious barrier to women's participation in gig work. According to the GSMA Mobile Gender Gap Report 2020, only 21% of mobile internet users in India are women, creating unequal access to digital technologies needed to engage in the platform economy. Although there is no comprehensive database available on gig workers in the country, it has been observed that there is occupational segregation based on gender stereotypes on the platforms. While women engage mostly in beauty and wellness services, as well as formal domestic and care work, men perform mostly transportation and delivery jobs.

2) Pay Inequality: Wage inequalities are prevalent in the gig economy. Pre-pandemic reports suggest that there was an 8%-10% gap between male and female gig worker earnings in India. In fact, studies suggest that the existing inequality leads women to underestimate their ability and engage in lower-paying jobs, thereby exacerbating the already prevalent pay inequalities in the gig economy.

3) Bias against women: Different platforms are often biased against women due to their 'on-demand' work schedules and incentive mechanisms. Engagement in household and childcare responsibilities often does not allow women to take advantage of peak hours, when both demand and wages are higher. Moreover, their daily working hours, including paid and unpaid work, are so much higher than men that they are short of time.

Opportunities in Gig Economy :

1) Flexibility: Women, particularly those balancing caregiving responsibilities, can benefit from flexible work hours. Gig platforms often allow workers to set their schedules, enabling better work-life balance.

2) Diverse Roles: Opportunities range from driving and delivery (Uber, Lyft, DoorDash) to freelance writing, graphic design, tutoring, and consulting (Fiverr, Upwork, Toptal). Platforms like Etsy provide space for women entrepreneurs to sell handmade or creative products.

3) Low Entry Barriers: Many gig platforms require minimal qualifications or certifications, making them accessible. Women can quickly start earning income without extensive formal education or training.

4) Entrepreneurial Pathways: Women can use the gig economy as a stepping stone to build their own businesses or side hustles. Gig platforms offer exposure to potential clients and markets.

5) Geographic Independence: Online freelance opportunities allow women to work from anywhere, which can be especially advantageous for those in remote or underserved areas.

Challenges in Gig Economy :

1) Income Instability: Earnings in the gig economy can be unpredictable, posing financial challenges. Women in caregiving roles may find it harder to commit to peak earning times.

2) Lack of Benefits: Gig workers are often classified as independent contractors, meaning they do not receive benefits like health insurance, maternity leave, or retirement savings.

3) Safety Concerns: Women in roles requiring physical interaction with customers, such as ridesharing or delivery, may face safety risks. Harassment is a notable concern on some platforms.

4) Gender Pay Gaps: Studies have shown women may earn less than men on some gig platforms due to fewer working hours or differences in job selection.

5) Technology and Skill Gaps: Women without access to technology or digital literacy may find it challenging to enter the gig economy. A lack of upskilling opportunities can limit growth prospects.

Impact on Gig Workers :

The gig economy in India has both positive and negative implications for workers. "On the one hand, it offers the potential for greater flexibility and autonomy, allowing workers to choose their own hours and work on projects that match their skills and interests. Many gig workers in India are also able to earn more than they would in traditional employment, particularly in sectors such as ride-hailing and delivery services. This has led to a significant increase in the number of people who are choosing to work in the gig economy as their primary source of income." However, gig work in India is also characterized by low pay, poor working conditions, and limited access to benefits such as health insurance and retirement savings. "Many gig workers in India are also classified as independent contractors rather than employees, meaning they do not have access to the same legal protections and labour rights as traditional employees. This has led to concerns about worker exploitation and the need for better regulation of the gig economy in India."

Suggestion :

Even today, the government has not been able to take such prominent measures to provide regular employment. Also, most of the class is still not capable enough to work online in the service sector. Total 49% population is still away from online services. In developed countries, gig economy workers are protected through social security number for unemployment benefits, sickness, maternity, insurance, health, pension etc.

India will also have to make such provisions, so that the interests of gig workers are promoted. In the Budget 2021-2022, the Finance Minister has taken note of the gig economy and made a provision to accommodate gig workers under the State Insurance Scheme (ESIC). A centralized list of gig workers is planned. Substantial recommendations have been made regarding working hours and protection for women. If an optimistic picture of the gig economy as a whole is to be seen, the Indian government needs to plan and strictly implement provisions for the wider interests of both the gig industry and its workers.

Conclusion :

The gig economy is a difficult terrain for women, full with both opportunities and pitfalls. "While it provides exceptional freedom and opportunities for entrepreneurship, it also presents considerable obstacles in terms of financial stability, perks, and work-life balance. Addressing gender inequities and creating a supportive environment are critical for women to fully benefit from the gig economy."

Understanding these factors and advocating for required reforms can help society develop a gig economy that is inclusive, equitable, and responsive to women's different needs and goals. "The stories of success and perseverance among women in this sector demonstrate their determination and resourcefulness, paving the path for a more balanced and equitable future in the gig economy."

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THE ROLE OF ETHICS IN CURRICULUM DESIGN AND DELIVERY

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Introduction:

Ethics plays a fundamental role in shaping the curriculum design and delivery of an education system. A well-structured curriculum is not just about academic knowledge but also about fostering moral values, integrity, and social responsibility in learners. Ethical considerations ensure that education remains inclusive, fair, accurate, and relevant, helping to build a just and progressive society. Incorporating ethics in curriculum design ensures that the content is free from bias, culturally sensitive, and factually correct, while ethical delivery ensures that students receive education fairly and without discrimination. Moreover, educators have a social responsibility to instill values that help students become responsible citizens, critical thinkers, and ethical decision-makers.

This paper explores the ethical considerations involved in curriculum design and delivery and highlights the social responsibilities of educational institutions in ensuring equity, fairness, and ethical integrity in education.

1. Ethics in Curriculum Design :

Curriculum design involves planning what students should learn and how they should learn it. Ethical considerations ensure that the curriculum is **fair, inclusive, and promotes holistic development.**

Key Ethical Considerations in Curriculum Design:

A. Inclusivity and Equity :

Inclusivity and Equity in curriculum design ensure that education is accessible, fair, and representative of diverse student backgrounds. A well-designed curriculum must eliminate biases related to gender, ethnicity, disability, socioeconomic status, and cultural identity, fostering an environment where every learner feels valued and included. It should incorporate diverse perspectives, ensuring that students from marginalized communities see

themselves reflected in the content. Additionally, educational materials should be free from stereotypes and discriminatory language, promoting mutual respect and understanding. Providing accommodations for differently-abled students, such as assistive technologies and alternative learning methods, is essential to creating an equitable learning experience. By prioritizing inclusivity and equity, curriculum design helps bridge social gaps, empower underrepresented groups, and create a more just and harmonious society.

B. Accuracy and Truthfulness :

Accuracy and Truthfulness in curriculum design are essential to ensuring that students receive reliable, unbiased, and well-researched knowledge. Educational content must be factually correct, based on credible sources, and free from misinformation or manipulation that could distort historical, scientific, or social realities. A truthful curriculum presents multiple perspectives, especially in subjects like history, politics, and social studies, allowing students to develop critical thinking skills rather than being influenced by selective or biased narratives. It is the ethical responsibility of educators and curriculum developers to ensure that textbooks and learning materials are regularly updated to reflect new discoveries, evolving societal values, and technological advancements. Misrepresentation or omission of facts can lead to misconceptions, hinder intellectual growth, and perpetuate systemic biases. By prioritizing accuracy and truthfulness, curriculum design fosters an education system that promotes integrity, critical inquiry, and a well-informed citizenry.

C. Moral and Value-Based Education :

Moral and Value-Based Education in curriculum design is essential for shaping students into ethical, responsible, and compassionate individuals who contribute positively to society. A well-designed curriculum should not only impart academic knowledge but also instill core values such as honesty, respect, empathy, responsibility, and justice. These values help students develop a strong moral compass, guiding their decisions in personal and professional life. Integrating moral education across subjects—through literature, philosophy, history, and real-world ethical dilemmas—encourages critical thinking and ethical reasoning. Schools should also foster value-based learning by promoting activities such as community service, teamwork, and social responsibility projects, allowing students to practice ethical behavior in real-life contexts. By embedding moral and value-based education within the curriculum, educational institutions play a vital role in cultivating ethical leadership, civic

responsibility, and a culture of integrity, ultimately shaping a society that upholds fairness, justice, and human dignity.

D. Relevance and Practicality :

Relevance and Practicality in curriculum design ensure that education remains meaningful, applicable, and aligned with the evolving needs of society, industry, and the global economy. A well-designed curriculum must equip students with the knowledge and skills necessary for real-world problem-solving, critical thinking, and adaptability in various professional and personal contexts. It should incorporate contemporary issues, technological advancements, and industry-specific competencies to prepare learners for the challenges of the modern workforce. Practical learning methods, such as hands-on training, internships, case studies, and project-based assessments, should complement theoretical knowledge to enhance skill development and employability. Moreover, ethical curriculum design considers cultural, social, and economic contexts, making education more relatable and effective for diverse learners. By ensuring relevance and practicality, curriculum developers empower students with the ability to apply their learning to real-life situations, fostering lifelong learning and meaningful contributions to society.

2. Ethics in Curriculum Delivery :

Ethical teaching practices ensure that students receive education in a **fair, unbiased, and effective manner**. This includes the behavior of educators, assessment methods, and interaction with students.

Key Ethical Considerations in Curriculum Delivery:

A. Fairness and Impartiality in Teaching :

Fairness and Impartiality in Teaching are fundamental ethical principles in curriculum delivery, ensuring that all students receive equal opportunities to learn, grow, and succeed, regardless of their background, gender, ethnicity, or socioeconomic status. Educators must uphold neutrality in their teaching methods, assessment practices, and interactions with students, avoiding favoritism, bias, or discrimination. A fair learning environment fosters inclusivity, where every student is encouraged to express their thoughts and engage in academic discussions without fear of prejudice. Assessment and grading should be based solely on merit, ensuring transparency and consistency in evaluating student performance. Additionally, classroom policies and disciplinary actions should be applied uniformly to maintain trust and respect among students. By maintaining fairness and impartiality in teaching, educators create a positive, ethical, and motivating learning environment that upholds academic integrity and nurtures a culture of justice and equal

B. Respect for Student Dignity and Privacy :

Respect for Student Dignity and Privacy is a fundamental ethical principle in curriculum delivery, ensuring that students are treated with fairness, respect, and confidentiality in all aspects of their education. Educators must create a learning environment that upholds students' self-esteem, encourages open expression, and protects them from any form of humiliation, discrimination, or harassment. This includes maintaining a respectful tone in communication, avoiding public criticism or shaming, and fostering a supportive atmosphere where students feel safe to participate without fear of judgment. Privacy is equally crucial, requiring that personal information, academic records, and assessment results be kept confidential and shared only with authorized individuals. With the increasing use of digital platforms, institutions must implement strict policies to safeguard student data against unauthorized access or misuse. By upholding respect for student dignity and privacy, educators foster trust, promote ethical teaching practices, and ensure a nurturing and inclusive educational experience.

C. Encouraging Ethical Discussions :

Encouraging Ethical Discussions in curriculum delivery is essential for developing students' critical thinking, moral reasoning, and decision-making skills. By integrating ethical debates, case studies, and real-world dilemmas into classroom discussions, educators provide students with opportunities to explore different perspectives, question assumptions, and reflect on the consequences of ethical and unethical actions. Such discussions should be facilitated in a respectful and open-minded environment, where students feel safe to express their opinions without fear of judgment. Topics can range from professional ethics in fields like medicine, business, and technology to social justice issues, environmental responsibility, and human rights. Encouraging ethical discourse not only enhances students' ability to analyze complex situations but also instills a sense of responsibility, empathy, and integrity. By fostering ethical awareness, educators prepare students to navigate moral challenges in their personal and professional lives, ultimately contributing to a more conscientious and just society.

D. Responsible Use of Technology :

Responsible Use of Technology in curriculum delivery is essential for ensuring that digital tools enhance learning while upholding ethical standards related to privacy, security, and academic integrity. As education increasingly incorporates online platforms, artificial intelligence, and digital resources,

educators must guide students in using technology ethically, emphasizing responsible digital citizenship. This includes protecting student data, preventing cyberbullying, ensuring equitable access to technology, and discouraging plagiarism or academic dishonesty. Schools and institutions must implement policies that safeguard student privacy and promote safe online interactions while educating learners about ethical concerns such as misinformation, digital addiction, and the responsible use of social media. Additionally, technology should be used to enhance learning rather than replace critical thinking, ensuring that students develop analytical and problem-solving skills rather than relying solely on automation. By promoting the responsible use of technology, educators create a balanced, ethical, and inclusive digital learning environment that prepares students for the complexities of the modern world.

Conclusion :

Ethics in curriculum design and delivery ensures that education is not just about academic success but also about **creating responsible, ethical, and socially aware citizens**. A strong ethical foundation in education leads to a **more just, inclusive, and sustainable society**.

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**IMPACT OF TECHNOLOGY ON YOUTHS COMPARING
WITH ETHICAL SYSTEM OF EDUCATION****Dr. Pallavi Komawar**

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7447356431**Abstract:**

In the field of education, one has seen the revolutionary changes in the system of education, from the very old method of Gurukul education to the very much recognized online education. Throughout these phases it has been observed that the very close bond of one to one teacher - student relationship has been expanded to thousands and millions of followers worldwide. When the comparison between ethical education and technology is done and when its impact on youths has been studied it had been seen that ethical education had a structured guided value based education whereas technological impact in terms of acquiring knowledge is very instant, vast and unfiltered. Ethical education is strong in moral and social skills whereas technological education is strong in digital and tech skills. Ethical education supports healthy and emotional growth and overuse of technology can harm mental well being of an individual. Ethical education is focused in building up a strong character of an human being whereas technology is not at all concerned with it. Technology undoubtedly provides a wide platform to access of knowledge which definitely increases global awareness. Combining both ethical knowledge with technology can lead to well-rounded, responsible, matured and competent individual. Hence it has been concluded by the researcher that adapting the technology for well being of the society and for the positive growth in the community is mandatory but at the same time practicing ethical education is also important as it gives the base to the character of an individual, it builds up the capacity of critical thinking which is very much essential to take strong decisions for the betterment of future. Hence ethical education and technology goes hand in hand.

Introduction:*"The very essence of education is concentration of Mind."**-Swami Vivekanand.*

Swami Vivekananda, a man with a vision who believed that education is man making, life building character making and accumulation of ideas, emphasizing the role of education in developing self reliance, strength of mind and spiritual awareness. Swami Vivekanand, a revered spiritual leader and thinker, left an incredible mark on the realms of philosophy and education. His

teachings always aimed at the holistic development of an individual, fostering character, mental strength and self confidence. He believed that education is not the acquisition of knowledge but a transformative journey that shapes character and instills a deeper understanding of existence.

Education starts the day when human being takes birth and starts living with the people. Education starts very much from the surroundings where a human being is surviving, a family with whom he is living. The culture and the traditions that are practiced and followed from generations to generations resulting into the social behavior of an individual . but when we are talking about education then it started from gurukul system of education.

Gurukul system of education is believed to be an ancient Indian traditional education method which was based on residential method. In Gurukul School, students lived with a teacher in the natural environment emphasizing experimental learning, holistic development and moral values.

The relationship between the teacher and student was characterized by deep respect and trust with the teacher playing a crucial role in shaping the students character and knowledge. The traditional gurukul system declined with the introduction of the modern education in the 19th century focusing on rote learning and education, but however even the modern education system continued to influence educational philosophies and practices of holistic education and experiential learning around the world.

Post-independence, the focus of education system shifted to providing universal access to education, emphasizing on modern subjects like science, mathematics and English alongside. The government aimed to make education accessible to all, regardless of caste, creed, location or gender with policies focusing on inclusive education.

The national education policy 2020 introduced educational structure aiming for holistic development and critical thinking. Technology is increasingly being introduced in education, including online learning platforms and digital tools. During the time of Covid -19, the method of education was totally changed, rather the traditional method of education has been replaced by the modern method of teaching which is more technological based. As a result of modern technology it has brought the world more closer as many online educational courses had been granted permission by the government and has given a world wide recognition. But somehow it had been also observed that the critical thinking of the youths had been reduced. Creativity had been lost somewhere resulting into taking responsibilities and decision making.

Purpose of Study: It has been found that after the Covid -19 a major changes had occurred in educational system. A very modern concept of online teaching had been accepted widely by the youths and it has a become a part of an convenience learning. As a result of this the traditional method of learning has started losing its importance. A teacher student personal interaction has been

reduced a lot. A personal touch is been missing. A technology with various applications has been practiced Hence the researcher had decided to study the effect of technology on the youths learning style and does it has hampered their performance academically and also in their personal lives.

Aim: To study the impact of technology on the youths comparing with Ethical educational system.

Objectives:

- To study the behavioural changes amongst the youths.
- To study the academic and cognitive development.
- To study the social interactions and emotional well-being of the youths.
- To study the ability of decision making and taking responsibilities amongst the youths.

Limitations:

- The study was conducted amongst the age group of 16 to 22 years only.
- The youths selected for the study was selected from Nagpur city.

Review of Literature:

The effects of technology on education enhances learning experiences, promotes personalised learning, fosters global accessibility, develops essential digital skills, increase efficiency for educators and prepare students for future. The role of ethics in education revolves around imparting and practicing moral principles, values and virtues within the learning environment. It involves not only teaching ethics as a subject but also cultivating ethical behaviour, character and decision making. (23 October. 2023)

Research Methodology:

Ethical education or moral education is aimed to develop individuals capacity ethically by letting them know the principles, values and decision making process. The goal is to cultivate the skills and character traits necessary to act ethically in real life situations. On the other hand technological education involves leverage technology to enhance learning experiences, personalize instruction and foster global accessibility, ultimately preparing students for a digitally driven future. Hence "To study the impact of technology on the youths comparing with ethical education system" the research method was as follows:-

Area Selection: To conduct the study the area selected was only Nagpur City.

Sample Selection: The purposive random sampling method was used where the youths of Nagpur city belonging to the age group of 16 to 22 years were selected. This age group is been specifically selected as they are the one who are at the peak stage of their education with an focus of completing their graduation, looking for the opportunities and to start with their career. Nearly 70 samples were collected.

Data Collection:

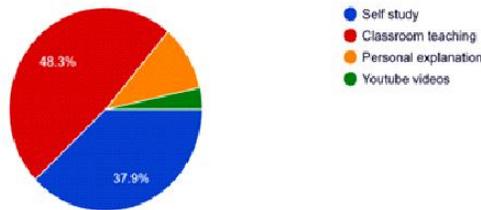
To collect the data, the following method was implemented -

- **Primary Data:** A questionnaire was designed for the youths in which all the varieties of questions were been asked which would enable the researcher to understand the youths who are surrounded with the technology and are trying to explore themselves worldwide.
- **Secondary Data :** Secondary data was collected through books, dissertaton, journals internet, e-journals etc.
- **Data Analysis:** The data collected through questionnaire was interpreted through the percentage method and was represented by means of figures and charts.

Results and Discussions:

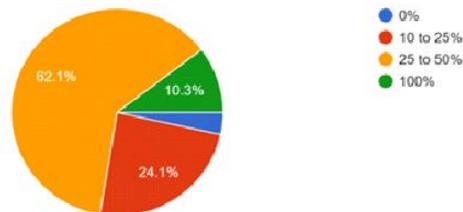
The data was collected through questionnaire method specially been designed for the youths of Nagpur city studying in various streams of education ranging in the age group of 16 to 22 years. The collected data had been graphically represented and interpreted in the following manner.

What gives you more satisfaction of studying



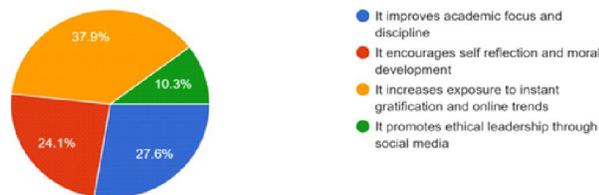
It has been graphically proved that majority of the students are very much comfortable in traditional classroom teaching where an interaction sessions are conducted which makes them more interesting and easily learned sessions. Next comes the self study, which is again most popular way of studying. Very few students prefer you tube to understand and learning process.

How does the excessive screen time affect critical thinking



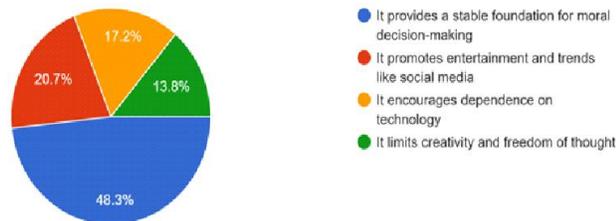
62.1% of students have experienced that long term screening has affected their critical thinking to almost to 50% and also the 10.3% has experienced that over screening has affected their critical thinking almost to 100%.

How does technology most commonly influence youth behavior today?



27.6% students responded that it has improved academic focus and discipline. 24.1% said that it has encouraged self reflection and moral development. 37.9% has realised that it had increased exposure to instant gratification and online trends. 10.3% had mentioned that it has promoted ethical leadership through social media.

What role does ethical education play in contrast to the influence of digital platforms?



48.3% students had said that ethical education had provided a stable foundation for moral decision-making. 20.7% has promoted entertainment and trends like social media. 17.2% had encouraged dependence on technology 13.8% had admitted that it has limited creativity and freedom of thought.

Summary and Conclusion:

The study conducted by the researcher on "Impact of Technology on Youths Comparing with Ethical System of Education". The researcher had drawn the following conclusions:

- Ethical education and Technological education has both positive and negative impact.
- Ethical education has positive impact like character building, critical thinking, balanced development and super build up confidence.

- Ethical education had negative impact like limited access to global exposure and slow adaptation which leads to time consumption in decision making process.
- On the other hand it has been found that the technology has an deep impact on youths like access to information through online platforms and courses available.
- Technological education enhances the skill development and global connectivity.
- Negative impact of technology on youths is that it has hampered the critical thinking of the youths leading to the addiction and distraction from the target point.

Suggestions and Recommendations:

After the survey was conducted, the researcher would like to recommend few things to the youths who are the future of the Nation and who will be driving the world on the path of progress. Adapt technology as it is in trend and demand but don't get addicted to the technology as it may mislead youngsters by providing wrong information. Technology is a powerful tool that can greatly enhance learning and connectivity but need to be balanced with the guidance of an ethical education system. Combining both ethical knowledge with technology can lead to well-rounded, responsible, matured and competent individual.

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INTEGRATING VALUES AND ETHICS IN THE MODERN EDUCATION: THE NEED OF THE HOUR

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Abstract:

This research paper defines the concept of values and ethics, it explores the distinction between values and ethics. It highlights the significant role of values and ethics in shaping individual's personality and behavior which contribute to social harmony. This paper explores the role of a family in instilling values and ethics in children. This paper also discusses about the principle aim of the National Education Policy (NEP) 2020, keeping in view the peculiar characteristics of the millennial students. It also advocates application of the moral framework in the new education system. This paper concludes by stressing the need of integrating values and ethics in the modern education system in order to foster conscientious society.

Key words:-values, ethics, personality, NEP2020, millennial students, education, society.

Introduction:

Values and ethics are integral components of human civilization. These two factors have been influencing every individual in particular and every society in general for the ages. Values are individual centered while ethics are society centred. Values and ethics existing in individuals govern their decision making process and way of interaction with other members of the society. Values and ethics guide individuals to make choices between wrong or right things in life. Collective values of individuals take the shape of ethics of the particular group or society. On the one hand values in individuals like honesty, a sense of responsibility, a sense of belonging and respect for others contribute to make a society consisting of ethics like trust, fairness, equality and justice, on the other hand if any society is devoid of human values and ethics it would turn into a chaos and anarchy. In the age of globalization, digitization, technological advancement and multiculturalism, challenges like climate change, global warming, data privacy, cybercrime, negligence of corporate responsibility, exploitation of human resources, racism, social inequality have become rampant. These challenges need to be addressed by employing nuanced ethical reasoning and cross-cultural understanding. Therefore values and ethics

that are inculcated into individuals by family, society, culture, religion, personal experiences and educational institutions need to be diagnosed and critically questioned. The role played by all these agencies should be examined whether they are shaping human personalities in a positive way and providing all individuals solid foundations for values-based life or not.

Definition of Values:

Milton Rokeach, a social psychologist defined values as “Enduring beliefs that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state”. According to the definition values are individual centered, which are fundamental beliefs or principles that guide an individual’s behavior and decision-making. They serve as a framework for what is considered important or desirable in life. Values can be personal, cultural or societal. These values often influence individuals’ attitudes, actions, and interactions with others. Common examples of core values include: honesty, integrity, respect, compassion, responsibility, kindness, tolerance, humility, gratitude, patience, justice, courage, forgiveness, loyalty and love which serve as guiding principles for ethical living and help in building a peaceful, cooperative and respectful society which are essential for personal and social development.

Definition of Ethics:

Richard William Paul and Linda Elder the modern scholars defined ethics as “Ethics is a set of concepts and principles that guide us in determining what behaviour helps or harms sentient creatures”. According to the definition Ethics are considered society centered. The ethics of society refers to the collective values, morals, principles and standards which govern the behaviour of individuals while living in a particular community or a social group. Ethics are generally shaped by the laws, social norms or common cultural practices. Ethics influence every member of the society and make them interact and behave with others in a peculiar way and also forces them to make decisions in their life which are aligned with social norms. Common examples of core ethics include: Social justice, collective responsibility, civic virtue, cultural norms and human rights. These ethics help in establishing standards for acceptable behaviour and promote social cohesion. Hence these ethics are essential for fostering a harmonious and functional community. The world famous ethical theories are Deontology and Utilitarianism.

The Role of Family in Instilling Values and Ethics into Children:

The family plays a crucial role in instilling human values into children, as it is the first social environment they experience. In a joint family, grandparents, parents and other family members function as role models for children. They often imitate them, when they see that values like honesty, kindness, respect, and empathy are practiced by the family members, they tend to adopt these

values. The emotional support extended by the elder people and loving environment at home help children develop the foundation values like compassion, empathy and sense of security. Discipline, set of rules and boundaries observed by the family members teach children the importance of responsibility, respect for rules, respect for others and self-control. Healthy cultural practices and moral lessons passed down to the children in the form of tradition, stories, rituals and everyday healthy conversations inculcates moral values, cultural norms and ethical principles among them. When the children notice that conflicts and disagreement among the family members are resolved peacefully foster among them values like patience, tolerance and forgiveness. When descent behaviour and sincere efforts of children are appreciated at home they feel motivated and willingly uphold positive values throughout their life. In short it can be said that the institution called family plays very vital role in shaping children's character and moral compass which provide solid foundation for values-based life.

But in the modern world the concept of joint family is vanishing gradually on the contrary the concept of nuclear family or extended family gaining popularity. The nuclear family is the family which consists of parents and their children and they live independently in a separate home. This scenario is common in the urban setting, though this concept of isolated living offers few advantages but presents unique challenges too. The children in a nuclear family get focused attention, adequate time and resources from their parents. The parents in a nuclear family adopt contemporary parenting style; they believe in open communication and give timely emotional support to their children. They also dedicate their time and money for their children's overall development. Unfortunately the nuclear family faces certain inherent challenges. The children of nuclear family do not get extended support, variety of role models worldly wisdom, values and ethics like cooperation, empathy, and respect for elders because of the absence of grand parents and other relatives at home. They grow up in isolation under the atmosphere of less interaction with human beings. Most of these children belong to the Gen Z and Generation Alpha, lets know about their unique characteristics.

The Characteristics of Generation Z (Gen Z) and Generation Alpha:

The Children who are born between 1997 and 2012 are labeled as the Gen Z while those who are born between 2012 and 2025 are popularly known as the Generation Alpha. The children of these two generations are also called millennials. They grew up in the digital era and demonstrate peculiar characteristics which define them. These children are called digital natives as they grew up in the company of smartphones, the internet and social media and they very comfortable with technology and they are expert in multitasking using various digital devices. They are socially aware regarding diversity,

inclusiveness, and social justice; they love to engage in activism or support brands which align with their values. They are independent learners as they prefer self-directed and self paced learning, often they love to learn from YouTube channels, Online Courses and other Social Media applications, they value Skill oriented practical based courses over conventional and theory-oriented courses. They are conscious about their mental healths they openly talk about it wish to maintain emotional balance and mental well being. Most of them are interested in innovation and creativity, they possess entrepreneurial mindsets who aspire to be creators, inventors or entrepreneurs they don't want follow the most trodden path. These millennials are pragmatic and financially cautious because they witnessed economic uncertainty and financial instability. They are rarely influenced by the traditional norms, they are cautious about their own personal identity and freedom, most of them are highly individualistic who value authenticity and self-expression. In order to meet the academic needs of the millennials the new education policy has been framed to be implemented in our country.

About the National Education Policy (NEP) 2020:

The principle aim of the national Education Policy (NEP) 2020 is to transform the Indian Education System to meet the needs of the 21st century world. In the NEP it is intended to make education holistic, flexible, and multidisciplinary so that it can be aligned with the goals of equity, quality and access for all learners.

Need of the Moral Framework in Education System:

Education is not only about academic success and career building but also it is about developing well-rounded individuals. Education is about integrating values and ethics in the present students in order to build their characters by instilling emotional intelligence and social responsibility in them. Education is about involving them in the community development, enabling them understand the importance of democratic participation and inspiring them to come forward to advocate as well as practice social justice. Values and ethics that are instilled in the students in the educational institutions equip them with a moral framework to navigate complex issues they would encounter in life. This framework helps them to make decisions that align with principles of fairness, justice, and respect for others. In the present diverse educational settings, it is essential to promote values like tolerance, empathy, and respect for different perspectives and enhance their cultural sensitivity and prepare them for global citizenship. Now a days conflict resolution has become one of the major challenges in the world, therefore the students should be equipped with a set of communication and negotiation skills which will help them handling conflicts and disagreements constructively by showing mutual respect. In the educational institutions where values and ethics like respect, responsibility and mutual cooperation is practiced by the teachers and students

results in positive and productive teaching learning environment. The students, who are preparing to enter the global workforce, should know the ethical dimensions of their chosen professions so that they could practice professional integrity in their careers. The students who adhere to ethical principles are more likely to achieve sustainable success. It is proved that values-driven education cultivates and breeds the leaders or community builders who prioritize ethical considerations and positive social impact. Hence the education that includes values and ethics encourages students to contribute positively to society and nation. It also nurtures a sense of belonging and encourages collaboration and service to mankind. To sum up it can be said that integrating values and ethics into education is essential for preparing students not only to succeed academically but also to become responsible, compassionate, and ethical members of society. We should always keep in mind Theodore Roosevelt's cautious words which say "To educate a man in mind and not in morals is to educate a menace to society."

Conclusion:

To conclude it can be assumed that conscious parenting and intentional value-based interactions within families can effectively instill values and ethics among the children. Strong emotional bonds, open conversation, and positive behavior among the family members bring positive results. But if our vision is broad and we wish to create a society where education will act as a true liberator and capacity-builder, and it will also unite people on the anvils of peace, tolerance and understanding, where the benefits of education will reach each and everyone, enabling them to live with self respect, dignity and enlightened awareness. Integrating values and ethics into education is essential for preparing students not only to succeed academically but also to become responsible, compassionate and ethical members of the society.

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AN OVERVIEW OF VALUES IN ENGLISH LITERARY WORLD

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Educate, organize, agitate! : Dr. B.R. Ambedkar

Values and ethics in education have always been a subject of diverse background and discussion. The ancient and modern traditions of education have given importance to ethics and values that encompasses the human lives on the larger scale. It is our moral responsibility as responsible citizens to provide value education to our coming generations, to make them understand the importance of treating oneself and others in a good manner. The young generation, particularly in India, has been leading a clueless life in recent times. It seems they have no aim at all, giving importance to issues that have no meaning and would have no impact on their future. They are being driven away from the main issues of relevance to life. It seems that we, as a nation, have failed to provide them a solid platform so as to enable them build their lives with strong foundation stone and leading it into right direction. We have failed in providing them an environment of mental, social, economical security. In such situation literature prove to be a ray of hope, beyond doubt. It gives the young minds a scope to think critically, to have effective communication, to have empathy and to develop creative thinking that leads to transform into good humans!

The evolution of human life has proved that values and ethics are the mainstay of human development in all spears of life. Literature, a branch of education, has always been a tool of providing moral teaching to humans from time to time. Literature has proven its mantle in providing humans clues in ethical behavioural patterns that help them grow into a good *human* which is the need of the hour, as far as the current scenario, around the world, is concerned.

The traditional education system, in connect with India, has a long history right from the Gurukul to Nalanda, Taxila Universities, which were the centres providing deep profound knowledge and education to its students. The tradition may have changed as per times, but the very basis remains the same still in modern world. There is no denying that the world has changed, the mentality of the people has changed, the science and medical fields have made immense progress beyond the human imagination. Now, recently we have entered into

the world of Artificial Intelligence (AI). This proves that human mind has taken flights into unknown realms of thoughts and imagination, that changed the world in an unimaginable way and now poses a deep threat to human mind.

Human life is full of endless possibilities. It's a wonderful manifestation of varied aspects which ultimately transforms the world into a place worth living in. Literature has always proved to be the torchbearer of humanity. It has corrected the erring human society from time to time. The literature, thus, has proven its mantle by becoming the mirror of human life. Writers, from all ages, have performed their duties honestly and have shouldered the responsibility of keeping an eye on the progress of human society, and scrutinizing it till the end. The world has suffered to the extreme end in the consequences of the conflicts arising out of wasted interests of few. In such situations, the writers from literary field have shown their solidarity and gave way to their feelings in establishing the ever necessary peaceful co-existence.

We humans have become a part and parcel of civilization after going through a process of evolution. In life sphere we; men, women, children; have to pass many a test in our day to day life. But unfortunately, the 'overall human development' has been thrown into a corner by human themselves in the name of scientific progress. A well-known philosopher and author Cyril Edwin Mitchinson Joad in his famous book "The Story of Civilization" has stressed upon developing a system where importance should be given to human thoughts in place of scientific achievements. He says that man has made the machine and has grown so much dependent on machine that once the slave machine has grown into a Master and man has turned into its slave! In the seventh chapter of *Our Own Civilization* from this book he says-

"Man has a better chance today to do the things than he ever had before; he has more time, more energy, less to fear and less to fight against. If he will give this time and energy which his machines have won for him to making more beautiful things, to finding out more and more about the universe, to removing the causes of quarrel between nations, to discovering how to prevent poverty, then I think our civilization would undoubtedly be the greatest as it would be the most lasting that there has ever been". (Joad, 93)

If we think of times we are witnessing now, the Joad observation proves apt! What is going on in this world is absolutely mayhem as nobody cares for each other now.

We all have grown into such selfish beings that we have very little left called humanity. The values and ethics are the basis of humanity. The English literary world is full of writers in all its aspects of drama, novel, short story, essays and poetry, who through their writings have underlined the importance of values in life. Chinua Achebe, William Wordsworth, Thomas Hardy, Robert Frost, Sir Earnest Hemingway, Dave Mary Gilmore, W.H. Auden, and from our own Asian background Mulk Raj Anand, Rabindranath Tagore, Saadat Hasan

Manto, Arundhati Roy, Arvind Gokhale, Nissim Ezekiel are some of the names out of many whom we may consider as the torchbearers of humanity. They, through their works, have talked about the need to maintain values to keep humanity alive and kicking.

Robert frost, the American poet and Nissim Ezekiel from India are two such poets, who thorough their poetry, have penned the words like the men with a mission. Robert Frost, the American poet in his every other poem talks about the importance of understanding life to the core. In his poem, *Mending Wall* he explores the theme of universal brotherhood in a comic way. The story has the backdrop of rural New England. Two neighbour are rebuilding the stone wall between their respective farms in the Spring. While doing so they are discussing there is any need of having wall. It is said that common-sense is very uncommon, which reflects in one of the characters from this poem. The age-old custom of having strong fences to keep our territory intact and safe is debated in the poem.

There where it is we do not need the wall:
He is all pine and I am apple orchard.
My apple trees will never get across
And eat the cones under his pines, I tell him.
He only says, 'Good fences make good neighbors.' (24-28)

Its evident that we have forgotten the value of giving importance to existence of others. We believe in what our forefathers have told us, instead of testing it on its merit. Such is the scene we witness now a day in our lives. Frost, in the very first line of the same poem says "*Something there is that doesn't love a wall*"(1, 37), which he repeats again but both the times same reply comes from his neighbour. Every country has been facing issues of civil dissent. People and nations are fighting against each other in the name of caste, creed, and faith. The problem is that everyone wants to reign supreme over others. We have forgotten the very basis of existence i.e. the humanity. If humanity is lost, we lose the power to evaluate.

C.E.M. Joad was very critical of the countries being fanatic about the war preparations. He said that the whole world has turned into an armed camp. All countries want the other countries to fall behind in the so-called race of possessing war material. In his own words

".....there are today many more trained soldiers in the world than there were before the last war, and the nations are spending still more money on war preparation. They still pride themselves on being good at fighting more than on anything else, and each nation always thinks that it is going to win" (Joad, 90-91)

We have forgotten that war brings destruction only. A group, a race, or a country might win a battle but even the winner proves to be the losers in form of lives of many a person and not to forget the infrastructural loss. There is complete chaos in the world.

Another writer who stands out in this aspect is Mulk Raj Anand. If we closely examine Anand as a short story writer, we come to conclusion that he had great faith in humanity and wanted India to be the India of equality where all, especially women who were the lesser known individuals like lower caste people, would be able to live life freely like others. Anand's short stories throw light on the protagonists chosen from cross section of society, particularly the women and poor ones. Being a firm believer of humanism, Anand had an agenda of talking about it more vocally through his works. So the post-independence Indian society for him was a sham. He wanted the society to change its behavior for the betterment of the women. The people, men in particular, needed to change their mindset rooted in false customs. Anand in his *Apology for Heroism* comments:

Obviously such a democracy cannot be brought about without upsetting the present social order based on *Laisses faire*; it can only be achieved by braking away from the vicious circle of the old society" (Anand, 165).

So we do find the protagonists whom he place at the centre stage of his stories as the ones who are the victims of social injustice, be it the poor workers who fall prey to landlords or the women who were mere commodities for the male dominating society. His stories throw light on the rural life in very effective way. While discussing the protagonists from rural life Anand works as a skilled surgeon who dissects the layers of good and bad in it. Women, for ages have been and still, are the most neglected and suppressed section of Indian society. Anand stories are full of women and their predicaments as for him it was the burning problem of that time. Karima (*On the Border*), Phalini (*Lullaby*), Lajwanti (*Lajwanti*), Gujri (*The Witch*), Sukeshi (*A Village Wedding*), Sukhi (*Torrents of Wrath*), Naina (*Naina*), Gobindi (*Boots*), Savitri (*Between Tears and Laughters*) are some of the prominent names of his women characters whom we find in pathetic conditions fighting for their existence.

These are just a few drops from the deep ocean of resources available in English literary world. There are innumerable authors who have given their invaluable contribution to literature in form of their staunch humanistic writing. In the realm of novels there is novelist like G. B. Shaw who shows us the importance of human qualities. There is Sir Earnest Hemingway who teaches us the principle of never dying hope. Novels of Charles Dickens are known for social commentary, highlighting both struggles and resilience of humanity. Jane Austen novels take us into the world of intricacies of social relationships and offer insightful observations on human nature and behaviour. Novels by George Orwell give us lessons into individual freedom and socialism. The novelists like D. H. Lawrence, Joseph Conrad, Samuel Beckett, Jonathan Swift, the Bronte Sisters (Emily, Charlotte, Anne), Oscar Wilde also were notable figure to mention.

In the poetry region, we have Robert Browning who makes us believe in the quality of optimism. John Milton teaches us the importance of religious beliefs. On the other hand, we have war poets Wilfred Owen, Siegfried Sassoon, Rupert Brooke who shows us the futility of war and how its aftermaths are more

dangerous than war itself. Then there is the African English literature where we meet the fierce poets like Wole Soyinka, Chinua Achebe, Derek Walcott, Gabriel Okara who want the world to recognize the contribution of Blacks in human development. And not to forget the Indian English poets Rabindranath Tagore, Kamala Das, A. K. Ramanujan, Sarojini Naidu, Nissim Ezekiel, Vikram Seth and others who not only established India on world literary scene but also made the world aware of the values Indians cater in their lives. These writers have devoted their lives as writers in guiding us on the path of salvation, the path that teaches us to become more refined in our treatment of others; helping us in scrutinizing our own behavioural pattern. The world of literature has and always will be the guiding spirit in the times of darkness. It is full of love, sympathy, compassion, positivity, humanity, co-existence.

There is no denying the fact that what we witness in India now a day is also a matter of great concern. The small children, the youth in particular are turning out to be fanatic, which is really painful to watch. They have forgotten the core human values and are giving more importance to the unimportant and irrelevant issues that doesn't have any direct impact on their lives. What matters most for a human is to have strong base which is the outcome of good value education. To get such education one need strong content full of spreading awareness on the most humane topic of understanding values and ethics in human life that may shape the young minds into creative and more sensitive human beings. Then only people will start to value and respect the feelings, beliefs of others and importance of co-existence. This would prove beneficial for the whole world and its humanity which would turn the world into a beautiful and peaceful place to live in, by following the principle of 'live and let live'. So to inculcate such literary works in syllabus, which prompts the values and humanity as the core aspect of life, is the need of the hour!

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**SOCIO-ECONOMIC DISPARITIES IN INSTITUTIONAL
CREDIT TO AGRICULTURE IN INDIA****Dr. Premlata Anil Kumar**

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Abstract:

Disparities in Institutional Credit to Agriculture as social problem in India Access and adequacy of institutional credit to agricultural sector in India have been a great concern. And it is one of the main indicators of socio-economic development. Despite of improvement in the flow of credit to the agricultural sector, there are problems in this area. This paper studies the conditions of agricultural credit in India in terms of structure, flow of credit, regional disparities, problems, and measures. The role of instructional credit especially through commercial banks has been increasing in Indian agriculture. But the role of cooperative which have farmers participation has been declining. There are disparities in agricultural credit in India where the advanced states have larger share than the backward states and big farmers have larger share than the small farmers. There is need for big push to provide institutional credit to small farmers, tenant farmers, women farmers.

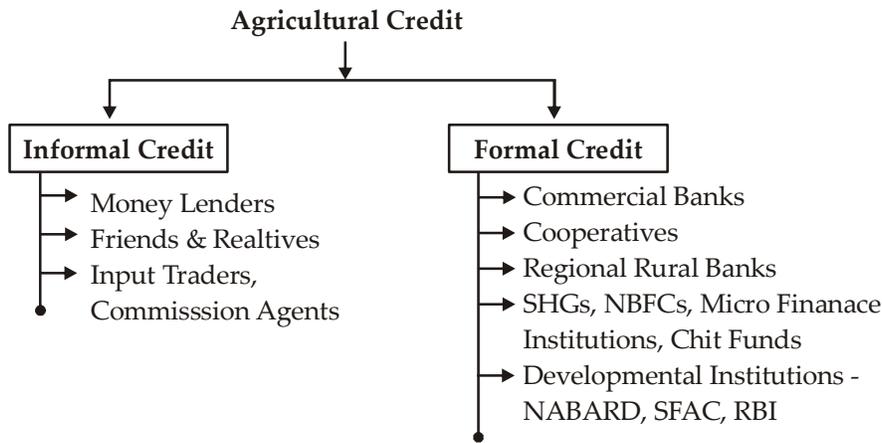
Key Word: Social disparities, Agriculture credit, institutional credit Banks.

Introduction:

Credit is the lifeline of any socio-economic activity. Credit is an important factor in managing the cultivation, procurement and marketing in agricultural sector. Access to institutional credit at affordable rates to the small farmers is important for the development of agricultural sector. It would ease the practice of agriculture at the farmers' level. It would save the farmers from dependence on moneylenders and other informal sources which are costly to borrow. Credit in the form of loans is used as working capital at the beginning of the growing season, as also at later stages of production & harvesting in order to purchase material inputs, prepare land or invest in farm machinery, as well for the harvest, processing, transport and to market the produce. Access to credit also allows a farmer the leeway to take risk, at every stage of the business including during marketing of the output. Access to formal credit is crucial for farmers to upgrade and sanction their enterprise by managing the various inputs needed to achieve higher agricultural productivity (Mohan 2006). Ashok Dalwai Committee on Doubling Farmers Income in India (2018) notes that output elasticity of farm credit in India is significant and positive; roughly for every 1 per cent increase in agricultural credit, there will be 0.29 per cent increase in

agricultural GDP and consequently aiding increased income. It is important to enhance the credit to the agriculture sector especially to the needy small farmers in India from all the formal sources (Kumar and Sinha 2010).

Based on the source, the agricultural credit can be broadly classified into two types as shown in the Figure 1. One is non- institutional credit which is sourced from the money lenders, friends, relatives etc. Generally, the annual rate of interest for this type of credit will be very high varying from 18 per cent to 36 per cent or even higher. The second one is formal credit. This is sourced from three types of institutions such as Commercial Bank, Cooperative Banks and Regional Rural Banks (RRBs). The interest rates are generally low in these formal institutions. Beside the above banking institutions, the institutional credit to agricultural sector is also sourced from the non-banking institutions like SHGs, NBFCs, MFIs, Chit Funds for the short-term purposes. Apart from these all, there are specialized developmental institutions like National Bank for Agriculture and Rural Development (NABARD), Small Farmers Agricultural Consortium (SFAC) and Reserve Bank of India support agricultural credit through other institutions directly or indirectly.



Flow of Institutional Credit to Agricultural Sector in India:

The amount of institutional credit for agricultural sector has been increasing in India during the recent period with the efforts by the governments. As per the latest data of NABARD shown in Figure 2, the total agricultural ground level credit that includes both crop loan and term loan in India has tremendously increased by more than three folds during the last decade i.e. from Rs 6.1 lakh crores during 2012-13 to Rs 21.7 lakh crores during 2022-23. At the same time the share of agricultural GDP in total GDP is falling.

There has been gradual rise in share of commercial banks in total agricultural institutional credit in India with corresponding fall in share by Cooperative banks. Out of the total institutional credit during 2022-23, 74 per

cent is sourced from commercial banks, 12 per cent is from Rural Cooperative banks and 14 per cent is from RRBs.

The Situation Assessment Survey of Agricultural Households in India 2019 reports that out of the total loan outstanding by the agricultural households in India, about 70 per cent is from formal institutional loans such as commercial banks (44.5 per cent), RRBs (8 per cent), Cooperatives (10.6 per cent) and SHGs & others (6.4 per cent). About 30 per cent loan is from informal non-institutional sources such as Money lenders (20.5 per cent), relatives and friends (5.7 per cent) and others (4.5 Per cent).

Disparities in Institutional Credit to Agriculture in India :

The institutional credit to agricultural sector witnesses many disparities across the states and the farm size groups in India. NABARD report shows that the average credit disbursement per farmer in India during 2019-20 is Rs.102482 for all farmers and that for small and marginal farmers (Rs.71034) at the all-India level, while it varies from Region to Region and state to state.

Regional imbalance in the disbursement of agriculture credit has persisted over the years. NABARD report shows that during 2019-20, agricultural credit to gross value added from agriculture ratio was quite high in case of Kerala (324%), Tamil Nadu (267%), and Telangana (129 %) while it was very low in the States of Madhya Pradesh (28%), West Bengal (40%), Chhattisgarh (42%) and Uttar Pradesh (47%).

The report also shows the disparities of agricultural credit across the farm size groups. During 2019-20, Commercial banks lend 47 per cent of their total farm credit to the small and marginal farmers against their share of 75 per cent in total loan accounts. Cooperative Banks and RRBs are lending 69.7 per cent and 65.4 per cent, respectively of their total lending to small and marginal farmers in the country. There is need for improvement in credit to small and marginal farmers in India as per their share in accounts and land.

Problems in Agricultural Credit in India:

The agricultural credit in India, despite of its improvement over the period, has been facing many problems which are as follows.

- i. The flow of investment credit to agriculture is constrained by host of factors such as high transaction costs, structural deficiencies in the rural credit delivery system, issues relating to credit worthiness, lack of collateral in view of low asset base of farmers, low volume of loans with associated higher risks, high man power requirements, etc.
- ii. Small & Marginal Farmers (SMF) face many constraints in access to institutional agricultural credit in India mainly because of division and fragmentation of land ownership, the absence of proper titles or Record of Rights (ROR) for their land.
- iii. Tenant farmers hardly get the institutional credit despite of several efforts in some states like Andhra Pradesh and Telangana by issuing Crop Cultivators Right Cards (CCRCs).

- iv. There is a substantial increase in the share of agricultural credit outstanding from urban and metropolitan branches of banks indicating misuse of agricultural credit.
- v. There is a diversion of agricultural credit for nonagricultural purposes in the states which are getting agri-credit higher than the state agri-GVA such as Kerala, Tamil Nadu, Andhra Pradesh, Telangana, Punjab, Haryan and Uttakhand.
- vi. There is a delay or non-payment of interest subsidy on the agricultural loans to farmers both by central and state governments.

Measures for Strengthening the Credit to Agricultural Sector in India:

There are significant measures taken by both central and state government to address the problems of agricultural credit in India which are as follows.

- i. There are efforts by the governments to provide adequate and timely provisions on of institutional credit to the agricultural sector. Kissan Credit Card (KCC) scheme is strengthening for flexible and timely access and use of credit by the farmers. This was launched in 1998 with the aim of providing short-term formal credit to farmers. Owner cultivators, as well as tenant farmers, can avail loans to meet their agricultural needs under this scheme at attractive rates of interest. RBI monitors it for SCBs and NABARD monitors the scheme with respect to Cooperative Banks and RRBs. Now Cooperative sector are under RBI. Budget 2018-19 extended this provision to Animal Husbandry and Fisheries
- ii. Provision of interest subsidy on crop loans under Interest Subvention Scheme (ISS). Government of India has introduced the Interest Subvention Scheme (ISS) now renamed Modified Interest Subvention Scheme (MISS) to provide short-term credit to farmers at subsidised interest rates and to ensure that the farmers pay a minimal interest rate to the banks. It has been started during Kahriff 2006-07 and it is being implemented by NABARD and RBI. Under this scheme, short-term agriculture loan up to 3 lakh is available at 7 per cent per annum to farmers engaged in Agriculture and other Allied activities, including Animal Husbandry, Dairying, Poultry, Fisheries etc. An additional 3 per cent subvention (Prompt Repayment Incentive) is also given to the farmers for prompt and timely repayment of loans. Therefore, if a farmer repays his loan on time, he gets credit at 4 per cent per annum.
- iii. Promotion of Joint Liability Groups (JLGs) as the medium for financing landless farmers, tenant farmers, sharecroppers and oral lessees.
- iv. Promotion of Farmers' Producer Organisations (FPOs) in agricultural credit to help in overcoming the challenges of high transaction costs, security stipulations of loans and also support smallholders in gaining access to markets, public services, better price etc., through collective action. Producers Organisation Development and Upliftment Corpus Fund (PRODUCE) was set up in NABARD with a corpus of Rs 200 crore for promotion and nurturing of 2,000 FPOs through financial and non-

- financial support. SFAC also has been promoting FPOs
- v. NABARD also encourages the establishment of Rural Agricultural Startups by providing Venture Capital Fund (VCF). Recently it has allotted Rs 700 crore for this purpose through its subsidiary Newventures.

Conclusion and Policy Suggestions:

Access and adequacy of institutional credit to agricultural sector in India has been a great concern. The agricultural credit in India has been improving in many aspects. The role of non-institutional sources has been declining, and the role of institutional sources especially the commercial bank has been increasing. The proportion of farmers getting the formal loan has been increasing to about 70 per cent. The amount of credit flow to agriculture is also increasing from the institutional sources. Despite of these all there are problems in this area. Small and marginal farmers are not adequately getting the institutional credit. The tenant farmers do not have access to credit. There has been diversion of agricultural credit to other sectors. The following are the policy suggestions for the problems of agricultural credit in India.

- i. The cooperative credit system shall be strengthened with the active participation of farmers with adequate state financial support but without political intervention.
- ii. The long term credit shall be increased in agricultural sector for the asset creation.
- iii. Credit to small farmers shall be increased by strengthening through group approach like SHGs and Joint Liability Groups.
- iv. Tenant farmers shall be provided institutional credit at subsidized rates with adequate amount by with state support.
- v. FPOs shall be taken up at mission mode at the large scale to route the institutional credit to the small and tenant farmers
- vi. The female farmers shall be given special credit with a special scheme.

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**“PHEV’s : RECENT INNOVATION IN AUTOMOTIVE
INDUSTRY”**

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Abstract:

This study delves into the world of Plug-In Hybrid Electric Vehicles (PHEVs), positioned as a bridge between traditional Internal Combustion Engine (ICE) vehicles and fully Electric Vehicles (EVs). PHEVs, with their dual power sources, offer a flexible and eco-friendly alternative for consumers, reducing fuel costs and lowering emissions. It examines recent innovations in PHEV technology and the manifold benefits they offer to individuals and society. The study discusses their impact on employment, environmental sustainability, and financial advantages. Suggestions for further promotion of PHEVs, including policy support, consumer education, and infrastructure development, are presented.

Keywords : EVs, PHEV, ICE, BEV,

Introduction :

“Electric vehicles (EVs) are defined as vehicle that are powered by one or more electric motors, draw energy from rechargeable batteries or other energy storage device. This Vehicle do not relay internal combustion engines(ICE) no telpipe emissions during operation”(1)Indian automobile industry is on the cusp of a transformational journey Market by the emergence of electric vehicles (EV). Autonomous driving technology, innovative mobility solutions and Renewed focus on sustainability, at the forefront of this evolution is electric vehicles adoption (EVA). A crucial aspect that promises to reshape the industries landscape. As the world embrace cleaner and more anefficient transportation alternatives, India too is gearing up to more efficient transportation alternatives, India to is gearing up to navigate this dynamic shift and position itself as a key player in the global automotive area. India is a following the world and is a ready to boost sales of a vehicle’s of EVS, According to Bloomberg NEF (BNEF) estimate electric automobile out sale internal consumption engine cars by 2040, with a marketshare roughly 60%. In this 60% the automobile industry is undergoing a transformative shift towards more sustainable and environmentally friendly transportation solutions. In this context, plug in

hybrid electric vehicle have emerged as a pivotal bridge between ICE vehicles and fully electric one. PHEVs integrate the benefits of both, conventional and electric power train's, offering drivers enhance fuel efficiency, reduce emission and the flexibility to operate in various driving mods. this study we tell Delve into the evolution of PHEV technology, focusing on critical area As extended electric only range, regenerative breaking system, advancement in battery technology and the expansion of charging infrastructure. Furthermore we will exam in the impact of government incentives and policies on PHEV adoption, as well as the evolving consumer preferences and expectations in relation to this innovative vehicles we will discuss emerging trends in PHEVs designs, experience and connectively feature that are shaping the driving experience PHEVs owners.

Hybrid electric vehicles PHEVs:

“Login hybrid electric vehicles used batteries to power and electric motor as well as another fuel, such as gasoline or diesel, to power an internal consumption engine or other propulsion sources. PHEVs can chat their batteries through charging equipment and regenerative breaking. Using electricity from the grid to run the vehicle same or all of the time reduce operating cost and fuel use, relative to conventional vehicles, PHEVs may also produce lower level of emission, depending on the electricity source and how obtain the vehicle is operated in all electric modes”² The IEEE (board of directors, 2007) define PHEVs as “any hybrid” electric vehicle that contains at least :

- I) a battery store system of 4 kw or more used to power the motion of the vehicle.
- II) a means of recharging that battery system from an external sources of electricity.
- III) and an ability to drive at least 10 mil all electric mode and consume on gasoline.

Plugin hybrid electric vehicle technology between internal consumption engine vehicle and fully electric vehicle by combining elements of both vehicles system. Explain Below point.

A) Dual power sources :

PHEVS have both an internal consumption engine (usually gasoline). And an electric motor this dual power set up allow them to operate in different mode:

- **Electric only mode :** PHEVs Chandran slowly on electricity for shorter trips, which reduce emissions and minimize fuel consumption similar to EVS.
- **Hybrid mode:** In this mode, the gasoline engine power offering the convenience of a longer driving range and increased fuel efficiency compared to traditional ice vehicle.

B) Flexibility :

PHEVs can be charged via standard electric outlets for charging station. This flexibility allows owners to plug in their vehicles and use electricity for

commuting a short trips while the gasoline engine provided a safety need for longer journeys where charging a structure may be limited or unavailable.

C) Emission Reduce

PHEVs Emit fewer greenhouse gases and pollutant when operating the electric more compared to traditional ice vehicles this contributes to reducing the environment tell impact of transportation.

D) Fuel efficiency

PHEVs typically better fuel efficiency than conventional vehicles due to their ability to harness energy through regenerative breaking and operate in electric more during lower demand driving scenario.

E) Incentive and policies support

government obtain provide incentive and policies support to promote PHEVs, such as credit, rebate and access to carpoole lens. This incentive can makes PHEVs an attractive option car consumer's looking to reduce their carbon footprint.

F) Consumer Adoption

appeal to a border border range of consumers who may not be ready to fully commit to electric driving. They provide a stepping stone for those who want to experience the benefits of electric propulsions without the free received limitations.

PHEVs serve as a transitional technology that combines the best aspect of ice vehicles and EVs. They offer flexibility reduce emission fuel efficiency and incentives to encourage a gradual shift towards more sustainable transportation options, as the automotive industry continues to innovate, PHEVs play a crucial role in reducing the environmental impact a personal transportatio.

Review of literature

Electric Vehicles: A Synthesis of the Current Literature with a Focus on Economic and Environmental Viability: Marcello Contestable, Dr. Gregory Offer, Dr. Robin North, A research concludes that the longer-term uptake of EVs will depend heavily on progress in battery technology, to bring down costs and increase energy density, and on the provision of a suitable recharging infrastructure. (Marcello Contestable, 2012)(3)

Potential Need for Electric Vehicles, Charging Station Infrastructure and its Challenges for the Indian Market: by Praveen Kumar and Kalyan Dash, India should invest in small-scale reinforcements to manage the load issues locally rather than going for an enormous change. Home charging should be encouraged. Proper planning of place, population, traffic density, and safety should be considered before implementing the massive scale charging infrastructure. The integration of activities within the energy and transport fields is important. Development goals through different innovative policies and programs, for instance, drivers of electrical cars are offered a financial consumer incentive, like tax credits, purchase subsidies, discounted tolls, free parking, and access to restricted highway lanes will help the market to grow. (Dash P. K., 2013)(4)

Conventional, Hybrid, or Electric Vehicles: Which Technology for an Urban Distribution Centre?: by Philippe Lebeau, Cedric De Cauwer, Joeri Van Mierlo, Cathy Macharis, Freight transport has a major impact on urban movement. The researcher explored the possible integration of electric vehicles in urban logistics operations. A fleet with different technologies has the opportunity of reducing the costs of the last mile. The researcher presented a fleet size and mix vehicle routing problem with time windows for EVs. The main contribution of the authors was considering the variability of the range of EVs. In the segments of small vans, EVs are often the most competitive technology. In the segment of large vans, diesel has seen the most interesting solution from a financial point of view as electric vehicles would need to cover a longer distance to be cost-competitive. Hybrid vehicles are chosen in the segment of trucks as their running costs and fixed costs are lower than a diesel truck. (Philippe Lebeau, 2015)(5)

Consumer preferences for electric vehicles: by Fanchao Liao, Eric Molin & Bert van Wee, Widespread adoption of EVs may contribute to a lessening of problems like environmental pollution, global warming, and oil dependency. However, this penetration of EV is comparatively low despite governments implementing strong promotion policies. They presented a comprehensive review of studies on consumer preferences for EV aiming to convey policy-makers and give direction to further research. They compared the economic and psychological approach towards consumer preference for Electric vehicles. The impact of the financial and technical attributes of EV on its utility is generally found to be significant, including its purchase and operating cost, driving range, charging duration, vehicle performance, and brand diversity on the market. The density of charging stations also positively affects the utility and promotion of EV. The impact of incentive policies, tax reduction is quite effective. (Fanchao Liao, 2017)(6)

Objective Of Study :

- 1) To study running cost of PHEVs and bevs
- 2) Study of road price of PHEVs
- 3) To evaluate trustworthiness of vehicles technology
- 4) To study effect on automobile industry of shifting from ICE to PHEVs

Research Methodology :

To investing the impact of PHEV s innovation on the popularity and acceptance of electric vehicle a mixed method research approach will be employed. This approach will involve both qualitative and quantitative research method to gain a comprehensive understanding of the subject matter the study will utilize and explorer research design to explore the various dimension of the impact of PHEVs innovation of the popularity and acceptance of EVs, across sessional study will be conducted to gather data from secondary sources is that news, article, book interview, various site on Google, reputed journals and government report.

Data Analysis :

Category	2019	2020	2021	2022
E-2W	26829	44798	252550	727370
E-3W	143051	90898	172543	401882
E-4W	2404	5201	19782	48105
E-BUS	369	373	1198	1917

Table 1: Electric vehicles sales in India (Source: vahan dashboard)

The Covid-19 pandemic was significantly challenging for electric vehicle manufacturers in India. Temporarily closed manufacturing facilities disrupted the supply chain, and the shortage of raw materials greatly affected the growth of this industry; the semiconductors crisis has adversely affected the production of these vehicles in India. around 2404 electric four-wheelers (e-4W) were sold in 2019. Due to COVID-19-induced lockdowns and reduced manufacturing output, the growth was slower than expected despite the anticipated growth from the FAME II subsidies provided by the Indian government on new electric vehicle purchases. E-2W were sold after COVID-19 around 252550 units on 2021. However, this market is witnessing a steady recovery boosted by Indian government initiatives, hefty subsidies, and incentives at the state level. For instance, in 2021, e-4W sales increased by around 48105 units in 2021. Furthermore, electric bus sales were relatively neutral, and FAME II-backed e-bus deployment will support the market growth

The first PHEV in India

Was Volvo XC90 T8 Excellence. Launched in 2016 priced Rs 1.25 crore (ex-showroom), it was discontinued in 2022. The Mercedes-AMG GT 63 S E Performance, launched last month priced Rs 3.3 crore, is a PHEV.⁽⁷⁾

The India electric vehicle market size was valued at USD 220.1 million in 2020 and is expected to grow at a compound annual growth rate (CAGR) of 94.4% from 2021 to 2030. The attractive incentives being offered by the Indian government on the production and purchase of electric vehicles to encourage the adoption of electric vehicles are anticipated to drive the growth of the market over the forecast period. The outbreak of the COVID-19 pandemic triggered a significant decline in the overall sales of passenger and commercial vehicles in 2020. However, the sales of electric vehicles in India remained unaffected. The post-lockdown sale of pure and hybrid electric vehicles is a prominent driving factor for the electric vehicle market in India. The stringent GreenHouse gas (GHG) emission norms drafted by the government, such as the Bharat Stage (BS) VI emission standards introduced by India's Ministry of Road Transport and Highways (MoRTH), are also expected to play a decisive role in driving the growth of the market.

The benefits of Plug-In Hybrid Electric Vehicles (PHEVs) for people in India :The benefits of Plug-In Hybrid Electric Vehicles (PHEVs) for people in

India are multifaceted and can have a positive impact on various aspects of daily life and the economy.

- **Reduced Fuel Costs.**

PHEVs can significantly reduce fuel costs compared to traditional gasoline or diesel vehicles, which can be especially advantageous in a country like India where fuel prices can fluctuate

- **Fuel Price Stability.**

With the ability to switch between electricity and gasoline, PHEV owners are less vulnerable to fluctuations in fuel prices.

- **Reduced Noise Pollution.**

Electric-only operation of PHEVs generates less noise than traditional internal combustion engines, contributing to quieter and more peaceful urban environments.

- **Job Creation.**

The growth of the electric vehicle industry, including PHEVs, can create job opportunities in manufacturing, charging infrastructure development, and maintenance, benefiting the local economy.

- **Urban Planning and Congestion Mitigation.**

The adoption of PHEVs can influence urban planning, encouraging the development of charging infrastructure and policies that reduce traffic congestion and promote sustainable transportation.

Conclusion and Recommendations:

The landscape of personal transportation is undergoing a profound transformation, driven by the ever-pressing need for more sustainable and environmentally responsible mobility solutions. In this context, Plug-In Hybrid Electric Vehicles (PHEVs) have emerged as a promising bridge between traditional Internal Combustion Engine (ICE) vehicles and fully Electric Vehicles (EVs). This study has explored the recent innovations in PHEV technology and the manifold benefits they bring to individuals, society, and the environment. PHEVs, with their dual power sources, offer the versatility of electric-only commuting while providing the peace of mind of an internal combustion engine for longer journeys. They represent a unique compromise that caters to a wide range of consumer preferences and driving needs. Furthermore, the financial aspects of PHEVs, including reduced fuel costs, government incentives, and lower emissions, can have a substantial impact on individual and family budgets. From an environmental standpoint, PHEVs contribute to the reduction of greenhouse gas emissions and localized air pollution, especially in densely populated urban areas. Employment opportunities within the electric vehicle industry, driven by the growth of PHEVs and related sectors, are contributing to economic development and technological advancements. With investment in battery manufacturing, charging infrastructure, and research and development, the industry is poised to shape the future of transportation and

create job opportunities for a skilled workforce. As governments worldwide provide incentives and supportive policies, the adoption of PHEVs is expected to continue its upward trajectory. In future Consumer Education, Incentive Extension, Community Engagement, Environmental Initiatives, Collaboration with Educational Institutions and other factors related to EVs A lot of work has to be done.

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STUDY OF PRADHAN MANTRI UJJWALA YOJANA IN INDIA: A POLICY REFORMS

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Abstract:

The economic development of any country depends on the availability of different types of resources in that country and how and to what extent the citizens and the government utilize those resources. That resource includes many elements. Government's objective of implementing Pradhan Mantri Ujjwala Yojana (PMUY) is to provide free household electricity to below poverty line women. L. P. G. Providing gas will reduce the respiratory diseases they get while cooking on the stove and will improve their quality of life. Therefore, the topic has been selected from the point of view that the women belonging to below poverty line families should get the full benefit of this scheme by conveying the information about this scheme.

Under the Pradhan Mantri Ujjwala Yojana (PMUY), the government aims to provide free gas connections to women belonging to below poverty line families. But the people of rural areas are facing many problems to get the benefits of this scheme so they have to be deprived of the benefits under this scheme. Solving many this type problems through research, Mauli's face shining in the light of the gas obtained through the scheme will strengthen her this aspirations. In a real sense this gas addition will add to her self-esteem and identity. In the implementation of Pradhan Mantri Ujjwala Yojana, the administrative machinery, gas agency LPG Due to the low level of education among women in rural areas regarding the facilities provided in relation to gas connection, the method of applying for the benefits of the scheme, the information about the legal provisions and the facilities provided in the Pradhan Mantri Ujjwala Yojana has not reached the desired level. Pradhan Mantri Ujjwala Yojana is studied in the presented research paper.

Keywords: Women Empowerment, Welfare Scheme, Governance, Poverty.

Introduction:

In May 2016, Ministry of Petroleum and Natural Gas (MOPNG), introduced the 'Pradhan Mantri Ujjwala Yojana' (PMUY) as a flagship scheme with an objective to make clean cooking fuel such as LPG available to the rural and deprived households which were otherwise using traditional cooking fuels such

as firewood, coal, cow-dung cakes etc. Usage of traditional cooking fuels had detrimental impacts on the health of rural women as well as on the environment. The scheme was launched on 1st May 2016 in Ballia, Uttar Pradesh by Hon'ble Prime Minister of India, Shri. Narendra Modi.

Population growth and its side effects have been a universal problem since independence. In terms of population, India currently ranks first in the world. According to the 2011 census, the total population of India is 1,210,854,977, which means that it has exceeded one hundred crores. 17.5 percent of the total population of the world lives in India. India has high rate of population growth, low agricultural productivity, economic disparity, increasing effects of unemployment, high illiteracy rate, increasing crime rate etc. Therefore, the number of poor people in the country is also increasing continuously. The growing poverty in India also affects the Indian economy. It is the duty of the country and society to solve the problems of these people. India is a democratic country. Therefore, it is the duty of the country to look at every citizen of the country equally. In terms of public welfare state concept, the government is responsible for the welfare of every citizen. Therefore, the government cannot ignore the problems of the citizens. This is a general principle of a democratic state. That is why social and economic security is a very essential component of good governance and the government is working to fulfill it.

Pradhan Mantri Ujjwala Yojana launched by the Government of India on May 1, 2016 is one of the most successful public welfare schemes. The main objective of this scheme is to provide free household L to about 5 crore women below the poverty line in India. P. G. The central government has decided to provide gas connections. 91 lakh below poverty line families living in Maharashtra will get the benefit of this scheme. Hindustan Petroleum Corporation Limited has distributed 1 lakh 6 thousand 492, Bharat Petroleum Corporation Limited 6 thousand 898 and Indian Oil Corporation Limited 53 thousand 306 gas connections of three companies have been distributed. Pradhan Mantri Ujjwala Yojana is studied in the presented research paper.

Objectives of the Research Paper:

1. Impact Assessment on Health and Empowerment of Women under Pradhan Mantri Ujjwala Yojana.
2. To study free LPG gas connection under Pradhan Mantri Ujjwala Yojana.
3. Examining the role of governance behind Pradhan Mantri Ujjwala Yojana.

Background of the Pmuy Scheme:

Pradhan Mantri Ujjwala Yojana is an ambitious step taken by the central government towards women empowerment. When the stove is lit by burning wood and dry leaves, the woman who cooks suffers the most from the smoke. According to the 2015 global statistics, the number of premature deaths caused

by the polluted environment behind the four walls of the house is about 1 million worldwide. Out of these 10 lakh, about 1.25 lakh deaths occur in India and that too in poor rural families, according to several reports.

Keeping this important matter in mind, due to the various UjjwalaYojana of the central government, the traditional method of cooking has been broken and the gas cylinder with clean fuel has been delivered to every village today. The central government announced the UjjwalaYojana to increase the use of clean media like gas cylinders for cooking in more and more families.9 out of 10 households in the country use gas cylinders for cooking due to the government's efforts to popularize low-pollution fuels and provide fuel to poor families at minimum cost. Four years ago, the ratio was 5 in 10 households.

Women Empowerment Through Pmuy :

Rural women are victims of pollution caused by fuel burning in traditional stoves. Due to this smoke that keeps playing inside the house while cooking, women and small children who garden around it are getting sick. Women in rural areas cook using wood, chips, dried grass or pounded cow dung etc. collected from nearby forests and fields. Many times, women are forced to collect fuel, so a network of social, economic and health related problems in rural areas is spread around the stove.

By empowering women and taking care of their health, reducing the adverse effects of using wood burning in cooking, maintaining the health of the respiratory system of women and the entire family, changing the status quo of Lakudphata as fuel, preventing the loss of forest resources, protecting the environment and reducing the time spent by housewives in cooking due to cooking gas. Center keeping in view various objectives such as saving time and thereby boosting empowerment Pradhan Mantri Ujjwala Yojana to depollution villages of the country under the slogan 'Clean Fuel Better Life' by the government was launched on May 1, 2016 in the village of Ballia in Uttar Pradesh on the occasion of World Workers' Day. Uttar Pradesh, Rajasthan, Chhattisgarh, Madhya Pradesh, Jharkhand and North Eastern states were given priority under this scheme.

Women are engaged in gathering firewood for up to four hours during the productive hours of the day. Whole families and even small children are involved in firewood collection. Therefore, for the development of a nation, the provision of clean fuel for cooking is an important problem for the people of the country.

Objectives of Pradhan Mantri Ujjwala Yojana:

1. Empowering women and taking care of their health.
2. Reduce the acute visual effects of using wood burning in cooking to do
3. To reduce deaths in India due to use of unhygienic burning for cooking.
4. Use of wood burning in the house can cause a lot of exposure to small children relieves respiratory complaints.

5. Free to families living below poverty line. L. P. G. Gas Making connections available.
6. To promote clean fuel consumption in India.

Ujjwala 2.0:

Additional allocation of 1.6 Crore LPG Connections under PMUY scheme with special facility to migrant households. Target number of connections under Ujjwala 2.0 was achieved during Dec' 22, thus taking overall connections under the scheme to 9.6 Crore. Government of India has approved release of additional 75 lakh connections under PMUY Scheme, taking overall target under the scheme to 10.35 Crore, against which connections are getting released now.

Beneficiary Eligibility for Pmuy?

To avail the benefit of this scheme, the beneficiaries have to submit only one application in their LPG Go to the distribution center and present it. LPG Application form is available free of cost at the center or online application form can be filled. While submitting the application, the applicant is required to provide his full name, address, Aadhaar card number, Jan Dhan account number. Along with Panchayat Adhikari Municipality certified B. P. L. Certificate B. P. L. Ration card, passport size photograph is required. Applicant must have completed 19 years at the time of submission of application and below poverty line women are required to apply. Eligible beneficiaries of Pradhan Mantri Ujjwala Yojana will get an additional assistance of Rs.1600 for purchasing gas connection under the scheme.

According to Social and Economic Caste Census 2011 LPG Connection was being given. Subsequently, beneficiaries of Scheduled Castes, Backward Communities, Pradhan Mantri Awas Yojana and Antyodaya Yojana were included in it. Now all poor families are included in this. So now up to 100 percent of the family LPG The connection is about to arrive.

Due to the expected speed and wide spread of this scheme, cylinder filling centers of petroleum and natural gas sector companies have started utilizing 120 percent of its capacity. Previously, there was no night shift work through this center, now that it has started, employment opportunities are also increasing gradually. There were 189 barrel plants (cylinder filling centers) in the country till last year, 32 new centers have been added this year. So far the number of gas connections has reached 23,489,757.

Pradhan Mantri Ujjwala Yojana (PMUY) has several benefits:

- This scheme provides free LPG connection to poor families and women.
- It reduced the number of deaths due to food consumption.
- The health of young children improved.
- Women's health improved.
- Environmental pollution reduced.
- Deforestation decreased.

- LPG connection has helped women get relief from health related problems.
- This scheme has reduced the pollution in the environment.

Connections of Pradhan Mantri Ujjwala Yojana till 2024**State-Wise PMUY Connections**

State/Ut	1-Dec-24
Chandigarh	2027
Delhi	259736
Haryana	1115283
Himachal Pradesh	150811
Jammu & Kashmir	1269910
Ladakh	11086
Punjab	1359529
Rajasthan	7382319
Uttar Pradesh	18595352
Uttarakhand	530240
Sub Total North	30676293
Arunachal Pradesh	53797
Assam	5097796
Manipur	224986
Meghalaya	317155
Mizoram	36007
Nagaland	122152
Sikkim	19892
Tripura	316464
Sub Total North-East	6188249
Andaman & Nicobar Islands	13824
Bihar	11630895
Jharkhand	3895867
Odisha	5550196
West Bengal	12376110
Sub Total East	33466892
Chhattisgarh	3801927
Dadra & Nagar Haveli And Daman & Diu	17798
Goa	1956
Gujarat	4309045

Madhya Pradesh	8847400
Maharashtra	5218447
Sub Total West	22196573
Andhra Pradesh	973396
Karnataka	4147373
Kerala	387845
Lakshadweep	361
Puducherry	19380
Tamilnadu	4100388
Telangana	1184164
Sub Total South	10812907
All India	103340914

Source: PSU OMCS(IOCL, BPCL & HPCL)

Conclusion:

The health of those who use traditional fuels (coal, wood, dung) is adversely affected. The UjjwalaYojana has provided women access to safe and clean fuel, leading to a reduction in respiratory diseases.

The government provides an initial fee for connection, which is very helpful for poor families. This makes fuel purchase easier. A gas stove saves women time and can be used for other household chores. This has helped in empowering them economically, socially and psychologically.

Using LPG gas is environmentally friendly, as it reduces smog emissions and prevents deforestation. Lakhs of households have got LPG connections under this scheme since 2016, which has made a huge difference in the society.

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INFLIBNET INITIATIVES BY GOVERNMENT OF INDIA**Dr. Vaishali D. Malode**

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Abstract:

This paper presents the Major INFLIBNET initiatives by Government of India i.e. **Shodhganga** and **Shodhgangotri**, which provide open access to theses and research proposals; **e-ShodhSindhu**, a digital library consortium offering access to e-resources; and the recently launched **One Nation One Subscription (ONOS)**, which aims to democratize access to global academic content across the country. Other significant efforts include the development of **SOUL** software for library automation, the **IndCat** union catalogue, bibliometric support for **NAAC**, and the **NIRF** ranking portal. These initiatives collectively enhance transparency, accessibility, and collaboration in the Indian academic and research ecosystem, reflecting the Government of India's commitment to educational excellence and knowledge dissemination.

Keywords: INFLIBNET, NAAC, Government of India

Introduction:

INFLIBNET - Information and Library Network (INFLIBNET) Centre, Gandhinagar is an Autonomous Inter-University Centre (IUC) of University Grants Commission, New Delhi (Ministry of Education, Govt. of India). It is a major National Programme initiated by the UGC on 27th February 1991 as a project under the IUCAA, it became an independent Inter-University Centre on 16th May 1996. INFLIBNET is involved in modernizing university libraries in India using the state-of-art technologies for the optimum utilization of information. INFLIBNET is set out to be a major player in promoting scholarly communication among academicians and researchers in India.

Major INFLIBNET Initiatives by the Government of India**Shodhganga:**

A digital repository providing open access to over 5,00,000 full-text theses and dissertations submitted to Indian universities. This initiative ensures transparency and accessibility in academic research.

Name of Database	No. of Records
Full Text Theses	573441
SYNOPSIS/MRPs/PDFs/Fellowships	15116
Universities Contributing	817
Universities+CFTIs/INIs Signed MoU	935

Shodhgangotri:

Under the initiative called "ShodhGangotri", research scholars/research supervisors in universities are requested to deposit an electronic version of the approved synopsis submitted by research scholars to the universities for registering themselves for the Ph.D. programme now it is expanded to MRPs/PDFs/Emeritus Fellowship, etc. The repository on one hand would reveal the trends and directions of research being conducted in Indian universities, on the other hand, it would avoid duplication of research. Synopsis in "ShodhGangotri" would later be mapped to full-text theses in "ShodhGanga". As such, once the full-text thesis is submitted for a synopsis, a link to the full-text theses would be provided from ShodhGangotri to "ShodhGanga". A repository of research synopses and proposals, offering insights into ongoing and proposed research projects across Indian universities.

Name of Database	No. of Records
Total	15182
SYNOPSIS	14955
MRPs	27
PDFs	51
Fellowship	5
PG Dissertation	78

N-LIST:

The Project entitled "National Library and Information Services Infrastructure for Scholarly Content (N-LIST)", being jointly executed by the e-ShodhSindhu Consortium, INFLIBNET Centre and the INDEST-AICTE Consortium, IIT Delhi provides for i) cross-subscription to e-resources subscribed by the two Consortia, i.e. subscription to INDEST-AICTE resources for universities and e-ShodhSindhu resources for technical institutions; and ii) access to selected e-resources to colleges. The N-LIST project provides access to e-resources to students, researchers and faculty from colleges and other beneficiary institutions through server(s) installed at the INFLIBNET Centre. The authorized users from colleges can now access e-resources and download articles required by them directly from the publisher's website once they are duly authenticated as authorized users through servers deployed at the INFLIBNET Centre.

Name of Database	No. of Records
E-Journals	6793
Bibliographic Database	1
E-Books	195809

e-ShodhSindhu:

The e-ShodhSindhu will continue to provide current as well as archival access to more than 10,000 core and peer-reviewed journals and a number of bibliographic, citation and factual databases in different disciplines from a large number of publishers and aggregators to its member institutions including centrally-funded technical institutions, universities and colleges that are covered under 12(B) and 2(f) Sections of the UGC Act.

Name of Database	No. of Records
CFTIs	98
Universities	217
Colleges	3800
e- Journals	10000
e- Books	199500
e-Books through NDL	600000
Resources	20
Databases	4

INDCAT:

IndCat is a free online Union Catalogue of Books, Theses and Serials of major university/institute libraries in India. The IndCat contains bibliographic information, location and holdings of Books, Theses and Serials. It provides the records in standard bibliographic formats i.e. MARC, MARCXML. It covers all major subjects, i.e. Psychology, Statistics, Political Science, Economics, Law, Public Administration, Education, Commerce, Linguistics, Mathematics, Astronomy, Physics, Chemistry, Biology, Life Sciences, Botany, Zoology, Medicine, Engineering, Agriculture, Management, Architecture, Sports, Literature, History, Computer Science etc. A Web-based interface is designed to provide easy access to the merged catalogues. The IndCat is a major source of bibliographic information that can be used for Inter-Library Loan, Collections Development as well as for Copy Cataloguing and Retro-Conversion of bibliographic records.

Name of Database	No. of Records	No. of Universities
Books	1,64,36,946 (Unique Records) and 2,48,77,002(holdings)	359
Theses	4,55,397	464
Serials	37,159	239

Online Copy-Catalogue System:

OCS is very useful application for all university libraries who wants to contribute their bibliographic data for INFLIBNET's Online Union Catalogue of Indian Universities (IndCat). OCS provides "IndCat Book Data" with simple

and advanced search options. It gives 'copy', 'edit' and 'create new' options for creating online bibliographic records of book data and then share with INFLIBNET's IndCat, which benefits academic communities around the world. OCS 2.0 Portal Launched by Prof. Yogesh Singh, Hon'ble Chairman, Governing Board, INFLIBNET Centre and Vice-Chancellor, DTU, New Delhi on 18th August 2021.

Name of Database	No. of Records
Total ocs	82535
Participated university	74

Shodh Shuddhi:

Based on the recommendation of Sub-Committee, National Steering Committee (NSC) of e-ShodhSindhu, The Ministry of Education, Govt. of India has initiated a programme "ShodhShuddhi" which provides access to Plagiarism Detection Software (PDS) to all Universities/Institutions in India since Sept 1, 2019. 1100+ institutions are identified which includes

- Central Universities
- State Universities
- Deemed to be University
- Private Universities
- Centrally funded Technical Institutions (CFTIs)
- Inter-University Centre (IUCs) of UGC
- Under the ShodhShuddhi initiative, Universities and Institutions across

the country were provided access to Ouriginal (formerly Urkund), a web-based plagiarism detection software system. This initiative was officially inaugurated by the Former Minister of Education (formerly MHRD) on September 21, 2019, and it continued until the contract with M/s Ouriginal by Turnitin concluded on September 30, 2023. Starting from October 1, 2023, the INFLIBNET Centre now offers the 'DrillBit-Extreme Plagiarism Detection Software' to Higher Education Institutions (HEIs) as part of the same ShodhShuddhi initiative. The trial phase for this software was scheduled for October 2023, with full-fledged service commenced on November 1, 2023.

Name of Database	No. of Records
Total Member Institutions	1148
Total Users	178836
Total Documents Submitted	1412492

SHERNI:

She Research Network in India (SheRNI) is the expert profile network system that connects and leverages the knowledge, skills, and expertise of women across various fields in India. This system aims to empower women by

providing opportunities for collaboration, mentorship, and knowledge-sharing. The objectives of this project are to create a national-level expert profile system for women faculty members and facilitate the exchange of expertise, insights, and experiences among women experts in diverse fields.

The system supports the women scientists/faculty members to build a strong professional network that fosters collaboration, mentorship, and career advancement opportunities. The SheRNI expert network system serves as a dynamic platform for women professionals to connect, collaborate, and empower each other, ultimately contributing to the advancement of women in various fields.

Name of Database	No. of Records
Publications	848179
Patents	16749
Closed Access	175214
Gold OA	31636
Bronze OA	12044
Green OA	11923
News, Blogs & Policy	446095
Wiki	125090
Social Media	771734
Mendeley	4840673

IRINS:

IRINS is web-based Research Information Management (RIM) service developed by the Information and Library Network (INFLIBNET) Centre. The portal facilitates the academic, R&D organisations and faculty members, scientists to collect, curate and showcase the scholarly communication activities and provide an opportunity to create the scholarly network. The IRINS is available as free software-as-service to the academic and R&D organisations in India.

The IRINS would support to integrate the existing research management system such as HR system, course management, grant management system, institutional repository, open and commercial citation databases, scholarly publishers, etc. It has integrated with academic identity such as ORCID ID, ScopusID, Research ID, Microsoft Academic ID, Google Scholar ID for ingesting the scholarly publication from various sources.

Instances	1380
Profiles	211008
Publications	2945585
Citations	26159308
Altmetric Mentions	10334053
Others	31001

INFED

Most of the publishers use IP filtering as a de facto standard for authenticating authorized users in subscribing institutions and providing access to e-resources to them. While IP-based access is most convenient, safe and hassle-free authentication mechanism for publishers as well as for subscribing institutions, it has some limitations. One of the most serious limitation of IP-filtered access to e-resources is that the users can access e-resources only when they are in the Institute campus. Ideally, an authorized user should be able to access e-resources irrespective of his / her physical location at any time as long as he has access to the Internet.

In order to overcome this limitation, the INDIAN Access Management Federation (INFED) has adopted Shibboleth, a standard-based open source software, for authenticating authorized users from institutions and provide them seamless access to e-resources from anywhere, anytime. Shibboleth offers a mechanism for users to access multiple resources within a federated single sign-on framework. The goal of the INFED is to allow users to access internal and external resources seamlessly using a single, institutionally controlled identity. This would not only allow authorized users to access e-resources from anywhere, anytime but would also circumvent the requirement of maintaining multiple passwords for multiple resources in multiple domains.

Name of Database	No. of Records
Total Number of Institution Signed Membership	266
Fully Functional Institutions	208
Service Providers	44

ONOS:

The Prime Minister of India in his address to the Nation from the ramparts of the Red Fort on 15th August, 2022, had pointed out the importance of Research and Development in our country in the *AmritKaal*. He had given the clarion call of "Jai Anusandhan" on the occasion.

The National Education Policy, 2020 (NEP 2020) has also identified research as a requisite for outstanding education and development in our country.

In response to the vision of making India *Atmanirbhar* and *Viksitbharat@2047*, the Government of India approved One Nation One Subscription scheme to provide country-wide access to international high impact scholarly research articles and journal publications to students, faculty and researchers of all Higher Education Institutions managed by the central government and state governments and Research & Development Institutions of the central government.

The One Nation One Subscription (ONOS) intends to acquire national licenses for e-journal/database subscriptions from most of the prominent journal publishers. A total of 30 major international journal publishers have been

included in ONOS. All the journals published by these publishers will be accessible to the students, faculty members and researchers of the participating institutions.

The initiative will open a goldmine of knowledge available in top quality scholarly journals to nearly 1.8 crore students, faculty members, researchers and scientists of all disciplines, including those in tier 2 and tier 3 cities, thereby encouraging core as well as interdisciplinary research in the country. The ONOS is starting its operation from 1st January 2025. ONOS phase-I has been approved for the calendar years 2025, 2026 and 2027. Access to journals is being provided through national subscription coordinated by the Information and Library Network (INFLIBNET) Centre, an autonomous inter-university centre of the University Grants Commission (UGC), Gandhinagar, Gujarat. The Department of Higher Education, Government of India will have a unified portal "One Nation One Subscription" (<https://www.onos.gov.in/>) through which the institutions will be able to access the journals. The ANRF will periodically review the usage of One Nation One Subscription and publications of Indian authors of these institutions.

One Nation One Subscription is a timely step towards establishing India in the global research ecosystem by bringing ease of doing research to the doorstep of all students, faculty members and researchers in the government institutions.

Shodhchakra:

Shodh-Chakra is an initiative of Information and Library Network (INFLIBNET) Centre under the guidance of University Grants Commission (UGC) to help the academic community during their research life cycle. Shodh-Chakra provides a unique space to the researcher, guide/supervisor and university to manage the research lifecycle of a research scholar. This will work as a digital workspace wherein researchers can collect, store, organize and cite their research work. The Shodh-Chakra would help researchers to create their profile and manage their preferences. The process of using the portal starts with signing an MoU between University and INFLIBNET Centre. The university/institute has to provide valid information of the researcher and supervisor. Further, researcher can login into system and avail the features of Shodh-Chakra. The system will generate login credentials to researchers, supervisors and universities.

Shodhganga: a reservoir of Indian Theses:

Theses and dissertations are known to be the rich and unique source of information, often the only source of research work that does not find its way into various publication channels. Theses and dissertations remain an un-tapped and under-utilized asset, leading to unnecessary duplication and repetition that, in effect, is the anti-theses of research and wastage of huge resources, both human and financial.

The UGC Notification (Minimum Standards & Procedure for Award of M.Phil. / Ph.D Degree, Regulation, 2009 Amendment made on 2016) dated 5th

May 2016 mandates submission of electronic version of theses and dissertations by the researchers in universities with an aim to facilitate open access to Indian theses and dissertations to the academic community world-wide. Online availability of electronic theses through centrally-maintained digital repositories, not only ensure easy access and archiving of Indian doctoral theses but will also help in raising the standard and quality of research. This would overcome serious problem of duplication of research and poor quality resulting from the “poor visibility” and the “unseen” factor in research output. As per the Regulation, the responsibility of hosting, maintaining and making the digital repository of Indian Electronic Theses and Dissertation (called “Shodhganga”), accessible to all institutions and universities, is assigned to the INFLIBNET Centre.

National Institutional Ranking Framework (NIRF) :

INFLIBNET developed and maintains the web portal for NIRF, which ranks higher education institutions in India based on various parameters. The Centre is responsible for data collection, validation, and analysis related to publications, citations, patents, and other metrics.

Vidwan:

A database of profiles of scientists and researchers, providing information about experts to peers, prospective collaborators, funding agencies, policymakers, and research scholars

Conclusion:

The INFLIBNET Centre, through its various initiatives supported by the Government of India, has significantly enhanced the accessibility, quality, and efficiency of academic and research resources across the country. By promoting open access, digital libraries, research visibility, and technological advancements in library management, INFLIBNET is fostering a more inclusive and knowledge-driven higher education system. These initiatives not only empower students, researchers, and faculty but also strengthen India’s academic infrastructure and global research presence. Continued investment and innovation in such programs will be critical in sustaining academic excellence and supporting a vibrant research culture nationwide.

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- IRINS.<https://irins.inflibnet.ac.in/irins/>
- ILMS.<https://ilms.inflibnet.ac.in>



OPPORTUNITIES IN THE PROGRESS OF TECHNICAL HUMAN RESOURCES IN INDIA

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Abstract :

The expanding human resources in India during the last seven decades was totally overlooked by both the government and the concerned economic sectors. As a result, the available opportunities in those sectors were lost due to non-availability of skilled workers. Only in the year 2014, when the New Government was formed, it immediately launched the massive skilled development initiative. The Prime Minister Koushal Vikas Yojana and many other institutions as well as authorities were set up in the Central and State Governments. The separate Ministry for Skilled Development and Entrepreneurship was established in July 2014 for formation of policies, practices, and programmes for the creation of facilities for skill development in not less than 24 sectors to cater to the training needs of not less than 510 million of human resources in the country. India's New Educational Policy 2020 aims to make education more skilled based by providing different skill job training to students.

This paper highlights the progress of technical human resources in India in the last decade and role of NEP 2020 in raising technical human resources in India in future.

Introduction:

Human resource is a supreme element in the process of development in almost every field. It is the only intelligent, creative, innovative, emotive, and most active element. Loren C. Scott (1) stated that "The constant and continuous development in the various systems in the world is the result of incessant and intensive efforts of human beings even at the cost of their lives; and their active participation had brought out the massive body of knowledge". No person, family, society, or nation is capable of empowering, enriching and ensuring success without people owning diligence, devotion, discipline, and dedication.

India's economic development was listless due to political and monetary disharmony and environmental and social adversities. However, new initiatives and priorities arising from the political will giving direction to the economy

appears meaningful as the focus is now on technology-based skills for human resources. The Prime Minister, Mr. Narendra Modi (2) set out the directive saying, "To make this the country of India it is important that the youth of India should be equally proficient in the education as well as the skills. When it comes to skills the mantra should be skilling, reskilling, and up skilling". The objective and direction for the development of human resources are clearly made out. In context, an attempt is made to examine how for the new initiatives push up the economic development of the country.

The key reforms for technical human resource development under NEP are i) focus on STEM (Science, Technology, Engineering and Technical Education, Encourages interdisciplinary learning, integrated technical subject with arts, humanities and social science.

Strengthening coding AI, robotics and data science education ii) Focus on vocational education and skill development, provide internships, apprenticeships and hand on training from standard 6 onwards collaboration with industry leaders to enhance skill based education. iii) Focus on Multidisciplinary higher education system. iv) Strengthening Research and Innovation. v) Digital and online learning Expansion.

Objectives :

The objectives of this paper are to examine and evaluate:

- a. The policies and programmes chalked out by the government, and
- b. The performance of those programmes in improving the technical skills of human resources; and
- c. The suggestions offered.

Limitations :

In the wake of massive information released by the Central and state governments as well as private sector industries, the study is confined to:

- the period of a decade i.e., 2014-2024;
- the schemes and institutions set up only by the central government,
- the information and data published only by government agencies, and
- Prescribed skills in the prescribed sectors and not those initiated under the 'Vishvakarma Yojana' inaugurated on September 23, 2023, for blacksmith, gold smiths, tailors, carpenters, cobblers, etc.

Discussions and analysis :

The massive thrust on MSME industrial sector by providing considerable bank credit at easy conditions bore the desirable results particularly in improving industrial production and creating additional opportunities of employment for young working population. The results of rejuvenated economic environment in the country are evident from the figures presented in the following table 1.

Table 1: Country-wise GDP growth-rates (Percentage)

Country	2022	2023
U.K.	3.6	0.3
Japan	1.7	1.6
USA	1.6	1.0
China	3.2	4.4
India	6.8	6.1

Source: Table 1.1, Page 7, Annual Report of the Ministry of MSDE 2023-24. Government of India, New Delhi.

Observations :

(i) The GDP growth rates of India surpassed the major developed nations including China and USA; India's growth rates for both the years under review were more than double of the rates of USA and China:

(ii) While the growth rates of all the countries except China came down in the year 2023 from 2022; the UK showed the sharpest fall from 3.6 per cent to 0.3 per cent;

(iii) Japan was the only country that recorded the fall as low as 0.1 per cent while India stands next recording the decrease of merely 0.7 per cent.

Seven decades after independence, India achieved the highest growth rate in the world despite the rising pressure of population, vagaries of nature, monetary constraints and the pandemic. The new dynamic and highly prudent leadership in the government opened the new vistas and had taken hard, determined but necessary decisions.

New initiative :

The noticeable achievement was certainly the result of new initiatives in financial, industrial, and commercial sectors. These sectors got the most fitting fillip in technical enrichment of entrepreneurs and workers in important sector and the states. The government leadership realized the necessity of making entrepreneurs and workers in various sectors of agriculture and industry technically competent. The separate Ministry for Skill Development and Entrepreneurship (MSDE) was set up by the Central Government on July 30, 2014. Its vision statement (3) says, "To unlock human capital to trigger a productivity dividend and bring aspirational employment and entrepreneurship pathways to all". The challenge was formidable because of the following reasons:

- In-built apathy in Indians for developing skills and accepting new technologies;
- Mismatch between the demand and supply of obtaining new skills for development;
- Paucity of trainers due to unwillingness of working technical personnel;
- Insipid functioning apprentice courses in established industries;

- Insufficient and obsolete tools and technical equipment for training;
- Limited mobility of skilled workers,
- Training period a deemed-paid holiday, and
- Absent of suitable opportunities for skilled human resources.

With a view to facing these challenges boldly, the MSDE (4) set out the following objectives, inter alia,

1. Create an ecosystem for the youth to make the informed choices on available skilling avenues;
2. Provide support to the youth for skilled training and certification.
3. Promote sustainable centres for skill development and greater proliferation of private sector; and
4. Benefit more than 8 lakhs of youth across the country during next five years.

Dr. M. N. Mahalingam (5) commented upon these objectives saying, "These objectives drawn by the MSDE are theoretically sound and reasonable but practically do not seem to be feasible". Further, the target of 8 lakhs is not over-ambitious in view of the present estimated size of workers in different major sectors of the economy of the country, as may be seen from the following Table 2. Table2: Sector-wise estimated number of workers (in Lakhs), during Jan-March 2022.

S. No.	Sector	No. of Workers
1.	Manufacturing	122.5
2.	Construction	6.1
3.	Trade	17.0
4.	Transport	13.8
5.	Education	69.0
6.	Health	33.8
7.	Hotels & restaurants	8.2
8.	L.T./BPO	38.3
9.	Others	9.1
	Total	318.00

Source: Annual Report of the MSDE 2023-24, VI, Table 56, page 166.

The above Table highlights certain following facts to be studied as a factor of demand for improvement of related skills:

- i. The total population of workers was 3.18 crores, and this size would expand further because of development of related industries as well as the increase in population;
- ii. Four major sectors, viz., manufacturing, education, information technology, and health, cause to enhance the demand side for skill-development; the management of these sectors are never keen to improve the skills of their workers;

- iii. All these sectors recognized the necessity of skilled workers for the purpose of improving productivity; yet they remain disinclined to improve the technical skills of human resources.

To sum up, the demand for skill development is evidently stupendous while the government efforts are not significant. No doubt, the new initiative of the government is laudatory, but the task is forbidding.

Implementation Spree:

The MSDE soon after its formation launched operational and institutional projects by July 30, 2014. On priority basis the following important projects were enthusiastically started for the development of working human resources in the country by the MSDE:

1. Prime Minister Koushal Vikas Yojana (PMKVY),
2. Prime Minister Koushal Kendra (PMKK),
3. National Skill Development Corporation, (NSDC),
4. Jan Shikshan Santha (JSS),
5. National Institute for Entrepreneurship & Small Business Units (NIESBUD),
6. Indian Institute of Entrepreneurships (IIE), and
7. Director General of Training.

Here, the focus is only on PMKVY due to the limitations of the paper. The objectives (6) of this pioneering and ambitious scheme are as under:

1. Create an eco-system for the youth to make informed choices on available skilling avenues;
2. Provide support to youth for skilled training and certification,
3. Promote sustainable skills centres across the country, and
4. Benefit of 8 lakhs of youth across the country.

These objectives underscore the necessity of young human resources throughout the country. Interestingly, considerable emphasis is laid on creation of supportive eco-system which was almost non-existent in the country. The effective eco-system calls for identification of proper fields or avenues for skill development. Further. It gets strengthened no sooner its benefits are verily acknowledged by young and keen people. In absence of assurance of future benefits, those exquisite young people mostly remain recalcitrant. Hence, proper certification as well as gradations or graduation such as diploma, post-graduate diploma, etc., have also been introduced by the MSDE.

Estimates of Human Resource Requirements:

The MSDE through NSS undertook the study of estimates of the human resource requirements in definite sectors as shown in Table 4. The details of the skill development programmes would likely to be formulated on the basis of these estimates.

Table 3: Estimates of Sector-wise Human Resource Requirements (in millions)

S. No.	Sector	2022-23	2024-25
1.	Agriculture	229.0	216.5
2.	Construction	60.4	91.0
3.	Retail Trade	45.3	56.0
4.	Logistics/Trans	2.3	31.2
5.	Textiles	18.3	25.0
6.	Education	14.8	18.0
7.	Handloom	14.1	18.8
8.	Auto-Corp.	12.8	15.0
9.	Const. Materials	0.7	12.4
10.	Printing & Stationery	8.9	12.6
11.	Food Processing	8.8	11.6
12.	Tourism	9.7	14.6
13.	Domestic Help	7.8	11.1
14.	Gems & Jewellery	6.1	9.4
15.	Electronic Hardware	6.2	9.6
16.	Furniture & Fur.,	6.5	12.2
17.	Beauty etc.,	7.4	15.6
18.	Health care	4.6	7.4
19.	Leather & Goods	4.4	7.6
20.	Information Tech.	3.8	5.3
21.	Banks	3.2	4.4
22.	Tele-communication	2.9	5.6
23.	Pharmaceuticals	2.6	4.0
24.	Medical Engineering	0.7	1.7
	Total	510.8	614.2

Observations :

i. Within a period of one year i.e., 2022-23 and 2024-25 the total number of estimated prospective eligible candidates (PECs) for skilled training would rise by 20.2 percent:

ii. The agricultural sector being the most prominent sector of the Indian economy would have not less than 44.9 per cent in 2022-23 and 35.1 per cent in the year 2024-25; it thereby shows that a largest number of skilled development programmes need be undertaken for human resources in different agricultural and related activities;

iii. Next comes the construction sector which is highly disorganized and fragmented labour sector; as per estimates, this sector contains 12.2 per cent in 2022-23 and 15 per cent of total PECs; the skills required for this sector are vivid and varied depending upon the methodologies of construction in different states;

iv. Five sectors namely, (a) transport and logistics (b) Construction materials, (c) Furnishing (d) Beauty and wellness, and (e) medical engineering, registered the highest percentages of expansion in human resources; this would cast additional responsibility on the MSDE to concentrate more on these sectors.

It may be concluded that the expansion in the size of eligible human resources for undergoing the skilled development programmes in all the sectors, as reported, was substantial. All the 24 sectors comprise vivid and varied skills for which effective training courses need be launched. This is very vast, costly and intricate venture. Suggestions

The above analysis as well as the study of the Annual Reports of the MSDE lead to come out with the following suggestions.

The State Governments are roped in the process of development of human resources of their respective States in the effective manner. The State Governments may be asked to set up their own Skill Development Corporation which can draw appropriate training courses for the State-based industries. For example, the State Government of Kerala in close association with the Coir Board, may set up then SDC for identified need skills.

The Industries Associations belonging to varied industries may be approached to launch SDCs from the funds available under the Corporate Social Responsibility. In this manner, private sector industries may play crucial role in technical development of human resources. Its benefits to industry and workers cannot be overlooked. The Old and obsolete Apprentice Act needs to be made more effective and stringent. Under the proposed Act, any eligible candidate may be admitted to skill development courses with reasonable conditions, keeping the national interest at the fore and core. The New Education Policy and the National Training Policy stipulated in the Annual Report of the MSDE need be combined to develop the close relationship between the formal education and specific skill development may be set up and effectively monitored. NEP 2020 is a game-changer for technical human resource development in India. By promoting multidisciplinary, skill-based and technology-driven education, it aims to create future-ready workforce, development in research and innovation, entrepreneurship and global competitiveness.

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FUTURE OF GIG WORKERS IN INDIA'S GIG ECONOMY**Rajendra Motghare**

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Abstract:

India's gig economy is growing rapidly, providing flexible work options while simultaneously raising critical questions about equitable growth. The term "gig economy" is defined as a market based on fixed-term contracts. It has completely changed the direction of people to engage at work. The impact of the gig economy on the work and worker is widespread. Due to its unparalleled quality, the number of gig workers will continue to grow, as many of the best and brightest workers will turn to gigs as their primary employment. This study examines the internal barriers to equitable growth in India's gig economy. In this paper, researcher discussed key issues including income inequality, absence of social security, geographical and digital inequalities, and structural barriers for marginalised people. The study also examines the policies of equitable growth and makes suggestions for equitable growth with the benefits of the gig economy.

Keywords: Gig economy, equitable growth, income inequality, social security, structural barriers.

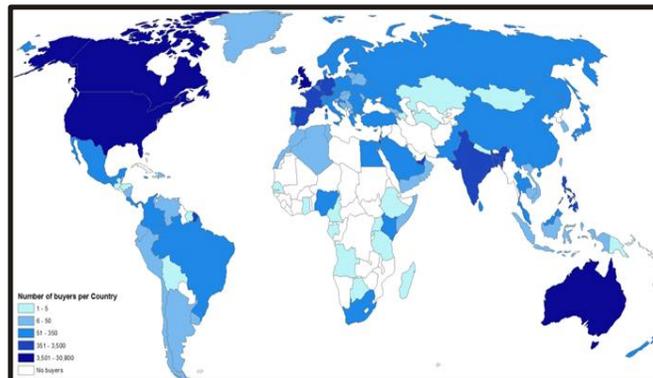
Introduction:

In the digital world, the trend of online workers on online platform has opened a new market system. This trend is known as Gig economy (Healy et al., 2017). The Gig economy is a free market system where the organisation contract with individual worker for a short period services (Roy & Shrivastav, 2020). In global economy, many permanent workers are unable to secure their permanent jobs (Manyika et al., 2016), when these permanent workers joint contractual jobs as independent workers, popularly called them Gig workers (Friedman, 2014). According to Cambridge Dictionary, "a way of working that is based on people having temporary jobs or doing separate pieces of work, each paid separately, rather than working for an employer". Staffing Industry Analysts analyzed that Global gig economy reaches approximately 3.7 trillion dollar and it generate employment for 53 million people in the economy (Staffing Industry Analysts, 2024).



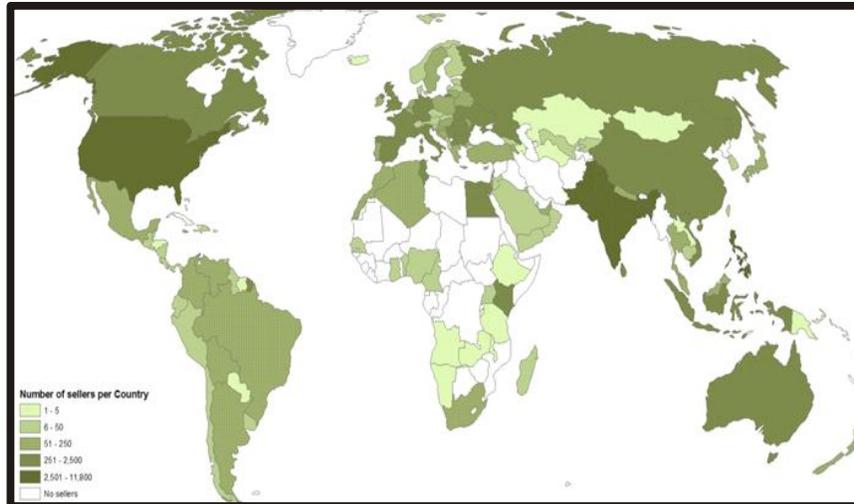
Source: SIA (Staffing Industry Analysts)
Figure 1: Global gig economy reaches \$3.7 trillion

In India, 42 percent gig workers were involved in high skill work as freelancing IT, design, and management services. A majority of the share of the gig workforce was involved in low-skilled work. Delivery, ridesharing, cleaning, and micro tasks were the common low-skilled jobs among gig workers (*Statista - The Statistics Portal*, n.d.). Figure 2 offers a representation of the geographical distribution of buyers.



Source: (Graham et al., 2017)
Figure 2: Numbers of buyers per country

It shows the vast majority of buyers of work are located in high-income countries excepting Malaysia and India. It also shows supply comes from the developing countries. While Figure 3 offers a representation of the geographical distribution of sellers. It shows the various job sources used by the gig workers from different digital platform



Source: (Graham et al., 2017)

Figure 3: Number of Sellers per Country

Above data shows, India is a second largest gig workers country after USA. Hence, there is a need to frame regulatory policies and provide better working environment, minimum wages policy, social security policy, and labour laws for gig workers (Kässi & Lehdonvirta, 2018). India's economic landscape is undergoing a transformation with the rapid rise of the gig economy. This paper investigates how the gig economy impacts this goal and highlights the need for targeted interventions.

Literature Review:

Graham explained in his research, the gig workers are facing the problems like bargaining powers, economic policy, and lack of opportunities for upgrading their skill (Graham et al., 2017). He argues that, to survive in this competitive market, gig workers should upgrade their skills through certifications and at the same time, the industry should be strengthened through good regulatory policies and democratic control over digital platforms. According to him, demand mostly comes from developed countries, while supply comes from the developing countries like India, Philippines (Graham et al., 2017). In the gig economy, there is also huge competition between job seekers and job creators. Number of job seekers is always more than the number of job creators. Hence gig workers always face competition from their fellow workers and also face more challenges from job creators (Graham et al., 2017).

Several studies have examined the rise of the gig economy in India. Existing literature highlights both the benefits and drawbacks of the gig economy in India. According to Vinod Kumar, President, India SME forum, India's gig economy was poised to grow the economy and is expected to employ 23.5 million gig

workers and contribute 1.25% to GDP by 2030. Tier-II and Tier-III cities are emerging as growth hubs and platforms, leveraging AI to create sustainable, inclusive opportunities, analytics and digital innovation to drive future welfare initiatives. As well as, the gig economy supports sectors such as e-commerce, transportation, and delivery services, among others. India's gig economy projected to create 90 million jobs (Staffing Industry Analysts (SIA), n.d.)

A report of NITI Aayog suggests that the gig economy can boost employment, particularly in urban areas. According to it, the gig workforce in India is projected to reach 23.5 million by 2029-30 (Aayog, 2022), while the study on Income and Job Security by the International Labour Organization reveal that gig workers often earn lower wages and lack job security compared to traditional employees (ILO, 2021). The Indian Council for Research on International Economic Relations indicates in its study on Social Security and Benefit Research that most gig workers do not receive health insurance, pension benefits, or paid leave (ICRIER, 2022). According to the Gender and Regional Disparities Studies, female participation in the gig economy is lower due to safety concerns and social norms, while rural workers face limited opportunities (Jose, 2019). Kumar and Bhakat argues that women and marginalized communities face disproportionate disadvantages in gig work (Kumar & Bhakat, 2021). These findings underscore the need for policies that support financial stability and social security for gig workers.

Objectives of the Research:

Objective of the study are as following:

1. To analyse of wage distribution, job satisfaction and work hour
2. To examine the relation between education level and income stability among gig workers.
3. To evaluate gig workers earning against traditional employment sectors.

Methodology:

The author has adopted a mixed method approach for this research paper including qualitative analysis. It is difficult to conduct field survey of gig workers across India; therefore the researcher used secondary sources for this study such as reports of various government agencies, industries, and academic publications. The study also examines case studies of major gig platforms to understand their impact on workers and communities.

The Gig Economy in India:

Platforms like Uber, Ola, Zomato, Swiggy, and Urban Company are reshaping the nature of work, creating new opportunities but also presenting challenges to equitable growth. Equitable growth-which ensures that economic benefits are widely shared is crucial for India's social and economic stability (Bandura & Sword, 2018).

The most crucial factor of production is labour. It has contributed significantly to India's growth. In the early years of development, workers played a major role in the expansion, especially in heavy and fundamental industries.

Workers have moved into the service sector as a result of new economic policies and technological advancements. Currently, workers in the service sector account for 55% of India's GDP (Varanasi & Pal, 2021). More than two-thirds of the population is between the ages of 15 and 64, which suggests that labour has enormous potential to support India's development. But, the government has not been started an innovative programs and regulations, such as minimum salaries, social protection for gig workers. The "gig economy" is a free market system in which different businesses, companies, and institutions contract with independent workers for short period in projects or services (Harris, 2024). India's labour force is mostly young and expanding. Employment possibilities in a various sectors are guaranteed by equitable growth, particularly in rural areas and labour-intensive enterprises. Due to its direct impact on social and economic justice as well as the strengthening of democracy (Samuelson, 2019), the "Emerging Challenges of Equitable Growth" pose a serious threat to the Indian economy. India has glaring differences in access to resources, regional development, and wealth distribution. By addressing these disparities, poverty is increased and social cohesiveness is promoted, ensuring that the advantages of growth are felt by all faces of society. Equitable growth is essential for upholding the constitutional principles of justice and equality, providing marginalized groups with opportunities for upward mobility. Without addressing these challenges, economic growth risks being unsustainable and exclusionary, undermining the country's long-term goals of prosperity and stability.

The gig economy refers to a labor market characterized by short-term, freelance, and contractual work facilitated primarily through digital platforms. India's gig workforce is estimated to comprise nearly 15 million workers, spanning sectors such as ride-hailing, food delivery, and freelancing services. While this trend offers flexibility and supplemental income, it often lacks stability and long-term benefits for workers.

Gig economy sectors in India :

There are several gig economy sectors in India like Ride-hailing services (Uber, Ola), Food and grocery delivery (Swiggy, Zomato, Dunzo, Blinkit), Freelance digital work (Upwork, Fiverr, Freelancer), E-commerce and logistics (Amazon, Flipkart, Delhivery), Healthcare and wellness (Urban Clap, Practo), Professional consulting (Toptal, LinkedIn services), Online education (Unacademy, Byju's, Chegg) (Agrawal, 2018)

Types of Gig Workers in India:

Gig workers can be classified into platform workers, non-platform workers, and skill base workers.

Platform Workers – Those who earn through digital platforms (Uber drivers, Zomato delivery agents).

Non-Platform Workers – Independent freelancers or contract workers in fields like content writing, graphic design, IT, and consulting.

Based on skill levels: Low-Skilled – Delivery personnel, drivers, domestic help.

Medium-Skilled – Data entry operators, digital marketing freelancers.

High-Skilled – IT professionals, financial consultants, designers.

Challenges for Equitable Growth in the Gig Economy :

Economic Challenges :

Equitable growth emphasizes inclusive and balanced economic progress, ensuring that the benefits of development reach all sections of society. This is particularly vital in India, a country marked by significant socio-economic disparities.

1. Employment and Income inequality:

Gig work often pays workers on a per-task basis, leading to irregular and unpredictable earnings. High commission rates charged by platforms further reduce workers' take-home income, exacerbating income disparities. According to a report by McKinsey (2022), 36% of the U.S. workforce engages in some form of gig work, contributing to economic dynamism. However, many gig workers face unpredictable earnings, making financial planning challenging.

A survey by the Centre for Monitoring Indian Economy (CMIE) (2022) found that 60% of gig workers earn below the minimum wage in India. Furthermore, income volatility poses financial risks, particularly for workers reliant solely on gig work.

2. International Labour Organization (ILO):

A study by the International Labour Organization (ILO) (2021) found that gig workers earn 22% less per hour than their full-time counterparts performing similar tasks. This wage disparity contributes to economic inequality and financial insecurity.

3. Contribution to GDP :

Despite challenges, the gig economy contributes significantly to GDP. In 2021, the gig economy accounted for approximately \$1.4 trillion in economic activity in the United States alone (Statista, 2022). As gig work expands, its role in economic growth will continue to evolve.

Social Challenges:

1. Lack of Social Security :

One of the most significant challenges of the gig economy is the lack of social security benefits. Gig workers operate as independent contractors, which disqualifies them from benefits such as health insurance, retirement plans, and paid leave. This absence of a safety net makes them vulnerable to economic shocks. According to a study by ILO (2021), 75% of gig workers in India do not have access to health insurance or provident fund schemes, exposing them to financial and medical vulnerabilities. A study by the Economic Policy Institute (2022) found that 70% of gig workers do not have health insurance through their jobs. The absence of unemployment benefits and paid leave exacerbates financial insecurity.

2. Work Life and Mental Health :

A survey by Pew Research Center (2022) revealed that 52% of gig workers experience stress due to job unpredictability. Mental health concerns, including anxiety and depression, are more prevalent among gig workers than traditional employees.

3. Digital Divide:

The gig economy relies heavily on digital platforms, creating barriers for individuals without access to smartphones, the internet, or digital literacy. Rural and underprivileged populations are disproportionately affected.

4. Urban-Rural Divide:

Gig opportunities are predominantly concentrated in urban areas, leaving rural workers with limited access to such jobs. This uneven distribution exacerbates regional economic disparities.

5. Gender Inequality:

Women face significant barriers in gig work, including safety concerns, societal norms, and a lack of flexible options that accommodate caregiving responsibilities. Consequently, their participation in the gig economy remains limited. Women constitute only 20% of India's gig workforce (NITI Aayog, 2022), facing lower wages and fewer job opportunities. Moreover, rural gig workers have limited access to digital platforms compared to their urban counterparts. Research indicates that marginalized communities are disproportionately represented in the gig economy. Women and minority workers often face lower wages and fewer job opportunities, reinforcing existing social inequalities. A Brookings Institution study (2021) found that Black and Hispanic gig workers earn 15% less on average compared to White gig workers.

6. Regulatory and Policy Gaps :

India's labor laws have not kept pace with the rise of gig work, leaving a regulatory void. This has resulted in a lack of accountability for platform companies regarding worker rights and benefits. India lacks a comprehensive legal framework to govern gig employment. The Code on Social Security (2020) proposes extending benefits to gig workers, but implementation remains inconsistent.

The Need for Targeted Interventions :

Given the challenges posed by the gig economy, targeted policy interventions are necessary to ensure equitable economic growth and social protection.

Regulatory Frameworks:

Governments should establish labor laws that provide gig workers with minimum wage protections, health benefits, and collective bargaining rights. Countries like the United Kingdom have implemented policies classifying gig workers as "dependent contractors," granting them certain benefits.

Social Security Reforms :

Expanding access to unemployment insurance, retirement savings plans, and healthcare benefits for gig workers is crucial. Public-private partnerships could facilitate these initiatives, ensuring gig workers receive necessary protections.

Skill Development and Financial Literacy:

Investing in skill development programs can enhance gig workers' employability and income stability. Financial literacy initiatives can also help workers manage irregular earnings more effectively.

Government Initiatives & Regulations

Recognizing the significance of the gig economy, the Indian government has taken steps to support gig workers:

a) Code on Social Security, 2020 :

Defines gig and platform workers for the first time.

Proposes social security benefits like insurance, pensions, and maternity benefits.

b) E-Shram Portal :

Launched in 2021 to register gig workers and provide them with social security schemes.

Over 28 crore unorganized workers, including gig workers, have been registered.

c) State-Level Schemes :

Rajasthan announced Rs. 2 lakh insurance coverage for gig workers in 2022.

Other states are also working on frameworks for better labor rights and benefits.

Future of the Gig Economy in India:

a) Rapid Expansion :

India's gig workforce is expected to grow from 7.7 million (2020-21) to 23.5 million by 2029-30 (NITI Aayog).

Growth in sectors like ed-tech, healthcare, and finance will create more gig opportunities.

b) Policy Reforms :

There is a growing demand for minimum wage regulations and social security provisions.

Companies might be required to offer benefits like health insurance to gig workers.

c) Increased Formalization :

With government intervention, gig workers might get legal recognition and rights.

Digital payment systems and blockchain technology could ensure transparent payments.

d) Skill Development & Upskilling:

As competition increases, gig workers need to upskill in emerging fields like AI, blockchain, and digital marketing.

Platforms like Skill India and NSDC (National Skill Development Corporation) are providing training programs for gig workers.

Limitation of the Study:

While this analysis it is essential to acknowledge the inherent limitations of the study, which may impact the depth of the findings. The study's findings may be limited by the temporal context, Geographical Scope, Data Sources, lack of uniformity in terminology regarding gig workers and gig economy, Diversity of Gig Workers, Limited Stakeholder Perspectives, Social and Cultural Factors, and Dynamic Nature of Technology.

Conclusion :

India's gig economy presents significant opportunities for economic growth but also raises concerns about equitable income distribution and worker protection. Addressing these challenges through targeted interventions and policy reforms is crucial to fostering a sustainable and inclusive gig economy in India. These challenges require a multi-faceted approach involving government policies, platform accountability, and community engagement. By prioritizing equitable growth, India can create a gig economy that is not only dynamic but also inclusive and fair.

The gig economy presents both opportunities and challenges for social and economic goals. While it fosters employment and economic contribution, it also exacerbates financial insecurity and social disparities. Targeted interventions, including regulatory reforms and social security enhancements, are essential to create a more sustainable gig economy that benefits all workers. Policymakers must act swiftly to bridge these gaps and promote inclusive economic growth.

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THE ROLE OF MINIMUM SUPPORT PRICE IN ENHANCING FARMERS' LIVELIHOODS: CHALLENGES AND OPPORTUNITIES

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Abstract:

Many nations have adopted the Minimum Support Price as a government policy to guarantee farmers a just price for their produce. The purpose of this study is to investigate how farmers' financial growth is affected by the Minimum Support Price (MSP). The impact of MSP on farmers' revenue, profitability, and general financial health will be examined in this article. It will also look at potential obstacles and restrictions related to MSP implementation and offer ideas for potential ways to improve its efficacy. The study will make use of case studies from different areas, empirical data, and a thorough analysis of the body of current literature. The results of this study can add to the current conversation on agricultural market reforms by educating stakeholders, agricultural professionals, and policymakers about the role that MSP plays in helping farmers improve their financial circumstances.

By using different statistical tools like Mean, Median, Mode, T-test and Chi-square test result for the study is drawn.

Keywords: MSP, Farmers, Policymaker, Financial Growth, Agriculture.

Introduction:

An important factor in the economic growth of many nations, especially those with significant rural populations, is the agricultural industry. But farmers frequently deal with issues including volatile revenue, fluctuating prices, and low returns on their agricultural output. Governments all over the world have put in place a variety of agricultural support programmes, such as Minimum Support Price (MSP) systems, in an attempt to address these issues and advance the welfare of farmers.

The government's Minimum Support Price programme is designed to give farmers financial stability and price support for the produce they grow.

By establishing a floor price at which it will buy crops from farmers under MSP, the government guarantees a minimum income and guards against changes in the market. The goal of MSP is to improve farmers' financial growth, reduce poverty, and provide food security. It has been implemented in many countries, such as China, India, and several African countries.

Politicians, academics, and professionals in agriculture have all expressed a great deal of interest in and discussion about the effect of MSP on farmers' financial development. MSP's supporters contend that it stabilises farmers' incomes, promotes investment in the industry, and boosts agricultural output. In their view, MSP serves as a safety net, especially for marginal and small farmers who are more susceptible to market hazards. Furthermore, MSP can encourage farmers to embrace new technologies, boost production, and support the expansion of agriculture as a whole by offering guaranteed pricing.

Critics, however, express worry over MSP's possible downsides and unforeseen effects. They contend that MSP may cause market distortions, disincentives for crop diversification, and the government's hoarding of excess stockpiles. Critics also draw attention to the difficulties in putting MSP into practice, including problems with logistics of distribution, storage, and procurement, which may hinder the program's intended advantages.

Given the importance of the subject and the current debates about MSP's effectiveness, it is critical to examine and assess how MSP affects farmers' ability to develop financially. The purpose of this study paper is to add to the body of knowledge by investigating how MSP affects farmers' income, profitability, and overall financial well-being. To provide a sophisticated understanding of the issue, it will draw upon a thorough analysis of previous studies, empirical evidence, and case studies from various geographical locations.

This research can help stakeholders, agricultural specialists, and policymakers understand how MSP can improve farmers' financial circumstances by illuminating its effects. The results can inform the development and use of successful agricultural support programmes and add to the current discussion on agricultural market changes. The ultimate goal is to improve farmers' incomes and economic growth while advancing food security and sustainable agricultural development.

Literature Review:

1. Emmanuel Aboky (2020): The impact of buffer stock operations (BSO) on Ghanaian smallholder farmers' incomes has been evaluated in this study. Farmers' participation in the government's BSO program yielded a beneficial impact on smallholder farmers' income. According to the findings, smallholder farmers' incomes can be raised in developing nations like Ghana by promoting output price support through buffer stock activities.[1]

2. Srinivasa, A. K., et al. (2023) : This study investigates whether farm-gate prices are impacted by farmers' awareness of minimum support prices (MSPs). The minimum guaranteed price (MSP) for 24 agricultural commodities is declared by the Indian government. Due to a tiny marketable surplus, the majority of Indian farmers choose to sell their produce at the farm gate and do not immediately profit from MSP.[2]

3. Kumar, M. (2024): The findings indicate that groundwater conditions and agro-ecology in Punjab, Haryana, and Western Uttar Pradesh have suffered greatly as a result of the MSP policy.[3]

4. Das, R. (2020) : Based on a comprehensive farm survey carried out in 2012–2013, this study assesses farmers' access to the Minimum Support Price (MSP) for wheat and paddy across states and farm size groups. By calculating the proportion of farmers who sell wheat and paddy to Public Procurement Agencies (PPAs), the price they charge, and the amount of the crop sold at that price, the article examined and evaluated the effectiveness of the MSP program.[4]

5. Swaminathan, M. S. (2004) : Renowned agricultural economist M.S. Swaminathan explores the significance of MSP and how it affects Indian farmers' financial development in this piece. In order to improve farmers' total well-being, it emphasises the necessity of going beyond MSP and enacting extensive agricultural market reforms that include investments in infrastructure, R & D, and development.

Collectively, these studies show that MSP can positively affect farmers' financial development. It guarantees income support, stabilises prices, and encourages agricultural output. However, elements including market dynamics, infrastructural development, and complementary policies may have an impact on how effective MSP is. To fully realise the potential advantages of MSP for farmers' financial security, more study and legislative changes are required.

6. Bhue, C. at. el. (2024) : The goal of the study is to determine the degree of MSP accessibility and awareness, the extent of state-to-state variations, and the causes of low accessibility. Bihar, along with the North-Eastern states of Assam, Tripura, and Meghalaya, is ranked as the lowest-ranking state in the classification of states based on knowledge of MSP and procuring agencies (PA) and the size of sales to PA at MSP.[6]

7. Jana S. K. (2024) : The paper's conclusion highlights the necessity of extensive changes to the MSP system and argues for a well-rounded strategy that modernizes market mechanisms and integrates international best practices rather than depending just on legal assurances to support the agricultural economy.[7]

Objectives:

1. To evaluate how the Minimum Support Price (MSP) affects farmers' ability to develop financially.
2. To investigate how MSP affects farmers' choices about investments, income, and profitability.
3. To investigate the connection between MSP and the crops that farmers decide to cultivate.
4. To examine farmers' perspectives on the advantages and difficulties of MSP applications.

5. To determine what modifications or additions might be made to better the MSP's ability to support farmers' financial development.
6. To add to the body of knowledge already available on agricultural support programmes and give stakeholders and policymakers useful information.

Scope:

1. The study will take into account the viewpoints and experiences of farmers who are impacted directly by MSP implementation.
2. In addition to qualitative data that reflects farmers' perspectives and difficulties, the research will analyse quantitative data about income, profitability, investments, and agricultural methods.
3. The scope will encompass an analysis of MSP's potential advantages as well as disadvantages or restrictions.
4. To give a thorough grasp of the subject, the research will consult case studies, empirical data, and already published literature.

Hypothesis:

Null Hypothesis (H0): The awareness about implementation of Minimum Support Price (MSP) does not correlate with farmer's income from agriculture activities.

Alternative Hypothesis (H1): The awareness about implementation of Minimum Support Price (MSP) correlate with farmer's income from agriculture activities.

Research Methodology:

1. **Type of Research:** For the study of Challenges and opportunities of MSP for Farmers an **Exploratory Research** conducted.

2. **Research Design:** The research design for this study can be a combination of quantitative and qualitative methods to provide a comprehensive analysis of the impact of MSP on the financial growth of farmers.

Quantitative methods can be used to analysed data and measure the statistical relationship between MSP and farmers' financial indicators such as income, profitability, and investment.

Qualitative methods can be employed to gather in-depth insights on farmers' perceptions, experiences, and challenges related to MSP implementation.

3. **Data Collection Sources: Primary data:** Primary data collection can involve surveys, interviews, and focus group discussions with farmers, agricultural experts, policymakers, and other relevant stakeholders. The primary data can provide firsthand information on the impact of MSP on farmers' financial growth.

Secondary data: Secondary data sources can include government reports, agricultural databases, research papers, and relevant literature. These sources can provide historical data, market information, and contextual background on MSP implementation.

4. Sampling: Non-probability sampling methods, such as purposive sampling, can be used to ensure representativeness of the sample. Farmers can be selected from different regions or districts where MSP is implemented

Purposive sampling can be used to select key informants, such as famers, policymakers or agricultural experts, who possess relevant knowledge and insights on MSP.

Sample Size: 68 Respondents

5. Analytical Techniques:

Quantitative analysis: Statistical techniques such as regression analysis, t-tests, or chi-square tests can be used to examine the relationship between MSP and farmers' financial indicators.

Qualitative analysis: Qualitative data collected from interviews, focus groups, or open-ended survey questions can be analyzed using thematic analysis or content analysis. This process involves identifying key themes or patterns in the data to gain a deeper understanding of the impact of MSP on farmers' financial growth.

Data Analysis and Hypothesis testing

Test Statistics:

Descriptive Statistics like Mean, Mode and Standard deviation etc., will use.

Inferential statistics such as Spearman Rank Correlation, F-test, Chi-Square test and Z-test will use to test the Hypothesis and to draw the conclusion.

Likert Scale Values will use to find central tendency of data

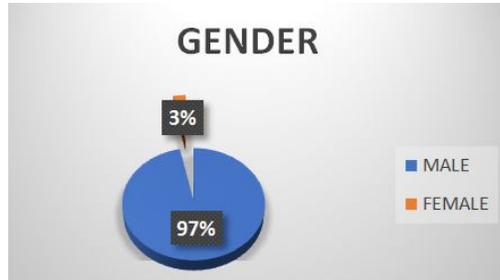
Attitude	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Range	1-1.8	1.81-2.6	2.61-3.40	3.41-4.2	4.2-5
Scale	1	2	3	4	5

Data Analysis and Interpretation:

The responses collected were coded and tabulated as follows to draw meaningful conclusions:

a) Gender

Male	Female
66	2



Interpretation:

Data collected from famers from different district of Nagpur Region, where female respondents 3% and 97% male respondents.

b) Educational Qualification:

Upto 10 th Std	10-12	UG
45	15	2

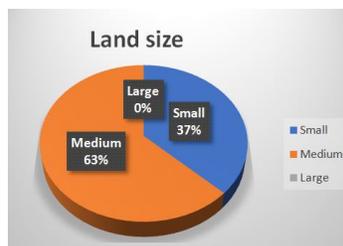
Interpretation:

According to data available from respondents 73% belongs to Secondary education, 24% belongs to High secondary education and 3% belongs to graduation.



c) Land Size :

Small (<2 hectares)	2) Medium (2–10 hectares)	3) Large (>10 hectares)
45	15	2



Interpretation:

According to data available from respondents 37% belongs to small size land holder whereas 63% belongs to medium land size holder.

d) I am aware of the Minimum Support Price (MSP) policy.

(मला किमान आधारभूत किंमत (MSP) धोरणाची माहिती आहे.)

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
6	24	12	22	4
Mean	2.92		Mode	2
SD	1.08		Var	1.18

Interpretation:

A substantial proportion of respondents (44%) are not aware of the MSP policy, which could hinder its effectiveness and uptake. The moderate mean (2.92) indicates that awareness campaigns about MSP could be improved to ensure that farmers are better informed.

e) My income from agriculture has increased due to the implementation of MSP. (MSP लागू केल्यामुळे माझे शेतीतील उत्पन्न वाढले आहे.)

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
6	26	12	18	6
Mean	2.80		Mode	2
SD	1.16		Var	0.83

Interpretation:

According to the primary data collected from different talukas of Nagpur district, it is found that MSP does not impact on farmers income. 32 respondents out of 68 claim that their incomes were not increased due to the implementation of MSP.

f) I can rely on MSP to provide financial stability.

(मी आर्थिक स्थिरता प्रदान करण्यासाठी MSP वर अवलंबून राहू शकतो.)

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
4	32	12	18	2
Mean	2.73		Mode	2
SD	1.01			

Interpretation

The data reflects a divided perception among respondents regarding MSP's reliability for financial stability.

Roughly half find MSP unreliable (e.g., due to implementation issues, low MSP rates, or market fluctuations).

The other half might either believe MSP does provide stability or are unsure about its impact.

g) I sell most of my produce at MSP rates.

(मी माझे बहुतांश उत्पादन MSP दराने विकतो.)

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
2	30	12	20	4
Mean	2.92		Mode	2
SD	1.04		Var	1.08

Interpretation

h) I prefer selling my produce in the open market rather than through MSP channels.

(मी माझे उत्पादन MSP चॅनेलद्वारे विकण्यापेक्षा खुल्या बाजारात विकण्यास प्राधान्य देतो.)

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
8	10	8	24	16
Mean	3.45		Mode	4
SD	1.31		Var	

Interpretation

The majority of respondents (40 out of 66, or 60.6%) lean towards agreeing or strongly agreeing with the statement. This indicates a significant preference among respondents for selling their produce in the open market rather than through MSP channels.

Testing of Hypothesis :

Question Statement	Mean	Standard Deviation	Sample Size
My income from agriculture has increased due to the implementation of MSP (MSP लागू केल्यामुळे माझे शेतीतील उत्पन्न वाढले आहे.)	2.8	1.06	68
I am aware of the Minimum Support Price (MSP) policy. मला किमान आधारभूत किंमत (MSP) धोरणाची माहिती आहे.	2.92	1.08	68
Correlation Coefficient	0.377		
Significance test value of Correlation	0.002	Significant P-value	0.05

Correlations

Correlations			
		Awareness_of the_MSP_Poli cy	Income_Increa sed_by_the_i mplementation _of_MSP
Awareness_of_the_MSP_P olicy	Pearson Correlation	1	.377**
	Sig. (2-tailed)		.002
	N	68	68
Income_Increased_by_the _implementation_of_MSP	Pearson Correlation	.377**	1
	Sig. (2-tailed)	.002	
	N	68	68

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

➔ **Nonparametric Correlations**

Correlations

Correlations			
		Awareness_of the_MSP_Poli cy	Income_Increa sed_by_the_i mplementation _of_MSP
Spearman's rho	Awareness_of_the_MSP_P olicy	Correlation Coefficient	1.000
		Sig. (2-tailed)	.001
		N	68
	Income_Increased_by_the _implementation_of_MSP	Correlation Coefficient	.387**
		Sig. (2-tailed)	.001
		N	68

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

Interpretation:

The correlation coefficient between awareness of the MSP policy and the resulting increase in farmers’ income is +0.377. The significance of the correlation is indicated by a P-value of 0.002, which is less than the threshold of 0.05. Therefore, we reject the null hypothesis or we don’t have enough ground to accept the null hypothesis. And hence we accept the alternate hypothesis. This implies that there is a significant relationship between awareness of the MSP policy and the income of farmers.

Conclusion:

The analysis concludes that there is a statistically significant positive relationship between farmers’ awareness of the MSP policy and their income. This suggests that increased awareness of the MSP policy contributes to an increase in farmers’ income.

Suggestion:

1. Organise workshops and focused awareness campaigns to inform farmers about the MSP policy, its advantages, and how to apply for it.
2. To help farmers effectively utilise MSP, arrange training sessions on pricing strategy, crop selection, and market trends.
3. To make the system more accessible, provide mobile applications or SMS services that inform farmers about MSP pricing, procurement locations, and due dates.

Limitations:

1. Although the study does not prove a direct relationship, it does find a strong correlation between farmers' income and their awareness of MSP. The income levels may also be influenced by other things.
2. The results may not apply to all areas with varying socioeconomic or agricultural situations because the data was gathered from certain regions.
3. The study measures awareness but does not assess the depth or quality of this awareness. Farmers might know about MSP superficially but lack detailed knowledge of its benefits or application process.
4. Sample size is small.
5. Respondents are too much biased about the MSP policy
6. Literacy in famers affects the policy implementation.

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NATIONAL EDUCATION POLICY, 2020**Mangalavati G. Pandey**

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Abstract:

National Education Policy (NEP) 2020 is a policy that aims to transform India's education system. It was approved by the Indian government in July 2020. The NEP 2020 replaced the 1986 education policy. National Education Policy, 2020 (NEP) envisions a massive transformation in education through—"an education system rooted in Indian ethos that contributes directly to transforming India, that is Bharat, sustainably into an equitable and vibrant knowledge society, by providing high quality education to all, thereby making India a global knowledge superpower." The NEP 2020 is founded on the five guiding pillars of Access, Equity, Quality, Affordability and Accountability. It will prepare our youth to meet the diverse national and global challenges of the present and the future.

Introduction:

Education is fundamental for achieving full human potential, developing an equitable and just society, and promoting national development. Providing universal access to quality education is the key to India's continued ascent, and leadership on the global stage in terms of economic growth, social justice and equality, scientific advancement, national integration, and cultural preservation. Universal high-quality education is the best way forward for developing and maximizing our country's rich talents and resources for the good of the individual, the society, the country, and the world. India will have the highest population of young people in the world over the next decade, and our ability to provide high-quality educational opportunities to them will determine the future of our country. The global education development agenda reflected in the Goal 4 (SDG4) of the 2030 Agenda for Sustainable Development, adopted by India in 2015 - seeks to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030. Such a lofty goal will

require the entire education system to be reconfigured to support and foster learning, so that all of the critical targets and goals (SDGs) of the 2030 Agenda for Sustainable Development can be achieved

Goals :

- Provide high-quality education to all
- Develop cognitive and higher-order skills
- Promote creativity, critical thinking, and problem solving
- Ensure universal access to education
- Promote multilingualism and national unity

Features:

- **New curricular structure:** The NEP 2020 introduced a 5+3+3+4 structure for school education
- **Foundational literacy and numeracy:** The NEP 2020 established a National Mission on Foundational Literacy and Numeracy
- **Academic Bank of Credit:** The NEP 2020 allows students to open a digital Academic Bank Account
- **Open and distance learning:** The NEP 2020 provides an option for students to study from anywhere
- **Multidisciplinary education:** The NEP 2020 promotes the integration of arts, humanities, sports, and vocational skills
- **Use of technology:** The NEP 2020 proposes to develop digital infrastructure and provide high-speed internet connectivity to all schools and colleges

Guiding principles :

The NEP 2020 is based on five guiding pillars: access, equity, quality, affordability, and accountability.

In school education, the National Education Policy 2020 stresses on the core values and principle that education must develop not only the cognitive skills, that is, – both ‘foundational skills’ of literacy and numeracy and ‘higher-order’ skills such as critical thinking and problem solving – but also, social and emotional skills - also referred to as ‘soft skills’ -including cultural awareness and empathy, perseverance and grit, teamwork, leadership, communication, among others. The Policy aims and aspires to universalize the pre-primary education and provides special emphasis on the attainment of foundational literacy/numeracy in primary school and beyond for all by 2025. It recommends plethora of reforms at all levels of school education which seek to ensure quality of schools, transformation of the curriculum including pedagogy with 5+3+3+4

design covering children in the age group 3-18 years, reform in the current exams and assessment system, strengthening of teacher training, and restructuring the education regulatory framework. It seeks to increase public investment in education, strengthen the use of technology and increase focus on vocational and adult education, among others. It recommends that the curriculum load in each subject should be reduced to its 'core essential' content by making space for holistic, discussion and analysis-based learning.

It also proposes the revision and revamping of all aspects of the education structure, including the school regulation and governance, to create a new system which is aligned with the aspirational goals of 21st century education along with India's tradition, culture and value system. Technology will be integrated with education through several existing as well as proposed initiatives, including energized text books, high quality e-content for capacity building of teachers and learners, question banks based on learning outcomes, etc. The policy also notes that establishing primary schools in every habitation across the country has helped in increasing access to education. However, it has led to the development of very small schools (having low number of students) which makes it operationally complex to deploy teachers and critical physical resources. Therefore, the Policy recommends that multiple public schools can be brought together to form a school complex or any innovative grouping mechanism for efficient governance. The policy has emphasized upon Quality Education across all stages of School Education. Quality education is not only a life-changing, but also a mind-crafting and character-building experience, that positively impacts on citizenship. Empowered learners not only contribute to many growing developmental imperatives of the country but also participate in creating a just and equitable society.

In Higher Education, NEP, 2020 provides valuable insights and recommendations on various aspects of education that include moving towards multidisciplinary and holistic education, institutional autonomy, promotion of quality research through establishment of National Research Foundation, continuous professional development of teachers, integration of technology, internationalization of higher education, restructuring of governance and regulatory architecture, multidisciplinary curricula, engaging blended, pedagogy, valid reliable and blended assessment and availability of content in Indian languages. The policy is expected to bring long-lasting positive impact on the education system and making India a global hub of skilled manpower during the 'Amrit Kaal', the next 25 years leading up to Developed India in 2047.

Its implementation needs collective efforts of Centre, States, UTs, HEIs, Regulating Agencies / Regulatory Bodies and all other relevant stakeholders.

Conclusion:

Any policy's effectiveness depends on its implementation. Such implementation will require multiple initiatives and actions, which will have to be taken by multiple bodies in a synchronized and National Education Policy 2020 62 systematic manner. Therefore, the implementation of this Policy will be led by various bodies including MHRD, CABE, Union and State Governments, education-related Ministries, State Departments of Education, Boards, NTA, the regulatory bodies of school and higher education, NCERT, SCERTs, schools, and HEIs along with timelines and a plan for review, in order to ensure that the policy is implemented in its spirit and intent, through coherence in planning and synergy across all these bodies involved in education.

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AGRICULTURAL AND RURAL DEVELOPMENT OF LABOURS WORKING IN NAGPUR DISTRICT OF MAHARASHTRA

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Abstract:

Agricultural and rural labourers form the backbone of agrarian economies, contributing significantly to food production, economic stability, and rural livelihoods. Despite their critical role, they often face numerous challenges, including low wages, income instability, lack of social security, poor working conditions, and limited access to education and skills training. Addressing these issues is essential for enhancing their quality of life and ensuring sustainable rural development. This paper explores the agricultural and rural development of labourers working in Nagpur District of Maharashtra. The study is carried out using standard research methods. The sampling was done using purposive sampling method and data was collected from 650 MGNREGA beneficiaries working in the rural areas of Nagpur District. Statistical analysis of data was performed with the aid of SPSS 18.0 Software. The specific conclusions drawn on the basis of the study results show that for most of the MGNREGA labourers working in the rural areas of study area have felt increase in the as well as agriculture related infrastructure, and their income level during last five years due to improved employment opportunities. Furthermore, their access to credit also increased along with increase in the literacy rate in their household of labourer during last five years. However, there was moderate change in the health status of most of the MGNREGA labourers working in the study area.

Keywords: *Agrarian economies, rural livelihoods, MGNREGA, income level, employment opportunities*

Introduction:

Agriculture has been the backbone of many economies, especially in developing countries where a large portion of the population resides in rural areas. Agricultural labourers, the most vital segment of this workforce, play a crucial role in ensuring food security and economic stability (Mishra, 2022). However, despite their significance, they often face numerous challenges that hinder their development (Shiralkar et al., 2019). This essay explores the importance of agricultural and rural development for labourers, the obstacles they face, and the potential solutions to improve their living and working conditions (Emerick, 2018). Agricultural labourers form the foundation of the

rural economy. They contribute to various stages of agricultural production, from sowing seeds and irrigation to harvesting and processing crops. Their work ensures the availability of food and raw materials, not only for domestic consumption but also for export. In many regions, they are also involved in allied activities like animal husbandry, fishing, and forestry, which further support rural livelihoods (Vicol, 2019). Despite their critical role, agricultural labourers are among the most vulnerable sections of society. They face multiple challenges, including but not limited to low wages and income instability; agricultural labourers often earn meagre wages that are insufficient to meet basic needs. Seasonal employment and dependence on unpredictable weather exacerbate income instability (Singh et al., 2020).

Another is lack of social security; it is because most agricultural workers lack access to formal social security systems, leaving them vulnerable to financial crises, health issues, and old age poverty (Rai, 2018). Often the labourers work for long hours under harsh conditions without adequate tools or safety measures. Exposure to harmful chemicals and physical strain often leads to health issues (Gupta, 2016). Also limited access to education and skills training leads to labourers lacking access to quality education and vocational training, limiting their opportunities for better employment or income diversification. Women labourers, who make up a significant portion of the workforce, often face wage discrimination and lack access to land ownership or decision-making roles (Tripathy, 2013). To address the above mentioned problems Governments, non-governmental organizations, and private sector entities have a pivotal role to play in agricultural and rural development (Swami and Parthasarathy, 2021). Policies like minimum wage laws, rural employment schemes, and subsidies for small-scale farmers can provide immediate relief (Saha, 2019). Simultaneously, long-term investments in rural education, healthcare, and infrastructure are essential for sustainable development. However, it has been reported that these interventions often do not make the impact they are intended to. In view of the above information this study was conducted to assess the agricultural and rural development of labourers working in Nagpur District of Maharashtra.

Research Methodology:

In the current study a formal survey was conducted to collect relevant information from the laborers working in the rural areas of Nagpur District of Maharashtra. The population for the study refers to the beneficiaries of MGNREGA scheme who are working in the rural areas of Nagpur District. The study used a combination of descriptive and exploratory research design. The sampling was done using purposive sampling method and data was collected from 50 MGNREGA beneficiaries each from 13 talukas of the Nagpur District comprising a total of 650. The primary data was collected using a reliable and valid self made structured questionnaire and by using a survey method. All the

questions were closed-ended so that quantitative data insights can be obtained. The self-administered surveys were conducted in each taluka for collection of necessary data. Statistical analysis of data was performed with the aid of SPSS 18.0 Software and significance level was set at 0.05 (or equivalently, 5%).

Results and Discussion:

Income level:

Table 1: Changes in **income level** of MGNREGA labourers working in the rural areas of Nagpur District during last five years

Response	Nos.	Per
Increased significantly	367	56.5
Moderate increase	183	28.2
No change	100	15.4
Total	650	100.0

$$\chi^2 = 172.365; \text{df: } 2; \chi^2_{\text{crit}} = 5.99; p < 0.05$$

Above table 1 shows information pertaining to changes in income level of MGNREGA labourers working in the rural areas of Nagpur District during last five years. The study result shows that according to 56.5% study participants income level is significantly increased during last five years while 28.2% study participants felt moderate increase in the income level. Further, 15.4% study participants felt no change in the income level during last five years.

Employment opportunities

Table 2: Changes in **employment opportunities** of MGNREGA labourers working in the rural areas of Nagpur District during last five years

Response	Nos.	Per
Increased significantly	422	64.9
Moderate increase	131	20.2
No change	97	14.9
Total	650	100.0

$$\chi^2 = 294.566; \text{df: } 2; \chi^2_{\text{crit}} = 5.99; p < 0.05$$

Above table 2 shows information pertaining to changes in employment opportunities of MGNREGA labourers working in the rural areas of Nagpur District during last five years. The study result shows that according to 64.9% study participants employment opportunities is significantly increased during last five years while 20.2% study participants felt moderate increase in the employment opportunities. Further, 14.9% study participants felt no change in the employment opportunities during last five years.

Access to credit

Table 3: Changes in **access to credit** of MGNREGA labourers working in the rural areas of Nagpur District during last five years

Response	Nos.	Per
Increased significantly	124	19.1
Moderate increase	389	59.8
No change	137	21.1
Total	650	100.0

$\chi^2 = 206.003$; $df: 2$; $\chi^2_{crit} = 5.99$; $p < 0.05$

Above table 3 shows information pertaining to changes in access to credit of MGNREGA labourers working in the rural areas of Nagpur District during last five years. The study result shows that according to 19.1% study participants access to credit is significantly increased during last five years while 59.8% study participants felt moderate increase in the access to credit. Further, 21.1% study participants felt no change in the access to credit during last five years.

Literacy rate in household of labourer

Table 4: Changes in **literacy rate in household of labourer** of MGNREGA labourers working in the rural areas of Nagpur District during last five years

Response	Nos.	Per
Increased significantly	511	78.6
Moderate increase	94	14.5
No change	45	6.9
Total	650	100.0

$\chi^2 = 605.32$; $df: 2$; $\chi^2_{crit} = 5.99$; $p < 0.05$

Above table 4 shows information pertaining to changes in literacy rate in household of MGNREGA labourers working in the rural areas of Nagpur District during last five years. The study result shows that according to 78.6% study participants literacy rate in household of labourer is significantly increased during last five years while 14.5% study participants felt moderate increase in the literacy rate in household of labourer. Further, 6.9% study participants felt no change in the literacy rate in household of labourer during last five years.

Health status

Table 5: Changes in **health status** of MGNREGA labourers working in the rural areas of Nagpur District during last five years

Response	Nos.	Per
Increased significantly	168	25.8
Moderate increase	288	44.3
No change	194	29.8
Total	650	100.0

$$\chi^2=36.789; \text{df: } 2; \chi^2_{\text{crit}}= 5.99; p<0.05$$

Above table 5 shows information pertaining to changes in health status in household of MGNREGA labourers working in the rural areas of Nagpur District during last five years. The study result shows that according to 25.8% study participants health status is significantly increased during last five years while 44.3% study participants felt moderate increase in the health status. Further, 29.8% study participants felt no change in the health status during last five years.

Agriculture related infrastructure

Table 6: Changes in **agriculture related infrastructure** of MGNREGA labourers working in the rural areas of Nagpur District during last five years

Benefits	Nos.	Per
Increased significantly	406	62.5
Moderate increase	160	24.6
No change	84	12.9
Total	650	100.0

$$\chi^2=261.51; \text{df: } 2; \chi^2_{\text{crit}}= 5.99; p<0.05$$

Above table 6 shows information pertaining to changes in agriculture related infrastructure in household of MGNREGA labourers working in the rural areas of Nagpur District during last five years. The study result shows that according to 62.5% study participants agriculture related infrastructure is significantly increased during last five years while 24.6% study participants felt moderate increase in the agriculture related infrastructure. Further, 12.9% study participants felt no change in the agriculture related infrastructure during last five years.

Conclusions:

The development of agricultural and rural labourers is critical not only for improving their living standards but also for ensuring the overall growth of the agricultural sector and rural economy. By addressing the challenges they

face and implementing inclusive development strategies, we can create a more equitable and prosperous society. A concerted effort by all stakeholders, including the government, private sector, and civil society, is necessary to transform the lives of agricultural labourers and build a resilient rural economy. The specific conclusions drawn on the basis of the study results are as follows.

Income level

- From the study results it is evident that most of the MGNREGA labourers working in the rural areas of study area have felt increase in the income level during last five years.

Employment opportunities

- From the study results it is evident that most of the MGNREGA labourers working in the rural areas of study area have felt increase in the employment opportunities during last five years.

Access to credit

- From the study results it is evident that most of the MGNREGA labourers working in the rural areas of study area have felt moderate increase in the access to credit during last five years.

Literacy rate in household of labourer

- From the study results it is evident that most of the MGNREGA labourers working in the rural areas of study area have felt increase in the literacy rate in household of labourer during last five years.

Health status

- From the study results it is evident that most of the MGNREGA labourers working in the rural areas of study area have felt moderate increase in the health status during last five years.

Agriculture related infrastructure

- From the study results it is evident that most of the MGNREGA labourers working in the rural areas of study area have felt increase in the agriculture related infrastructure during last five years.

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“पर्यावरणीय संतुलन व आर्थिक विकास : एक अर्थशास्त्रीय अध्ययन.”

प्रा. डॉ. अमोल गिरिधरराव आवंडकर

अर्थशास्त्र विभाग प्रमुख

नुतन आदर्श कला, वाणिज्य व श्रीमती एम.एच वेगड विज्ञान महाविद्यालय,

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सारांश :

वर्तमान काळात जगातील सर्वच देश पर्यावरणीय असंतुलनाच्या समस्येने ग्रस्त झालेले आहेत त्यामुळे जगात शाश्वत विकास म्हणजेच पर्यावरणाला संतुलित ठेवून आर्थिक विकास साध्य करणे या बाबीला अतिशय महत्त्व आले आहे म्हणूनच या संशोधन लेखाचा विषय “पर्यावरणीय संतुलन व आर्थिक विकास: एक अर्थशास्त्रीय अध्ययन.” असा घेण्यात आला आहे जेणेकरून या समस्येचे विस्तृत विवरण करून व त्यावरील उपाययोजना शोधून पर्यावरण संतुलन साध्य करून आर्थिक विकास कसा करता येईल हे अभ्यासाने यथायोग्य होईल. कोणत्याही देशाला आर्थिक विकास करण्याकरिता नैसर्गिक संसाधन मोठ्या प्रमाणात उपलब्ध असतील तर आर्थिक विकास मोठ्या प्रमाणात करता येईल परंतु या नैसर्गिक संसाधनावर आर्थिक विकास अवलंबून असल्यामुळे जर नैसर्गिक संसाधने कमी झाली किंवा संपुष्टात आली तर आर्थिक विकास देखील कमी होईल किंवा आर्थिक विकास खंडित होईल. ज्यामुळे संपूर्ण मानव जातीसमोर मोठी समस्या निर्माण होईल म्हणून केवळ भौतिक उत्पादन व उत्पन्न यावर भर न देता हे भौतिक उत्पादन व उत्पन्न निरंतर वाढते राहण्याकरिता किंवा सतत विकास होण्याकरिता पर्यावरणावर देखील भर देणे तितकेच आवश्यक आहे. कारण जोपर्यंत नैसर्गिक संसाधने मिळत जातील तोपर्यंत कोणताही देश विकास करत राहील आणि जर नैसर्गिक संसाधने मिळाली नाहीत तर मात्र कोणताही देश आर्थिक विकास करू शकणार नाही निष्कर्ष रूपाने असे म्हणता येईल की नैसर्गिक साधने निरंतर टिकून ठेवण्यासाठी पर्यावरण संतुलन साधने आवश्यक आहे. आर्थिक विकास करण्याकरिता कोणत्याही देशाला नैसर्गिक संसाधने अखंडितपणे मिळत राहतील ज्यामुळे कोणताही देश आपल्या देशातील वर्तमानकालीन पिढीच्या गरजा तर पूर्ण करेलच सोबत भविष्यकालीन पिढ्या देखील आपल्या गरजा पूर्ण करू शकतील अशा पद्धतीने पर्यावरणाला पोषक शाश्वत विकास करण्यावर भर देईल. प्रस्तुत शोधनिबंधाचा विषय “पर्यावरणीय संतुलन व आर्थिक विकास: एक अर्थशास्त्रीय अध्ययन” असा असून हा शोध निबंध पूर्णता द्वितीय सामग्रीवर आधारित असून विश्लेषणात्मक संशोधन पद्धतीचा वापर करून लिहिण्यात आला आहे. या शोधनिबंधाची उद्दिष्टे पुढील प्रमाणे आहेत. शाश्वत विकास या संकल्पनेचा अर्थ समजून घेणे, पर्यावरणीय संतुलनाचा अर्थशास्त्रीय दृष्टिकोनातून अभ्यास करणे, आर्थिक विकास

व पर्यावरण संतुलन यातील संबंधाचा अभ्यास करणे, पर्यावरणीय प्रदूषण विषयक अध्ययन करणे, पर्यावरणीय समस्यांवर उपाय सुचविणे, शाश्वत विकास निर्देशांक विषयी माहिती घेणे, भारतीय अर्थव्यवस्था व पर्यावरणीय परिस्थितीचे अध्ययन करणे, आर्थिक विकास व शाश्वत विकास यातील फरक समजून घेणे, शाश्वत विकास व पर्यावरणीय संतुलन विषयक अध्ययन करणे.

प्रस्तुत शोधनिबंधाकरिता पुढीलप्रमाणे गृहीतके घेण्यात आलेली आहेत-

आर्थिक शाश्वत विकास पर्यावरणास पोषक आहे, शाश्वत विकास मानवी विकासाला अनुकूल आहे, शाश्वत विकास भविष्यकालीन अर्थव्यवस्थेचा कणा आहे, देशातील नैसर्गिक साधन संपत्तीवर शाश्वत आर्थिक विकासाचा अनुकूल परिणाम झाला आहे. अशाप्रकारे प्रस्तुत शोधनिबंधाची उद्दिष्टे व गृहीतके वरील प्रमाणे घेण्यात आली असली तरी या उद्दिष्टे व गृहीतकांचे अध्ययन केल्यानंतर लक्षात येते की वरील सर्व गृहीतके अनुकूल सिद्ध झाली आहेत तथा सर्व गृहीतकांचा स्वीकार करण्यात आला आहे. निष्कर्ष रूपाने म्हणता येईल की वर्तमानकालीन जगात पर्यावरणाचा न्हास होत आहे म्हणून प्रत्येक देशाने व व्यक्तीने शाश्वत विकासाचे अनुकरण करून पर्यावरण संतुलित करण्याकरिता शाश्वत विकासाचा पुरस्कार करणे व संवर्धन करणे यथायोग्य होईल.

प्रस्तावना:

प्रस्तुत शोधनिबंधाचा विषय “पर्यावरणीय संतुलन व आर्थिक विकास: एक अर्थशास्त्रीय अध्ययन” असा असून प्रस्तुत विषयाचा सखोल अभ्यास केल्यानंतर लक्षात येते की संपूर्ण मानव जातीकरिता पर्यावरणीय संतुलन अतिशय महत्त्वपूर्ण आहे. सोबतच देशाचा आर्थिक विकास करण्याकरिता पर्यावरणीय घटक महत्त्वपूर्ण भूमिका वटवितात ज्यामुळे कोणताही देश आर्थिक विकास करू शकतो. परंतु कोणत्याही देशाला आर्थिक विकास करण्याकरिता कच्चा माल किंवा नैसर्गिक साधन संपत्ती मोठ्या प्रमाणात लागत असते या नैसर्गिक साधन संपत्तीवरच कोणत्याही देशाचा आर्थिक विकास निर्भर असतो उदा. ज्या देशाकडे नैसर्गिक साधन संपत्ती कमी असेल तो देश कमी विकास करेल किंवा अन्य देशांवर आर्थिक विकासाकरिता निर्भर राहील. यावरून आपल्या लक्षात येते की कोणत्याही देशाला झपाट्याने आर्थिक विकास करण्याकरिता नैसर्गिक साधन संपत्ती अतिशय महत्त्वपूर्ण आहे आणि ही नैसर्गिक साधन संपत्ती आपल्याला पर्यावरणाच्या माध्यमातून उपलब्ध होते म्हणून पर्यावरण आणि आर्थिक विकास यात संतुलन साधने आवश्यक आहे. पर्यावरणामध्ये असंतुलन निर्माण झाल्यास देशाचा आर्थिक विकास खंडित होईल किंवा आर्थिक विकासात व्यत्यय निर्माण होईल म्हणून आर्थिक विकास व पर्यावरण संतुलन या दोन्ही बाबी एक सोबत राहणे आवश्यक आहेत. म्हणूनच प्रस्तुत शोधनिबंधाचा विषय “पर्यावरणीय संतुलन व आर्थिक विकास : एक अर्थशास्त्रीय अध्ययन” असा घेण्यात आला आहे. कोणत्याही देशाचा विकास हा केवळ भौतिकतेवर आधारित असते ज्यामुळे पर्यावरणाकडे दुर्लक्ष होते म्हणून अशा प्रकारचा आर्थिक विकास भविष्यकाळात खंडित होईल परंतु जर देशाला चिरकाल चालणारा, अखंडित आर्थिक विकास करायचा असेल तर प्रत्येक देशाला शाश्वत

आर्थिक विकास करावा लागेल. शाश्वत आर्थिक विकास हा पर्यावरणाला कोणतेही प्रकारची इजा न पोहोचविता किंवा पर्यावरण संतुलन राखून पर्यावरणामध्ये कोणतेही प्रदूषण किंवा समस्या निर्माण न करता म्हणजेच पर्यावरण पोषणीय विकास होईल. शाश्वत आर्थिक विकास म्हणजेच शाश्वत आर्थिक विकासामध्ये आर्थिक विकासासोबतच पर्यावरणीय संतुलनाला देखील अत्यंत अधिक महत्त्व देण्यात येते. जगातील प्रत्येक राष्ट्रांनी आज पर्यावरणीय संतुलन राखून आर्थिक विकास करणे आवश्यक आहे ज्याकरिता शाश्वत आर्थिक विकास ही नवीन संकल्पना अर्थशास्त्रामध्ये महत्त्वपूर्ण भूमिका वटविते.

संशोधन पद्धती :

पर्यावरणीय संतुलन व आर्थिक विकास एक अर्थशास्त्रीय अध्ययन या शोधनिबंधाच्या अध्ययनाकरिता पूर्णता द्वितीय सामग्रीचा वापर करण्यात आला आहे तथा या शोधनिबंधाच्या लिखाणा करिता विश्लेषणात्मक अध्ययन पद्धतीचा वापर करून निष्कर्ष काढण्यात आले आहेत द्वितीय सामग्रीमध्ये विविध ग्रंथ किंवा पुस्तके, मासिके, वर्तमानपत्रे, शासकीय व निमशासकीय अहवाल, कागदपत्रे व इंटरनेटचा वापर करून विविध सामग्री ह्या शोधनिबंधाच्या लिखाणाकरिता वापरण्यात आलेली आहे. कोणत्याही शोधनिबंधाचे लिखाण करण्याकरिता शोधनिबंधाचे उद्दिष्टे व गृहिते घेणे क्रमप्राप्त ठरते. प्रस्तुत शोधनिबंधाची उद्दिष्टे व गृहितके खालील प्रमाणे घेण्यात आलेली आहेत.

अ) शोधनिबंधाची उद्दिष्टे :

प्रस्तुत शोधनिबंधाची अनेक उद्दिष्टे असली तरी काही महत्त्वपूर्ण उद्दिष्टे पुढीलप्रमाणे सांगता येतील-

- १) शाश्वत विकास या संकल्पनेचा अर्थ समजून घेणे.
- २) पर्यावरणीय संतुलनाचा अर्थशास्त्रीय दृष्टिकोनातून अभ्यास करणे.
- ३) आर्थिक विकास व पर्यावरण संतुलन यातील संबंधाचा अभ्यास करणे
- ४) पर्यावरणीय प्रदूषण विषयक अध्ययन करणे.
- ५) पर्यावरणीय समस्यांवर उपाय सुचविणे
- ६) शाश्वत विकास निर्देशांक विषयी माहिती घेणे
- ७) भारतीय अर्थव्यवस्था व पर्यावरणीय परिस्थितीचे अध्ययन करणे.
- ८) आर्थिक विकास व शाश्वत विकास यातील फरक समजून घेणे.
- ९) शाश्वत विकास व पर्यावरणीय संतुलन विषयक अध्ययन करणे.

ब) शोधनिबंधाची गृहितके :

प्रस्तुत शोधनिबंधाची महत्त्वपूर्ण गृहितके पुढीलप्रमाणे आहेत.

- १) आर्थिक शाश्वत विकास पर्यावरणास पोषक आहे.
- २) शाश्वत विकास मानवी जीवनाला अनुकूल आहे.
- ३) शाश्वत विकास भविष्यकालीन अर्थव्यवस्थेचा कणा आहे.
- ४) देशातील नैसर्गिक साधन संपत्तीवर शाश्वत आर्थिक विकासाचा अनुकूल परिणाम झाला आहे.

पर्यावरणीय संतुलन व शाश्वत आर्थिक विकास:

The World Commission of Environment And Development (WCED; 1987; 43) यांच्या मते “शाश्वत विकासाची व्याख्या पुढील प्रमाणे केलेली आहे. “वर्तमानकालीन पिढीच्या गरजा पूर्ण करून भविष्यकालीन पिढ्यांच्या गरजा पूर्ण होतील असा विकास म्हणजे शाश्वत विकास होय.” या व्याख्येवरून आपणास शाश्वत विकासाचा नेमका अर्थ काय आहे हे समजण्यास मदत होते. व्याख्येमध्ये स्पष्ट केल्यानुसार शाश्वत विकासामध्ये वर्तमान पिढीच्या गरजा पूर्ण करणे अपेक्षित आहे तसेच भविष्यकालीन पिढीच्या गरजा देखील भविष्यात पूर्ण झाल्या पाहिजेत असे स्पष्ट दिसून येते यावरून निदर्शनास येते की गरजा पूर्ण करण्याकरिता ज्या नैसर्गिक संसाधनांचा वापर करायचा आहे अशा पद्धतीने केला पाहिजे जेणेकरून वर्तमान आणि भविष्यकालीन पिढ्यांच्या गरजा पूर्ण होतील म्हणजेच कोणत्याही परिस्थितीमध्ये नैसर्गिक संसाधने समाप्त होता कामा नये किंवा सर्वांकरिता नैसर्गिक संसाधने उपलब्ध राहतीलच हे शाश्वत विकासाचे मुख्य तत्व आहे हे आपणास व्याख्येवरून निदर्शनास येते हे तेव्हाच होवू शकते जेव्हा पर्यावरणामध्ये संतुलन प्रस्थापित होईल पर्यावरणामध्ये असंतुलन, समस्या, अडचणी निर्माण झाल्यास शाश्वत विकास साध्य करता येणार नाही. निष्कर्ष रूपाने स्पष्ट होते की पर्यावरण संतुलन झाल्याशिवाय शाश्वत विकास करणे शक्य होणार नाही म्हणूनच शाश्वत विकास हा पूर्णतः पर्यावरण संतुलनावर निर्भर आहे असे निदर्शनास येते. बार्तेलमुस (१९९७-३८८) यांच्या मते “शाश्वत विकास हा विकास कार्यक्रमांचा असा एक संच आहे की जो दीर्घकालीन नैसर्गिक संसाधन क्षमता, पर्यावरणीय गुणवत्तेचे मापदंड आणि सामाजिक समता यांच्यावर विपरीत परिणाम न करता मानवी गरजांच्या पूर्ततेचे उद्दिष्ट पूर्ण करते.” बार्तेलमुस यांच्या शाश्वत विकासाच्या व्याख्येवरून स्पष्ट होते की शाश्वत विकासात दीर्घकाळपर्यंत नैसर्गिक संसाधने टिकून राहण्यावर भर दिला जातो म्हणजेच नैसर्गिक संसाधने कधीही समाप्त होता कामा नये एवढेच नव्हे तर पर्यावरणीय गुणवत्ता देखील टिकून राहणे अनिवार्य आहे. पर्यावरणीय गुणवत्तेमध्ये कोणत्याही प्रकारची तळजोळ नको. शाश्वत विकासामध्ये सामाजिक समतेवर देखील भर देण्यात आला आहे याचाच अर्थ असा की नैसर्गिक संसाधनावर सर्वांचा समान अधिकार आहे सर्वांना आपल्या गरजा पूर्ण करण्याकरिता नैसर्गिक संसाधने वापरण्याचा समान अधिकार आहे. अशाप्रकारे शाश्वत विकास व पर्यावरणीय संतुलन यांचा संबंध अतुट आहे.

विविध निर्देशांक व शाश्वत विकास :

विविध विविध शाश्वत विकास निर्देशांकांच्या माध्यमातून आपण तपासून किंवा पडताळून पाहू शकतो की एखादा देश जो विकास करित आहे तो शाश्वत विकास आहे किंवा नाही साधारणता शाश्वत विकास पडताळण्याकरिता शाश्वत विकास निर्देशांकांचे चार भागात वर्गीकरण करण्यात येते. हे निर्देशांक खालील प्रमाणे आहेत.

अ) अर्थविषयक : एखाद्या देशाचा आर्थिक विकास होत असतांना शाश्वत आर्थिक विकास आहे किंवा नाही हे या अर्थविषयक शाश्वत विकास निर्देशांक मध्ये तपासून पाहिले जाते. देशाची आर्थिक स्वावलंबन, ऊर्जेचा वापर, उपभोग, उत्पादन पद्धती, अपव्यय व्यवस्थापन,

वाहतूक, खनन इत्यादी च्या निर्देशांकाच्या माध्यमातून कोणत्याही देशाच्या शाश्वत विकासाची पडताळणी केली जाऊ शकते.

ब) संस्थाविषयक : शाश्वत विकासाची संकल्पना ही समतेच्या तत्त्वाचा स्वीकार करते तसेच ही संकल्पना सर्वसमावेशक आहे. सहकार तत्व आणि कायदेशीर चौकट, नैसर्गिक आपत्ती व्यवस्थापन, लोकांना संस्थात्मक सहभाग, विज्ञान आणि तंत्रज्ञान, लोक जागृती आणि माहिती इत्यादी द्वारे समाजाची संस्थात्मक बांधणी करत असतांना या निर्देशांकांचा आधार घेतला जातो.

क) समाज विषयक : समाजाच्या गरजांचा विचार करता यामध्ये विशेष रूपाने आरोग्य, पाणीपुरवठा, स्वच्छता, घरबांधणी, सांस्कृतिक वारसा, गरिबी निर्मूलन, शिक्षण आणि रोजगार, आर्थिक समानता, गुन्हेगारी उच्चाटन, लोकसंख्या विषयक समस्या, सामाजिक मूल्य, नैतिक मूल्य, महिला-पुरुष समानता, महिला सुरक्षा व स्थान इत्यादींच्या माध्यमातून समाज विषयक निर्देशांकद्वारे देशामध्ये विविध धोरणे ठरवून नियोजन केले जाते. शाश्वत विकास करण्यासाठी वरील सर्व घटकांद्वारे निर्देशांक काढण्यात येते याद्वारेच ठरविले जाते की देशात समाज विषयक शाश्वत विकास होत आहे किंवा नाही.

ड) पर्यावरण विषयक : शाश्वत विकासाचा पर्यावरण कणा आहे. पर्यावरण संतुलन हेच शाश्वत विकासाचे मुख्य उद्दिष्ट असते. देशामध्ये शुद्ध पाणी, भूगर्भातील पाणी, कृषी, सुरक्षित अन्नपुरवठा, जैवतंत्रज्ञान, किनारी भूभाग, सागरी पर्यावरण, हवा, वातावरणातील बदल, शाश्वत पर्यटन, जमिनीच्या वापरातील बदल, पिकांमधील बदल इत्यादी घटकांच्या माध्यमातून पर्यावरण विषयक निर्देशांक तयार करून मापन केले जाते ज्याद्वारे समजण्यास मदत होते की देशात शाश्वत विकास होत आहे किंवा नाही. हे मापन झाल्यानंतर पर्यावरण संतुलन साधण्याकरिता आणि त्याद्वारे शाश्वत विकास घडवून आणण्याकरिता विविध निर्णय घेतले जातात.

कोणत्याही देशांमध्ये शाश्वत विकास किती प्रमाणात होत आहे हे तपासणी वरील सर्व म्हणजेच अर्थविषयक संस्था विषयक समाज विषयक व पर्यावरण विषयक विविध निर्देशांकांद्वारे व अन्य निर्देशांकांच्या सहाय्याने केली जाते. अन्य निर्देशांकांमध्ये बेरोजगारी दर, लोकसंख्या वृद्धीदर, दरडोई उत्पन्न, जमिनीचा पर्याप्त वापर, खताचा वापर, हवा प्रदूषण, विजेचा वार्षिक उपभोग इत्यादी आहेत. ज्याद्वारे देखील शाश्वत विकासाची पडताळणी केली जाते आणि आपणास सहज लक्षात येते की शाश्वत विकासाच्या मार्गावर देश आहे किंवा नाही.

पर्यावरणीय अर्थशास्त्रीय विश्लेषण :

मनुष्य आणि पर्यावरणाचा घनिष्ठ संबंध आहे. उदाहरणार्थ मनुष्याच्या मूलभूत गरजा अन्न, वस्त्र, निवारा ह्या पर्यावरणाच्या माध्यमातूनच पूर्ण होतात. एवढेच नव्हे तर पृथ्वीवरील सर्व सजीवांना पर्यावरणाचा आधार घेऊनच जीवन जगावे लागते. पशु-पक्षी व अन्य जीव यांचा जन्म, वाढ व विकासासाठी पोषणीय निसर्गाची किंवा संतुलित पर्यावरणाची आवश्यकता असते अन्यथा त्यांच्या जीवनावर विपरीत परिणाम होऊन त्यांचे जीवन धोक्यात येऊ शकते. आधुनिक काळातील साम्राज्यवाद व औद्योगीकरणामुळे पर्यावरणामध्ये असंतुलन निर्माण होत आहे

ज्यामुळे जीवनमान खालावत जात आहे. आपल्या भारतासारख्या किंवा चीन सारख्या देशांमध्ये प्रचंड लोकसंख्या असल्याने व गरीबी असल्याने ही समस्या अधिक विघातक रूप धारण करत आहे. विविध कारणांमुळे जगात पर्यावरणात असंतुलन निर्माण होऊन पर्यावरणाचा न्हास होत असल्याचे विविध वृत्तपत्रे, व्याख्याने, इत्यादींच्या माध्यमातून वाचण्यात आणि ऐकण्यात येते. पार्क सी. यांनी पर्यावरणाची व्याख्या केली आहे त्यांच्या “विशिष्ट वेळी, विशिष्ट ठिकाणी मानवाला वेढणारी जी नैसर्गिक किंवा सांस्कृतिक परिस्थितीची एकात्मिक अवस्था असते तिलाच पर्यावरण म्हणतात.”

या व्याख्यावरून स्पष्ट होते की मानवाच्या अवतीभवतीची सर्व परिस्थिती चा समावेश पर्यावरणामध्ये केला जातो ज्यामुळे पर्यावरण ही संकल्पना अधिक व्यापक असल्याचे लक्षात येते. डडले स्टॅम्प यांच्यानुसार “पर्यावरण प्रभावाचा असा एकत्रित परिणाम आहे जो एखाद्या जिवाचा विकास आणि निसर्गाला परावर्तित किंवा निर्धारित करित असतो.” डॉ. कुलकर्णी यांच्यानुसार “ मानवी जीवन अनुभवत असलेल्या नैसर्गिक, भौगोलिक आणि जैविक परिस्थितीची गोळा बेरीज म्हणजे पर्यावरण होय.” या व्याख्यावरून निदर्शनात येते की वातावरण व अवती-भोवतीची परिस्थिती म्हणजे पर्यावरण होय. पर्यावरणामध्ये सर्वच घटकांचा समावेश होतो. उदाहरणार्थ माती, जल, वायु, वनस्पती व सूक्ष्मजीव इत्यादी सर्वच घटकांचा समावेश पर्यावरणामध्ये होतो. यासोबतच पर्यावरणाचा महत्त्वाचा एक भाग म्हणजे लोकसंख्या, सामाजिक, राजकीय व सांस्कृतिक सर्वच चल अचल सर्वच घटकांचा पर्यावरणात समावेश होतो.

अ) अर्थव्यवस्था व पर्यावरण :

पर्यावरणामध्ये निर्माण झालेल्या असंतुलनाचे अध्ययन करण्याकरिता व पर्यावरण संतुलन किंवा पोषणीय पर्यावरण निर्माण करण्याकरिता आपणास सर्वप्रथम अर्थव्यवस्था व पर्यावरण यांच्यातील परस्पर संबंध अभ्यासणे आवश्यक आहे. एखाद्या देशाचा आर्थिक विकास कसा होत आहे हे समजून घेऊन आपणास शाश्वत विकास कसा करावा हे समजण्यास मदत होईल. अर्थव्यवस्था ज्यामध्ये आर्थिक, सामाजिक, संस्थात्मक, कायदेशीर, तंत्रज्ञान युक्त व्यवस्थांचा समुच्चय असतो यातूनच समाजातील व्यक्ती त्यांचे भौतिक व आध्यात्मिक कल्याण साधण्याचा व वाढविण्याचा प्रयत्न करत असतात. अर्थव्यवस्थेची दोन प्राथमिक स्वरूपाची कार्ये असतात त्यामध्ये एक उपभोग व दुसरा म्हणजे उत्पादन. कोणतीही अर्थव्यवस्था ही तिच्या भोवती असणाऱ्या पर्यावरणाशी निगडित असते. या दोन्ही बाबी एकमेकांवर अवलंबून असतात आणि त्यांच्यात आंतरक्रिया घडत असतात. नैसर्गिक पर्यावरणात जी नैसर्गिक संसाधने असतात त्यातून मानवी जीवनासाठी आवश्यक असणाऱ्या अनेक वस्तू व सेवा आणि सुविधा पुरविल्या जातात याशिवाय नैसर्गिक पर्यावरण हे आर्थिक वृद्धीच्या प्रक्रियेत महत्त्वपूर्ण भूमिका किंवा कार्य पार पाडत असते. त्यातील प्रमुख दोन कार्ये म्हणजेच -१) उत्पादन प्रक्रियेसाठी आवश्यक असणाऱ्या आदानाचा पुरवठा करणे. २) उत्पादन प्रक्रिया तयार होणारे टाकाऊ पदार्थ किंवा शिल्लक पदार्थ यांना सामावून घेणे. आर्थिक व्यवहारांमुळे मोठ्या प्रमाणात पर्यावरणाचा न्हास होत आहे आणि जोपर्यंत पर्यावरणीय संसाधनांचा पुरवठा मुबलक प्रमाणात होतो तोपर्यंत पर्यावरणीय समस्या

सामाजिक स्वरूपाच्या असतात परंतु जेव्हा पर्यावरणीय वस्तूंचे रूपांतर आर्थिक वस्तूंमध्ये झाले तेव्हा अर्थशास्त्रीय तत्वाच्या आधारे पर्यावरणीय समस्या सोडविणे आवश्यक झाले आहे.

ब) पर्यावरणीय प्रदूषण व नियंत्रण :

वर्तमान काळात पर्यावरणाचा न्हास मोठ्या प्रमाणात झाला आहे. ज्यामुळे पर्यावरणात वेगवेगळे प्रदूषण झालेले दिसून येतात. पर्यावरणातील प्रदूषण विषयी केनेड बिल्डिंग म्हणतात की “आपण एका प्रदूषित ओरबोरडलेल्या ग्रहावर राहत आहोत. ज्यामुळे पर्यावरणातील संसाधने केवळ कमी झाले असे नसून पर्यावरणाचे प्रदूषण झाले आहे.”

यावरून आपणास पर्यावरणाची दुर्गती झाल्याचे लक्षात येते. अनेक पर्यावरणीय समस्यांचे मूळ हे मानवाचा निसर्गातील वाढता हस्तक्षेप हेच आहे. ज्यामुळे पाणी, हवा, ध्वनी इत्यादी प्रदूषणाच्या समस्या निर्माण झाल्या आहेत. आता तर पर्यावरणीय समस्या ही अर्थशास्त्रीय समस्या देखील झाली आहे. पर्यावरणीय प्रदूषण दूर करण्याकरता प्रदूषणाच्या विविध बाबींची योग्य माहिती जनजागृतीद्वारे सर्वांना होणे आवश्यक आहे पर्यावरणाला हानी पोहोचविणारी किंवा पर्यावरणाला मारक उदाहरणार्थ प्लास्टिकचा कचरा, मलमूत्र व त्याज्य पदार्थ, कारखान्यातील टाकाऊ पदार्थ, रसायने इत्यादींवर प्रक्रिया करून त्यांचे योग्य नियोजन करणे आवश्यक झाले आहे. आपल्या अवती-भवती असणाऱ्या पर्यावरणाशी आपला रोजचा जवळचा संबंध येतोच पर्यावरणाशिवाय कोणीही जगू शकत. तलाव, वन्यजीव, भूभाग, जमीन, पाणी, जंगले, खनिजे, वनस्पती, हवामान स्थैर्य, ओझानचा स्तर इत्यादींचे संरक्षण करणे आवश्यक ठरते.

मनुष्याला ऑक्सिजन हे पर्यावरणामधून मिळत असते पाणी, अन्न इत्यादी मनुष्याकरिता पर्यावरणातूनच उपलब्ध होते म्हणून मनुष्य करिता पर्यावरणाचे महत्त्व अनन्य साधारण आहे. परंतु हे देखील सत्य आहे की मनुष्याच्या पर्यावरणातील अतिरिक्त हस्तक्षेपामुळे पर्यावरणात असंतुलन निर्माण झाले असून आता मात्र पर्यावरण संरक्षण व संवर्धनाची गरज निर्माण झाली आहे.

आर्थिक विकास, आर्थिक वृद्धी व शाश्वत विकास :

संपूर्ण जगात सर्वच देशांमध्ये प्रगतीची स्पर्धा लागली आहे. विकसित देश असो किंवा अविकसित देश प्रत्येक देश प्रगती करिता मोठ्या प्रमाणात प्रयत्नशील आहेत. देशाची झपाट्याने प्रगती करण्याकरिता विकसित देश देशातील नैसर्गिक साधनसामुग्रीचा मोठ्या प्रमाणात अवाढव्य वापर करतात आणि त्याद्वारे राष्ट्रीय उत्पन्न, उत्पादन, रोजगार इत्यादींमध्ये वाढ करण्याचा प्रयत्न करतात. यालाच आर्थिक वृद्धी म्हटले जाते. ज्यामुळे देशात मात्रात्मक वाढ घडून येते. परंतु शाश्वत विकास ही संकल्पना आर्थिक वृद्धि पेक्षाही व्यापक आहे. कारण शाश्वत विकासामध्ये मात्रात्मक बदलासोबतच गुणात्मक बदल देखील आवश्यक असतात. एवढेच नव्हे तर आर्थिक वृद्धी चिरकाल किंवा दीर्घकाळ टिकणारी नसते. कारण यामध्ये नैसर्गिक संसाधनांचा अवाढव्य वापर केला जातो परंतु पर्यावरणीय संतुलनाकडे दुर्लक्ष केले जाते आणि शाश्वत विकासामध्ये मात्र नैसर्गिक संसाधनांच्या संवर्धनाचा विचार केला जातो आणि त्यावर विशेष लक्ष दिल्या जाते. ज्यामुळे नैसर्गिक साधने समाप्त होत नाहीत व आर्थिक विकास शाश्वत स्वरूपाचा होतो. जो दीर्घकाळपर्यंत निरंतर सुरू राहतो.

आर्थिक विकास ही संकल्पना आर्थिक वृद्धीपेक्षा व्यापक आहे. कारण आर्थिक विकासामध्ये मात्रात्मक व गुणात्मक अशा दोन्ही बदलांवर भर देण्यात येतो. परंतु आर्थिक विकासापेक्षाही शाश्वत विकास ही संकल्पना अधिक व्यापक आहे कारण शाश्वत विकासामध्ये अर्थव्यवस्थेतील मात्रात्मक व गुणात्मक बदलांसोबतच पर्यावरणीय संतुलनावर भर दिला जातो. ज्यामुळे शाश्वत विकास निरंतर किंवा दीर्घकाळ चालू राहतो परंतु त्या तुलनेत आर्थिक वृद्धी किंवा आर्थिक विकास दीर्घकाळपर्यंत किंवा निरंतर सुरू राहिलच याची शाश्वती नसते.

निष्कर्ष :

प्रस्तुत निबंधाचा विषय पर्यावरणीय संतुलन व आर्थिक विकास एक अर्थशास्त्रीय अध्ययन असा असून या शोधनिबंधाच्या अध्ययनद्वारे प्राप्त परिणामावरून निदर्शनास येते की प्रस्तुत शोधनिबंधाकरता घेण्यात आलेली सर्व गृहीतके अनुकूल सिद्ध झाली आहेत. त्यामुळे या गृहीतकांचा स्वीकार करण्यात येत आहे. प्रस्तुत शोधनिबंधाकरिता पुढील प्रमाणे गृहीतके घेण्यात आलेली आहेत. आर्थिक शाश्वत विकास पर्यावरणास पोषक आहे, शाश्वत विकास मानवी विकासाला अनुकूल आहे, शाश्वत विकास भविष्यकालीन अर्थव्यवस्थेचा कणा आहे. देशातील नैसर्गिक साधन संपत्तीवर शाश्वत आर्थिक विकासाचा अनुकूल परिणाम झाला आहे. अशाप्रकारे प्रस्तुत शोधनिबंधाची वरील गृहीतकांचे अध्ययन केल्यानंतर लक्षात येते की वरील सर्व गृहीतके अनुकूल सिद्ध झाली आहेत तथा सर्व गृहीतकांचा स्वीकार करण्यात आला आहे. निष्कर्ष रूपाने म्हणता येईल की वर्तमानकालीन जगात पर्यावरणाचा न्हास होत आहे म्हणून प्रत्येक देशाने व व्यक्तीने शाश्वत विकासाचे अनुकरण करून पर्यावरण संतुलित करण्याकरिता शाश्वत विकासाचा पुरस्कार करणे व संवर्धन करणे यथायोग्य होईल.

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सारांश :

भारतीय अर्थव्यवस्थेत शेतीला अतिशय महत्व आहे. “प्राचीन काळापासून स्वतःच्या मूलभूत गरजांच्या पूर्वतेसाठी भारतीय लोक कृषीचा आधार घेत असल्याचे दिसून येते. देशात आज सुमारे ६५ टक्के लोक ग्रामीण भागात म्हणजेच खेड्यात राहतात आणि या लोकांचा मुख्य व्यवसाय शेती हाच आहे. त्यामुळे अर्थव्यवस्थेतील उत्पन्नाचा महत्वपूर्ण स्रोत म्हणून शेतीक्षेत्राकडे पाहिले जाते.” शेती क्षेत्रामध्ये कमालीची अनिश्चिता व मोठी जोखिम असते, अपुरे व अनिश्चित पर्जन्यमान पूर, दुष्काळ आणि इतर अनेक कारणामुळे शेतीतील उभी पीके नष्ट होतात. त्यामुळे शेतकऱ्यांचे अतोनात नुकसान होते. शेतीतील पीकासाठी शेतकऱ्यांनी आपले भांडवल आणि श्रम लावून वाढविलेले पीके कापणी होईपर्यंत व्यवस्थित राहतीलच याची शाश्वती कोणालाही देता येत नाही, अशा परिस्थितीत शेतकऱ्यांचे आर्थिक नुकसान तर होतेच परंतु पूर्ण उत्पादन होण्यासाठी लागणारी मानसिक शक्ती देखील शेतकरी घालवून बसतो, कारण पुन्हा पेरणी करून देखील पीक हाती येईलच याची खात्री त्याला नसते. या समस्येवर उपायोजना करण्यासाठी पीक विमा योजनेची संकल्पना समोर आली. प्रस्तुत संशोधन पेपरमध्ये भारतातील पीक विमा व इतर काही निवडक देशातील पीक विमा योजनेचा अभ्यास करण्यात आला आहे.

कुट शब्द : शेतीपीक विमा, शेतकरी, विदेश, दुष्काळ, भरपाई.

प्रस्तावना :

सन २०११ च्या जनगणनेनुसार शेतीवर अवलंबून असणाऱ्या शेतकरी व शेतमजुरांचे प्रमाण हे ५८ टक्के आहे. “याचा अर्थ भारतातील शेती व्यवसाय आजही बहुसंख्य लोकांना रोजगार देण्यास सक्षम आहे. कोणत्याही देशाचा विकास होण्यासाठी शेतीचा विकास होणे आवश्यक असते. देशातील बहुतांश उद्योग, व्यवसाय हे शेतीवर अवलंबून आहेत. शेतीतील हंगाम चांगला असेल तर उद्योगामधून उत्पादन होऊ शकते. म्हणजे शेती उत्पादनाचा परिणाम उद्योग व उद्योगातील रोजगारावर तीव्र स्वरूपात पडतो, त्यामुळे सरकारने शेतीच्या विकासाकडे लक्ष देणे गरजेचे असते. शेतीला असणारी विविध संकटे आणि हानीपासून शेतीचे संरक्षण कसे करावे, यासाठी सरकार प्रयत्न करत असते. शेतीमध्ये शेतकऱ्यांचे नुकसान झाल्यास शेतकरी पुन्हा नव्या उमेदीने शेती पिकवण्यासाठी हिंमत करत नाही.”^१ पुन्हा संकटे येऊन शेतीची हानी होण्याची भीती शेतकऱ्यांच्या मनात निर्माण होते. “त्याचा परिणाम देशातील अन्नधान्य आणि कच्चा

मालाच्या पुरवठ्यावर होत असतो व त्याचे अर्थव्यवस्थेत दुष्परिणाम संभावतात. त्यासाठी शेतकऱ्यांना त्यांच्या पिकांवर संकटे आल्यास त्यापासून होणाऱ्या नुकसानीची भरपाई मिळण्याची हमी प्राप्त झाल्यास शेतकरी पुन्हा नव्या उत्साहाने शेतीची कामे करू शकतात. म्हणूनच पीक विमा उतरविणे हे आधुनिक युगात अत्यंत महत्वाचे मानले जाते, पीक विम्यामुळे पीकांची होणारी हानी विमा कंपनी भरून देते, या पैशातून पुन्हा नवीन हंगामात पीक घेण्याचा शेतकरी प्रयत्न करू शकतात.”^२

शेत जमीनीमधील उभी असणाऱ्या पीकांना अतिवृष्टी, वादळ, आग, किड इत्यादी धोक्यांपासून होणाऱ्या नुकसानीची भरपाई देऊन पीकांना आर्थिक संरक्षण प्राप्त करून देणे म्हणजे ‘पीक विमा’ होय, त्यासाठी शेतकऱ्याला एका निश्चित रकमेचा भरणा लागतो यास विमा हप्त्या म्हणतात. “या विमा हप्त्याच्या मोबदल्यात पीकांवरील संभाव्य जोखीमीमुळे उद्भवणाऱ्या हानाची जबाबदारी विमा कंपनी स्विकारते. पीक विमा हा एका निश्चित मुदतीचा असतो, त्या काळात जर पीकांचे नुकसान झाले तर त्याची भरपाई विमा कंपनीद्वारे करण्यात येते. दरवर्षी विविध कारणांमुळे पीकांचे होणारे नुकसान शेतकरी सहन करू शकत नाही.”^३ त्यामुळे त्यांना यापासून आर्थिक संरक्षण प्राप्त करून देणे हा पीक विमा योजनेचा प्रमुख हेतु असतो.

संशोधनाची उद्दीष्ट्ये :

- १) भारतातील शेतीपीक विमा योजनेचा अभ्यास करणे.
- २) आंतरराष्ट्रीय स्तरावर शेतीपीक विमा योजनेचा आढावा घेणे.

जागतिक स्तरावरील शेतीपीक विमा योजनेची स्थिती :

जगामध्ये १९५ देश आहेत. अन्नधान्य आणि शेती संघटनेने (FAO) केलेल्या सर्वेक्षणानुसार १९९१ मध्ये १४८ देशांमध्ये कोणत्या ना कोणत्या स्वरूपाचे पीक विमा योजना चालू आहेत. “पीक विम्याच्या क्षेत्रात रशिया, जपान, अमेरिका या देशांचे नाव प्रामुख्याने घेतले जाते. तसेच इतर अनेक विकसीत आणि विकसनशील देशांमध्ये ही योजना अमलात आलेली दिसून येते. पीक विमा योजना ही विकसीत आणि विकसनशील या दोन्ही देशांमध्ये पूर्णपणे सरकारवर अवलंबून आहे. उदा. विमा हप्त्या अनुदान, विमा कंपनीच्या व्यवस्थापन खर्च, पीक हानी अंतर्गत येणाऱ्यासाठी पुर्नविमा, कंपन्यांना वित्तीय आधार आणि तांत्रिक मागदर्शन इ. जागतिक पातळीवर पीक विमा योजना हप्त्याचे एकूण वार्षिक प्रमाण २००३ मध्ये US\$ ७.१ विलियन होते, जे की एकूण कृषी उत्पादनाच्या ०.६ टक्के होते.”^४ याउलट भारतामध्ये २००३ यावर्षी एकूण कृषी उत्पादनाच्या ०.१५ टक्के होते.

संयुक्त राज्य अमेरिका :

अमेरिकेमध्ये १९३८ मध्ये संघराज्य पीक विमा अधिनियम मंजूर करण्यात येवून संघराज्य विमा महामंडळाची स्थापना करण्यात आली. “या महामंडळामार्फत शेती उत्पन्नातील आर्थिक संकटापासून शेतकऱ्यांचे रक्षण करण्याचा प्रयत्न करण्यात आला. या योजनेअंतर्गत गहू या एकमेव पिकाचा समावेश करण्यात आला होता. कालांतराने बदल होवून १९८० मध्ये सर्व पीकासाठी विमा लागू करण्यात आला. अमेरिकेमध्ये १५ खाजगी विमा कंपन्यांकडून योजना

चालवली जाते. सरकार योजनेस सहाय्य देते. संघराज्य पीक विमा महामंडळएक सरकारी संस्था आहे. पीक विमा योजनेचे व्यवस्थापन १९९६ साली स्थापन केलेल्या अमेरिका कृषी विभागाच्या जोखिम व्यवस्थापन कंपनीकडून केले जाते. पीक विमा योजनेस एकदा सरकारकडून मान्यता मिळाल्यानंतर (NCIS) मार्फत शेतकऱ्याला दिले जाते. जोखिम व्यवस्थापन कंपनीने निर्धारित केलेल्या दरानुसार कोणत्याही मान्यताप्राप्त कंपनी विमा उत्पादन विक्री करू शकते⁵ सर्व विमा कंपन्यांनी विकलेले विमा उत्पादन सरकारने जाहीर केलेल्या अनुदानास तसेच कंपनी व्यवस्थापन कंपनीने (RMA) निर्धारित केलेल्या दरानुसार विक्री करत आहेत.

श्रीलंका:

श्रीलंकेमध्ये सर्वप्रथम १९५८ मध्ये प्रायोगिक शेतीपीक विमा योजना पायलट स्वरूपाचे फक्त भाताच्या पीकासाठी लागू करण्यात आली. “या योजनेच्या १५ वर्षांच्या चांगल्या कामगिरीनंतर १९७३ मध्ये संसदेच्या कायद्यांतर्गत पीक विमा बोर्डाची स्थापना करून रसवं पीकांचा आणि पधुंचा या योजनेत समावेश करण्यात आला. पीक विमा योजनेत भात आणि इतर पीकासाठी संरक्षण देण्यात आले होते. त्यामध्ये पाण्याची कमतरता, दुष्काळ, पाणी आधिक्य, पुरापादा, किड, वन्य प्राण्यामुळे होणारे नुकसान, शेतातील नविन प्रयोगाने होणारे नुकसान इत्यादी जोखिमेचा समावेश करण्यात आला, उत्तरविलेल्या विम्याच्या एकूण रकमेपैकी ८५ टक्के भाग हा भात आणि कर्जप्राप्त पीकांचा आहे. उत्पादनसाधनाच्या खर्च वाढीमुळे अनेक शेतकऱ्यांची आर्थिक स्थिती खराब आहे. कर्जपुरवठा करणाऱ्या वित्तीय संस्था शेतीसाठी कर्जपुरवठा शेती विमा शिवाय देत नाहीत. पीक विमा योजना ही उत्पादन खर्चावर अवलंबून आहे. या योजनेमध्ये पूर्ण आणि अंशिक नुकसान उत्पादनाच्या विभिन्न अवस्थेमध्ये झालेल्या नुकसानानुसार नुकसान भरपाई दिली जाते. शेतीच्या एकूण क्षेत्रफळापैकी जवळपास ५ टक्के भागावर विमा उतर्तवला जातो. या योजनेची अंमलबजावणी करणाऱ्या पीक विमा बोर्डाला विम्याच्या हप्त्याच्या स्वरूपात उत्पन्न मिळते, श्रीलंकेतील बहुतांश शेतकरी निर्वाह पातळीवर शेती करतात. त्यामुळे अस्थिर उत्पन्न आणि निर्वाहातील असुरक्षितता यावर लक्ष केंद्रित करून पीक विमा बोर्डांने श्रीलंकेतील सर्वच शेतकऱ्यांसाठी पेंशन योजना सुरु केली आहे. तसेच जगातील इतर देशांमध्ये पीक विमा योजना राबविली जाते. रशियामध्ये पीक विम्याची योजना १९२३ पासून असली तरी तिला व्यापक स्वरूप देण्याचे काम पुढे करण्यात आले. रशियामध्ये वित्तमंत्रालयांतर्गत राज्य विमा संस्थाही योजना राबवते, तसेच फ्रांसमध्ये १९५९ साली शेतकऱ्यांचे नैसर्गिक आपत्तीपासून होणारे नुकसान कमी करण्यासाठी ही योजना लागू करण्यात आली.”^६ त्यासाठी राष्ट्रीय हमी निधी स्थापन करण्यात आला आहे.

दक्षिण आफ्रिका :

दक्षिण आफ्रिकेमध्ये सन १९२९ मध्ये शेतकरी समूहाने एक मंडळ स्थापन करून पीक विम्याची सुरुवात केली. “या कार्यक्रमात अनेक जोखिमेचा समावेश करण्यात आला. यामध्ये गारांचा वर्षावएक जोखिम होती. मुख्यतः बहु-जोखिम विमा या अनुदानावर आधारित होता, परंतु १५ वर्षांपूर्वी अनुदान बंद करण्यात आले. अनेक खाजगी विमा कंपन्यांनी पीक विमा क्षेत्रात

प्रवेश केला व त्यांनी मागील इतिहास व भूतकाळातील जोखमीच्या अनुभवावरून विम्याचा हसा स्थिर केला आहे. नुकसानीच्या मोजमापच्या मोठ्या समस्यांचा पीक विमाधारकास सामना करावा लागत आहे. योजनेत अनेक पीकांचा समावेश करण्यात आला आहे.’^७ त्यामध्ये गहु, सुर्यफूल, मका आणि नारिंग दक्षिण आफ्रिका एक चांगले उदाहरण आहे. ते पीक विम्याकरीता दिले जाणारे अनुदान काढले असतांना सुद्धा खाजगी पीक विमा शेतक-याला लाभ देत आहेत.

स्पेन :

स्पेन देशाला कृषी विमा योजनेचा मोठा अनुभव आहे. १९२० आणि १९७० यादरम्यान स्पेनमध्ये वेगवेगळ्या पद्धतीने अनेक योजनांचा समावेश केला, जवळपास त्यातील काही यशस्वी ठरल्या आहेत आणि काहीचा सहभाग दर कमी झाला आहे.

“आजची पद्धती याच अनुभवावर आधारित आहे. ती १९७८ मध्ये स्थापीत आली आणि निरंतर चालू आहे. याची विशेषतः महणजे कृषी क्षेत्रातील सर्व जोखिमीचा समावेश आहे. या योजना खाजगी क्षेत्राद्वारा चालविल्या जातात व राज्य सरकार सर्वाना अनुदान देते. मुख्य योजना ही या प्रकारची आहे. बहुजोखिम वर्ष २००० मध्ये स्पेन मधील ३०१७ उत्पादकाचा समावेश होता, तसेच १०० टक्के हे पशु उत्पादनाचा समावेश होता. ही योजना पद्धतीत शेतकरी व्यक्तिगत किंवा सहकारी संस्था आणि व्यावसायिक संगठन याद्वारे कृषी विमा घेऊ शकते.”^८ यामधील सहभाग हा ऐच्छिक आहे.

जपान:

“जपानमध्ये शेतीपीक विमा योजनेची सुरुवात १९४७ मध्ये करण्यात आली आहे. भात, गहु, जवस, रेशिम, पशुधन, फळ, फळझाडे, मीन हाऊस, इत्यादीसाठी विम्याचे सुरक्षाकवच उपलब्ध करून दिले आहे. जपानमधील पीक विमा योजना अनिवार्य आहे. त्यामुळे काही प्रदेशामध्ये संकटाचा प्रभाव जास्त असल्यास विम्याच्या हप्त्याच्या रकमेतून त्या प्रभावीत क्षेत्रांना मदत देणे शक्य होते.”^९

‘जपानमध्ये शेतीपीक विमा आणि शेतीला होणारा अल्पकालीन कर्ज पुरवठा यांची जोड घालण्यात आली आहे. शेतकऱ्यांने जेवढ्या रकमेचा पीक विमा काढला असेल तेवढे कर्ज सहकारी समितीकडून घेऊ शकतो. जर पीक चांगले आले तर कर्ज परत केले जाते, परंतू पीक चांगले आले नाही तर विम्याची रकम सहकारी समितीला दिली जाते.’

‘जपानमध्ये शेतीच्या जोखिम व्यवस्थापन, शेती उत्पादनाच्या प्रमाणामध्ये वाढ, स्थानिक अर्थव्यवस्थेमध्ये स्थिरता आणि नैसर्गिक आपत्तीमुळे झालेल्या नुकसानीपासून शेतकऱ्यांना सहाय्य करणे इत्यादीमध्ये पीक विमा कार्यक्रम उल्लेखनीय प्रगती करित आहे.’

कॅनडा:

कॅनडामध्ये शेतीपीक विमा योजना १९५९ मध्ये अंमलात आली. “५ जुलै २००० रोजी कॅनडा सरकारने शेती जोखिम व्यवस्थापन करारावर स्वाक्षरी केली आणि शेती आणि शेती सुरक्षा योजना आमलात आणून शेतीमध्ये आर्थिक स्थायित्व आणण्याचा प्रयत्न केला आहे. या करारांतर्गत २०००, २००१ आणि २००२ या वर्षासाठी ५.५ अरब डॉलर खर्च केला गेला

आहे. या योजनेअंतर्गत केंद्रसरकार आणि राज्य सरकार क्रमशः ६० : ४० या प्रमाणात खर्च करणार आहेत, या योजनेअंतर्गत शेतकऱ्यांचा सहभाग ऐच्छिक आहे. विमा हप्त्याचे प्रमाण प्रत्येक पीक आणि प्रांतानुसार ठरणार आहे.”^{१०} कॅनडा देशात सर्वाधिक ७० टक्के विमा योजनेकरीत अनुदान दिले जाते.

भारतातील पीक विमा योजना :

स्वातंत्र्यप्राप्तीनंतर १९४७ मध्ये लगेचशेती पीक विम्याच्या कामास सुरुवात झाली. पीक विमा विषयी संसदेमध्ये १९४७ ला चर्चा करण्यात आली. अन्नधान्य कृषी मंत्रालय यांनीशेती पीक विमा व पशुविमा सुरु करण्याचे आश्वासन देण्यात आले. १९४८ मध्ये भारत सरकारच्या कृषी मंत्रालयाद्वारे भारतीय पशु विमा व पीक विमा स्थितीचा अभ्यास करण्यासाठी श्री. जी. एस. प्रियोलकर यांना नियुक्त करण्यात आले. त्यांच्या अहवालात पायलट पीक विमा योजना ताबडतोब राबविण्याची सूचना करण्यात आली. या योजनेच्या अंमलबजावणी बरोबरच संघटीत प्रचार व प्रसार करण्यात आला.

व्यापक पीक विमा योजना (१९८५ ते १९९९) :

पायलट विमा योजनेच्या अनुभवाच्या आधारे भारत सरकारने राज्य सरकारच्या सक्रिय सहभागाने “१ एप्रिल १९८५ पासून व्यापक पीक विमा योजना सुरूकेली. सातव्या पंचवार्षिक योजनेमध्ये या पीक विमा योजनेचा उल्लेख करण्यात आला आहे. ही योजना समरूपी क्षेत्रीय आधार दृष्टीकोणावर आधारीत आहे. ही योजना अल्पकालिन पीक कर्ज घेतलेल्या सर्व शेतकऱ्यांसाठी अनिवार्यहोती.”^{११}

‘व्यापक पीक विमा योजना १५ घटक राज्य आणि दोन केंद्रशासित प्रदेशामध्ये लागू करण्यात आली. त्यामध्ये आंध्रप्रदेश, आसाम, बिहार, गोवा, गुजरात, हिमाचल प्रदेश, कर्नाटक, केरळ, मध्यप्रदेश, महाराष्ट्र, मेघालय, उडीसा, तामिळनाडू, त्रिपुरा, पश्चिम बंगाल, अंदमान आणि निकोबार बेटे आणि पाँडेचेरी इत्यादी घटकराज्ये आणि केंद्रशासित प्रदेशामध्ये ही योजना राबविण्यात आली.’

वित्तीय संस्थाकडून पीक कर्ज घेणाऱ्या शेतकऱ्यांसाठी ही योजना अनिवार्य करण्यात आली यामध्ये भात, गहू, ज्वारी, बाजरी, डाळी आणि तेलाच्या या पिकांच्या खरिप व रब्बी मोसममध्ये समावेश करण्यात आला, भात, गहू, ज्वारी, आणि बाजरीसाठी विमा हप्त्या हा पीक कर्ज धारकांसाठी २ टक्के आणि डाळी व तेलबियासाठी १ टक्का ठेवण्यात आला.

राष्ट्रीय कृषी विमा योजना :

व्यापक पीक विमा योजनेमधील समस्या, कमतरतेतून आणि त्यामध्ये असणाऱ्या सुधारणेच्या संधीतून “भारत सरकारने १९९८-९९ च्या अर्थसंकल्पात नविन पीक विमा योजनेची घोषणा केली. माननीय प्रधानमंत्री यांनी २२ जून १९९९ रोजी राष्ट्रीय कृषी विमा योजनेची घोषणा करून शेती उत्पादनाच्या जोखिम व्यवस्थापन इतिहासात एक नविन अध्याय जोडून ही योजना देशाला समर्पित केली. १९९९-२००० च्या रब्बी हंगामापासून व्यापक पीक विमा योजनेचे विसर्जन करून राष्ट्रीय पीक विमा योजना भारत सरकारने १६ जुलै १९९९ रोजी शासकीय अध्यादेश काढून या योजनेची अंमलबजावणी सुरू केली.”^{१२}

राष्ट्रीय पीक विमा योजना सर्व शेतकऱ्यांसाठी लागू केली. 'ज्यांनी वित्तीय संस्थांचे कर्ज घेतले आहे अशासाठी आणि ज्यांनी कर्ज घेतले नाही अशासाठी ही योजना लागू केली. राष्ट्रीय कृषी विमा योजना, पीक विमा संरक्षण तथा संभावित धोरण याविषयी व्यापक पीक विमा योजनेपेक्षा अधिक जास्त संरक्षण देते.' नविन पीक विमा योजनेचा हा उद्देश होता की, वेगवेगळ्या पीकासाठी असणारे विमा हप्त्या अन्नधान्य पिकासाठी ४ टक्के वाढवले आणि नगदी पीकासाठी उदा. बटाटे, भुईमुग इत्यादीसाठी त्यापेक्षा जास्त करणे, सरकारच्या विचारात सरकारी विमा महामंडळातर्गत एक स्वतंत्र कंपनी स्थापन करणे होते व ते २००३ मध्ये कृषी पीक विमा महामंडळ मर्यादीत पुढे आली व तिला योजनेमध्ये सुधारणा करणे, योजना चालवणे, हे स्वातंत्र्य देण्यात आले.

सारांश :

भारतात मोठ्या प्रमाणात शेतकरी कृषीक्षेत्रावर आधारित आहेत. मकृषीक्षेत्रामध्ये उत्पादनातील अनिश्चितता मोठ्या प्रमाणात आढळून येतात. या अनिश्चितता कमी करण्यासाठी वेगवेगळे प्रयत्न केले गेले. त्यामध्ये कृषी विमा योजना ही एक वरदान ठरली आहे. कृषी विमा योजना शेतीतील नैसर्गिक जोखिम कमी करण्याचा प्रयत्न करते. फ जागतिक स्तरावर तसेच भारतात वेगवेगळ्या पीक विमा योजना या १९७२ पासून सुरू केल्या आहेत.

पायलट पीक विमा योजना १९७९ मध्ये सुरू करण्यात आली. 'ही योजना १९७९ ते १९८५ या कालावधीत समाविष्ट राज्य व समाविष्ट राज्यात वाढ झाली आहे. तसेच प्रति हेक्टर जमा विमा ह्यापेक्षा देण्यात येणारी नुकसान भरपाई जास्त होती. याचा परिणाम माणून १९८५ झाली व्यापक पीक विमा योजना लागू केली. या योजनेत वित्तीय कर्ज घेणाऱ्या शेतकऱ्यांसाठी अनिवार्य होती.' व्यापक पीक विमा योजनेत पायलट पीक विमा योजनेच्या अनुभवाच्या आधारे भारत सरकारने १ एप्रिल १९८५ पासून व्यापक पीक विमा सुरू केली.

व्यापक पीक विमा योजनेमधील समस्यातून भारत सरकारने नविन पीक विमायोजना २२जुलै १९९९ रोजी राष्ट्रीय पीक विमा योजना सुरू केली. 'ही योजना ऐच्छिक व कर्जदार शेतकऱ्यांना अनिवार्य होती. या योजनेत देशात १९९९-२००० ते २०११-१२ या कालखंडात समाविष्ट शेतकरी व लाभधारक शेतकरी यांच्यामध्ये मोठी वृद्धी दिसून येते. लाभधारक शेतकरी यांच्यामध्ये मोठी वृद्धि दिसून येते. देशात १९७० च्या दशकापासून सरकारले वेगवेगळ्या पीक विमा योजना लागू केल्या आहेत.' प्रत्येक योजनेतील समस्या त्रुटी कमी करून नविन पीक विमा योजना व्यापक पीक विमा योजना, राष्ट्रीय पीक विमा योजना शेतकऱ्यांना त्यांच्या अनिश्चितता कमी करण्यासाठी लाभदायक ठरल्या आहेत.

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आर्थिक स्थिरता आणि कामाची आवड निर्माण होण्याकरिता सुरुवातीच्या काळात वेतनश्रेणीची आवश्यकता : एक अभ्यास

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प्रस्तावना:

विविध क्षेत्रातील व्यावसायिकांना, विशेषतः शैक्षणिक क्षेत्रातील व्यावसायिकांना, त्यांच्या कारकिर्दीच्या सुरुवातीच्या काळात अनेकदा महत्त्वपूर्ण आर्थिक आणि अस्तित्वात्मक आव्हानांना तोंड द्यावे लागते. लग्न, घरमालकीची मालकी आणि आर्थिक सुरक्षिततेच्या सामाजिक अपेक्षांमुळे हे ओझे वाढतात, ज्यामुळे तरुण व्यावसायिकांना त्यांच्या भविष्यासाठी गुंतवणूक करणे कठीण होते. मार्क्सवादी सिद्धांतातून घेतलेली संकल्पना, कामाच्या ठिकाणी परकेपणासह आर्थिक ताण, व्यक्ती आणि त्यांच्या कामात दुरावा निर्माण करते, ज्यामुळे असंतोष आणि मानसिक आरोग्य आव्हाने निर्माण होतात (ब्रोसिक, २०२३). सध्याच्या व्यवस्थेत, पगार संरचना श्रेणीबद्ध आहेत, जे वरच्या दर्जाच्या लोकांसाठी उच्च पगार राखून वर्ग-आधारित विभाजनांना बळकटी देतात. हा पेपर पगार मॉडेल्सची आमूलाग्र पुनर्रचना प्रस्तावित करतो जिथे तरुण व्यावसायिकांना त्यांच्या कारकिर्दीच्या सुरुवातीला सर्वाधिक पगार मिळतील, पदोन्नती होताना त्यांचे पगार कमी होतील. समाजशास्त्रीय सिद्धांतावर आधारित हे मॉडेल केवळ आर्थिक ओझे आणि परकेपणाला संबोधित करत नाही तर वर्ग-आधारित पदानुक्रम तोडून आणि काम आर्थिक गरजेनुसार नसून उत्कटतेने चालवले जाईल याची खात्री करून अधिक समतापूर्ण समाजाला प्रोत्साहन देते. हा पेपर आर्थिक भार, कामाच्या ठिकाणी परकेपणा आणि सामाजिक असमानता दूर करण्यासाठी पारंपारिक पगार मॉडेल्सची आमूलाग्र पुनर्रचना प्रस्तावित करतो. मार्क्सच्या परकेपणाच्या सिद्धांताचा आणि जीवनक्रमाच्या दृष्टिकोनाचा आधार घेत, संशोधन असा युक्तिवाद करते की सुरुवातीच्या करिअर व्यावसायिकांना त्यांच्या कारकिर्दीच्या सुरुवातीला सर्वाधिक पगार मिळायला हवा, जसजसे ते प्रगती करतात तसतसे भरपाई हळूहळू कमी होत जाते. ही उलट पगार रचना तरुण व्यावसायिकांना तोंड देणाऱ्या आर्थिक आव्हानांना तोंड देते - जसे की घरमालकत्व, शैक्षणिक कर्ज आणि कौटुंबिक जबाबदाऱ्या - जेव्हा सर्वात जास्त गरज असते तेव्हा आर्थिक स्थिरता प्रदान करून. शिवाय, हे मॉडेल वर्ग-आधारित पदानुक्रमांना विस्कळीत करते, पगाराला करिअरच्या दर्जापासून वेगळे करते, अधिक न्याय्य समाज निर्माण करते जिथे कामगार आर्थिक गरजेपेक्षा उत्कटतेने आणि पूर्ततेने प्रेरित असतात. हा बदल प्रामाणिक करिअर वाढीला प्रोत्साहन देतो, ज्यामध्ये आर्थिक लाभापेक्षा जबाबदारी आणि उद्देशासाठी पदोन्नती

दिल्या जातात. सामग्री विश्लेषण आणि दुय्यम डेटा या रचनेमुळे होणारे परकेपणा कमी होण्याची, नोकरीतील समाधानात वाढ होण्याची आणि सामाजिक फायद्यांची शक्यता अधोरेखित करतो. तथापि, पेपर संभाव्य टीकेला देखील संबोधित करतो, जसे की पदोन्नतींना निरुत्साहित करण्याचा धोका आणि व्यावसायिक वाढीमध्ये अंतर्गत बक्षिसांचे मूल्यांकन करण्याच्या दिशेने सांस्कृतिक बदलाचे आवाहन करते. शेवटी, हे पेपर अशा भविष्याची कल्पना करते जिथे व्यक्ती उत्कटतेने चालवलेले करिअर करतील, कार्यबलाला आकार देतील, नवोपक्रम वाढवतील आणि सामाजिक गतिशीलता चांगल्यासाठी बदलतील.

मार्क्सची अलगावची संकल्पना:

आजच्या व्यावसायिक कार्यबलातील व्यापक असंतोष आणि अलिप्तता समजून घेण्यासाठी कार्ल मार्क्सचा अलगावचा सिद्धांत मूलभूत आहे. भांडवलशाही अर्थव्यवस्थांमध्ये, व्यक्ती बहुतेकदा त्यांच्या श्रमापासून, त्यांनी तयार केलेल्या उत्पादनांपासून आणि स्वतःपासूनही अलिप्त असतात, कारण ते प्रामुख्याने पूर्ततेसाठी नव्हे तर आर्थिक अस्तित्वासाठी काम करतात. या संदर्भात, आर्थिक प्रेरणा उत्कटता आणि व्यस्ततेपेक्षा जास्त असते, ज्यामुळे एक कार्यबल त्यांच्या भूमिकांपासून विभक्त आणि असमाधानी असतो (व्हेलेझ-प्राऊ एट अल., २०२३). प्रस्तावित वेतन रचना व्यक्तींना त्यांचे आर्थिक भविष्य लवकर सुरक्षित करण्याची परवानगी देऊन, त्यांना नंतरच्या आयुष्यात त्यांच्या आवडींशी जुळणारे काम करण्यास मुक्त करून याचा सामना करते. अशा प्रकारे, मॉडेल आर्थिक सक्तीऐवजी अंतर्गत बक्षिसांनी प्रेरित व्यक्तींचा समावेश असलेले कार्यबल तयार करेल, भांडवलशाही प्रणालींमध्ये अंतर्निहित व्यापक अलगाव कमी करेल (सु एट अल., २०२३).

वर्ग-आधारित पदानुक्रम आणि समतापूर्ण समाज:

सध्याची भांडवलशाही वेतन रचना वर्ग-आधारित पदानुक्रमांना बळकटी देते, जिथे संघटनात्मक शिडीच्या वरच्या बाजूला असलेल्यांना जास्त वेतन दिले जाते, ज्यामुळे अनेकदा असमानता कायम राहते. हे मॉडेल स्वाभाविकपणे खालच्या स्तरावरील कामगार आणि उच्च-स्तरीय व्यावसायिकांमध्ये आर्थिक आणि सामाजिक विभागणी निर्माण करते (हेन, वेनस्टाईन आणि रिंग, २०२२). पगार रचना उलट करून, तरुण व्यावसायिकांना त्यांच्या कारकिर्दीच्या सुरुवातीलाच सर्वाधिक भरपाई मिळेल, घर खरेदी करणे, लग्न करणे आणि मुलांचे संगोपन करणे यासारख्या सुरुवातीच्या जीवनातील आर्थिक संघर्षांना तोंड द्यावे लागेल. व्यावसायिक जसजसे प्रगती करतात तसतसे त्यांच्या आर्थिक गरजा कमी होतात, ज्यामुळे त्यांचे पगार प्रमाणानुसार कमी होऊ शकतात. हे उलट वर्ग-आधारित पदानुक्रमांना विस्कळीत करते, हे सुनिश्चित करून की भरपाई स्थितीशी जोडलेली नाही तर आर्थिक गरजेशी जोडलेली आहे. यामुळे एक अधिक समतापूर्ण समाज निर्माण होईल जिथे व्यक्ती सुरुवातीलाच आर्थिकदृष्ट्या सुरक्षित असतील आणि गरजेपेक्षा आवडीने करिअर करतील (जोन्स, २०२२).

शिवाय, कॉर्पोरेट शिडीवर चढण्यासाठी आर्थिक प्रोत्साहन काढून टाकून, व्यक्ती केवळ उच्च पातळीची जबाबदारी घेण्यास खरोखर रस असेल तरच पदोन्नती मिळवतील. यामुळे एक अधिक

प्रामाणिक कार्यबल निर्माण होते जिथे नेतृत्व पदांवर असलेले लोक त्यांच्या कामावरील समर्पणाने प्रेरित होतात, आर्थिक बक्षिसांनी नाही, ज्यामुळे अधिक उत्साही आणि उत्पादक क्षेत्र सुनिश्चित होते (रॉड्रिगेझ आणि ओफ्फुलिवान, २०२३). परिणामी व्यावसायिक वातावरण अधिक न्याय्य असेल, कारण आर्थिक सुरक्षिततेच्या संधी यापुढे पदानुक्रमित प्रगतीशी जोडल्या जाणार नाहीत तर सर्व करिअर टप्प्यांमध्ये अधिक समान रीतीने वितरित केल्या जातील. तरुण व्यावसायिक, विशेषतः त्यांच्या करिअरच्या सुरुवातीच्या काळात, विद्यार्थी कर्ज, लग्न आणि गृहनिर्माण खर्चासह महत्त्वपूर्ण आर्थिक दबावांना तोंड देतात (ब्रोसिक, २०२३). त्यांच्या करिअरच्या सुरुवातीला जास्त पगार देऊन, हे मॉडेल व्यक्तींच्या तात्काळ आर्थिक गरजांशी भरपाई सरेखित करते. वयानुसार त्यांच्या आर्थिक जबाबदाऱ्या कमी होत असल्याने, ते त्यांच्या वैयक्तिक आवडी आणि आवडींशी जुळणाऱ्या भूमिकांच्या बदल्यात कमी पगार स्वीकारू शकतात. हे बाह्य आर्थिक बक्षिसांऐवजी अंतर्गत प्रेरणेवर आधारित करिअर मार्ग तयार करते, नोकरीतील समाधानाला प्रोत्साहन देते आणि बर्नआउट कमी करते (सु एट अल., २०२३).

संशोधन पध्दती:

या अभ्यासात गुणात्मक संशोधन दृष्टिकोनाचा वापर करण्यात आला, ज्यामध्ये विद्यमान साहित्याचे आशय विश्लेषण आणि कामाच्या ठिकाणी समाधान, वेतन ट्रेंड आणि परकेपणा यावरील अहवालांचा समावेश होता. आंतरराष्ट्रीय कामगार संघटना (ILO) आणि जागतिक आर्थिक मंच (WEF) सारख्या संस्थांकडून मोठ्या प्रमाणात आर्थिक अहवालांचा वापर करून दुय्यम डेटा विश्लेषण देखील करण्यात आले. या डेटाने तरुण व्यावसायिकांना तोंड द्यावे लागणारे आर्थिक ओझे आणि पर्यायी वेतन संरचनांचा कामगार समाधानावर होणारा संभाव्य परिणाम याबद्दल अंतर्दृष्टी प्रदान केली (Velez-Grau et al., 2023). याव्यतिरिक्त, संशोधनात मागील अभ्यासांमध्ये घेतलेल्या गुणात्मक मुलाखतींमधील निष्कर्ष एकत्रित केले गेले, जिथे तरुण व्यावसायिकांनी त्यांच्या करिअर प्रेरणा, आर्थिक संघर्ष आणि कामाच्या ठिकाणी परकेपणाच्या अनुभवांवर चर्चा केली (Henn et al., 2022). हा पद्धतशीर दृष्टिकोन पगार संरचना आर्थिक कल्याण, कामाच्या ठिकाणी सहभाग आणि सामाजिक समानतेवर कसा परिणाम करतात याची व्यापक समज प्रदान करतो.

आर्थिक भार:

संशोधनातून सातत्याने दिसून येते की तरुण व्यावसायिकांना त्यांच्या करिअरच्या सुरुवातीच्या काळात मोठ्या आर्थिक भारांना तोंड द्यावे लागते, ज्यामध्ये विद्यार्थी कर्ज, घरमालकी आणि कुटुंबाचे संगोपन यांचा समावेश आहे (रॉड्रिगेझ आणि ओफ्फुलिव्हन, २०२३). या आर्थिक संघर्षामुळे अनेकदा ताण, असंतोष आणि अगदी मानसिक आरोग्य समस्या देखील उद्भवतात. प्रस्तावित पगार मॉडेल हे भरपाईच्या अग्रभागी भरपाईद्वारे सोडवते, जेणेकरून तरुण व्यावसायिकांना सर्वात जास्त गरज असताना जास्त पगार मिळतील (व्हेलेझ-ग्राऊ एट अल., २०२३). तरुण कामगारांना त्यांच्या करिअरच्या सुरुवातीला आर्थिक स्थिरता प्राप्त करण्याची परवानगी देऊन, ते त्यांच्या भविष्यात गुंतवणूक करू शकतात आणि दीर्घकालीन आर्थिक वाढीसाठी चक्रवाढ

व्याजाचा फायदा घेऊ शकतात, ज्यामुळे आयुष्याच्या उत्तरार्धात आर्थिक दबाव कमी होतो (जोन्स, २०२२).

कामाला प्रोत्साहन:

आजच्या व्यावसायिक परिस्थितीत मार्क्सचा परकेपणाचा सिद्धांत खूप संबंधित आहे, जिथे अनेक कामगार आर्थिक ताणतणावामुळे आणि केवळ जगण्यासाठी नोकरी टिकवून ठेवण्याची गरज असल्यामुळे ते कामावरून दूर राहतात. पगार रचना उलट करून, व्यावसायिक आर्थिक गरजेपेक्षा त्यांच्या कामाबद्दल खरोखरच उत्साही असतील तरच ते पदांवर राहतील. यामुळे त्यांच्या कामात समाधान आणि अर्थ शोधणाऱ्या व्यक्तींनी बनलेले कार्यबल तयार होऊन परकेपणा कमी होईल (सु एट अल., २०२३). याव्यतिरिक्त, वरिष्ठ पदांवरील आर्थिक दबाव दूर करून, व्यावसायिक त्यांच्या कामाच्या अंतर्गत बक्षिसांवर लक्ष केंद्रित करू शकतात, ज्यामुळे अधिक नोकरी समाधान आणि उत्पादकता मिळते (रॉड्रिगेझ आणि ओफ्फुलिवान, २०२३).

समतापूर्ण समाजाला चालना:

भांडवलशाही अर्थव्यवस्थांमध्ये श्रेणीबद्ध पगार रचना व्यक्तींना त्यांच्या गरजांऐवजी त्यांच्या स्थितीनुसार बक्षिस देऊन असमानता कायम ठेवतात. या मॉडेलला उलट करून, एखाद्याच्या कारकिर्दीच्या सुरुवातीला सर्वोच्च पगार वितरित केले जातात, संपत्तीचे अधिक न्याय्य वितरण तयार केले जाते आणि आर्थिक सुरक्षा सर्वांना उपलब्ध आहे याची खात्री केली जाते (जोन्स, २०२२). हे सर्व करिअर टप्प्यांवर आर्थिक स्वातंत्र्य उपलब्ध करून वर्ग-आधारित अडथळे दूर करते, ज्यामुळे कामगारांना आर्थिक सक्तीऐवजी आवड आणि उद्देशावर आधारित भूमिका बजावता येतात. शिवाय, हे मॉडेल एक गुणवत्तापूर्ण कार्यबल निर्माण करते, जिथे पदोन्नती आर्थिक फायद्यासाठी नव्हे तर वैयक्तिक समाधान आणि क्षेत्रासाठी समर्पणासाठी मागितली जातात (ब्रॉसिक, २०२३).

आव्हाने:

फायदे असूनही, प्रस्तावित मॉडेलला संभाव्य आव्हानांचा सामना करावा लागतो. एक टीका अशी आहे की पदोन्नतीसह कमी केलेले पगार करिअरच्या प्रगतीला अडथळा आणू शकतात, ज्यामुळे व्यक्ती खालच्या स्तरावरील पदांवर राहतात. तथापि, ही टीका नेतृत्व भूमिकांसह येणाऱ्या अंतर्गत बक्षिसांकडे दुर्लक्ष करते, जी प्रस्तावित प्रणाली अंतर्गत, त्यांच्या कामाबद्दल खरोखर उत्साही असलेल्या व्यक्तींनी भरली जातील (व्हेलेझ ग्राऊ एट अल., २०२३). आणखी एक संभाव्य आव्हान म्हणजे करिअर प्रगती आणि आर्थिक यश यांच्यातील दीर्घकालीन दुवा तोडण्यासाठी सामाजिक प्रतिकार, ज्यासाठी महत्त्वपूर्ण सांस्कृतिक बदल आवश्यक असेल (सु एट अल., २०२३). तथापि, कमी परकेपणा, वाढीव नोकरी समाधान आणि अधिक समतापूर्ण समाजाच्या बाबतीत या मॉडेलचे दीर्घकालीन फायदे प्रदर्शित करून, या चिंता कमी केल्या जाऊ शकतात.

निष्कर्ष:

या पेपरमध्ये असा युक्तिवाद केला आहे की पारंपारिक पगार रचना उलट केल्याने कामाच्या ठिकाणी आर्थिक भार, परकेपणा आणि वर्ग-आधारित असमानता लक्षणीयरीत्या कमी होऊ शकते. तरुण व्यावसायिकांना त्यांच्या कारकिर्दीच्या सुरुवातीला जास्त पगार देऊन आणि प्रगती करताना त्यांचे पगार कमी करून, हे मॉडेल तरुण कामगारांच्या आर्थिक गरजा पूर्ण करते आणि त्याचबरोबर उत्कटतेने आणि उद्देशाने प्रेरित असलेल्या कार्यबलाला प्रोत्साहन देते. याव्यतिरिक्त, ही रचना वर्ग-आधारित पदानुक्रम तोडून आणि सर्व व्यावसायिकांना आर्थिक सुरक्षा उपलब्ध आहे याची खात्री करून अधिक समतापूर्ण समाजाला प्रोत्साहन देते. पगारांना स्थितीपेक्षा आर्थिक गरजांशी संरेखित करून, हे मॉडेल अधिक समाधानकारक, नाविन्यपूर्ण आणि न्याय्य व्यावसायिक परिदृश्य तयार करते. हि नवीन पगार रचना, नौकरदारच्या पगाराची फेररचना झाली तर तो आर्थिकदृष्ट्या सक्षम होतो आयुष्याच्या सुरुवातीच्या काळात तो आर्थिक सक्षम असल्याने त्याची क्रयशक्ती वाढते व तो बाजारपेठेत क्रियाशिल राहतो त्यामुळे अर्थव्यवस्था स्थिर व वाढीस चालना मिळते.

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सारांश:

प्रत्येकाच्या जीवनात काही स्वप्न असतात. ही स्वप्न पूर्ण करण्यासाठी प्रत्येकजण परिश्रम घेत असतो. या परिश्रमांना आर्थिक नियोजनाची जोड दिली जात असते. स्वतःचे घर हे त्यापैकीच एक स्वप्न आहे. हे स्वप्न आपल्यापैकी बहुतांशजण पाहतात. परंतु आर्थिक नियोजन आर्थिक परिस्थिती आणि घराच्या किंमती बघता हे स्वप्न प्रत्यक्षात उतरते असे नाही. आज शहरी भागात घराच्या किंमती गगनाला भिडल्या आहेत. हे सर्वसामान्य किंवा आर्थिकदृष्ट्या कमकुवत वर्गाच्या आवाक्याबाहेर गेली आहे. एका बाजूला ही गोष्ट खरी असली तरी दुसऱ्या बाजूला गृह खरेदीला प्रोत्साहन मिळावे म्हणून सरकार मदतीचा हात देत आहे. केंद्र सरकारच्या प्रधानमंत्री आवास योजनेच्या माध्यमातून आता तुमचे स्वतःच्या घराचे स्वप्न प्रत्यक्षात येऊ शकते. सर्वांसाठी घरे या उद्देशाने केंद्र सरकार प्रधानमंत्री आवास योजना राबवत आहे. २०२० पर्यंत सर्वांसाठी घर हे उद्दिष्ट पूर्ण करण्याचा सरकारचा मानस आहे. या संशोधनाचा मुख्य उद्देश्य म्हणजे देशातील प्रधानमंत्री आवास योजनेच्या वाटचालीचा आढावा घेणे हा आहे.

कुट शब्द : घर, योजना, कल्याण, समानता, महिला सशक्तिकरण व पर्यावरण.

प्रस्तावना :

मानवाला जीवन जगण्यासाठी अनेक गरजांची पूर्तता करावी लागते. त्यामध्ये अन्न, वस्त्र, निवारा आणि शिक्षण व आरोग्याच्या सोयी सुविधा या मूलभूत गरजा आहेत. त्या मिळविण्यासाठी प्रत्येक व्यक्ती कार्य करित असतो. स्वतःचे घर असावे हे प्रत्येकाचे स्वप्न असते, परंतु ते स्वप्न सर्वांचेच पूर्ण होत नाही. २०११ च्या जनगणनेनुसार भारताची लोकसंख्या ही १,२१०,८५४,९७७ इतकी असून आजही अनेक कुटुंबांना राहण्यासाठी घरी नाहीत. एक मूलभूत गरज व सर्वांगीण विकास या दृष्टीने प्रत्येकाला स्वतःचे घर असावे हा उद्देश्य समोर ठेवून सरकारने प्रधानमंत्री आवास योजना सुरु केली. २०११ च्या जनगणनेनुसार १७,७३०४० इतके कुटुंब बेघर आहेत.

२०११ च्या जनगणनेनुसार शहरी भागात ५२.९ टक्के तर ग्रामीण भागात ४७.१ टक्के एवढी लोकसंख्या आहे. त्याचप्रमाणे महाराष्ट्रामध्ये २०११ च्या जनगणनेनुसार २१०९०८ कुटुंब बेघर आहेत. चंद्रपूर जिल्ह्यातील लोकसंख्येचे प्रमाण जास्त असल्यामुळे व आर्थिक समता नसल्यामुळे निवासांचा प्रश्न निर्माण होतो. अनेक कुटुंबे मिळेल तिथे निवारा करतात, फूटपाटवर रात्र काढतात ही समस्या अनेक राज्यांमध्ये कमी अधिक प्रमाणात दिसून येते.

स्वातंत्र्य प्राप्तीनंतर १९५७ ला ग्रामीण आवास कार्यक्रमाची सुरुवात केली गेली. ज्याद्वारे लोकांना प्रति कुटुंबाला पाच हजार रुपये कर्ज देण्यात आले होते. महाराष्ट्रामध्ये ग्राम विकास व पंचायतराज विभागाद्वारे इंदिरा आवास योजना ही १९८५ पासून राबविण्यात येत आहे. ही योजना १९९५-९६ पासून महाराष्ट्रात स्वतंत्रपणे राबविण्यात येत आहे. या योजनांमध्ये दारिद्र्य रेषेखालील लोकांना घर उपलब्ध करून देण्यात असे. केंद्र व राज्य सरकारमार्फत या योजनेचा खर्च ७५ : २५ या प्रमाणात निधी पुरवठा केला जातो. जून २०१५ पासून इंदिरा आवास योजनेचे नाव बदलून प्रधानमंत्री आवास योजना असे नाव ठेवण्यात आले आहे.

संशोधनाचा उद्देश :

प्रस्तुत शोधनिबंधात प्रधानमंत्री आवास योजनेचा आढावा घेण्यात येत आहे, त्या अनुषंगाने पुढील उद्देश निश्चित करण्यात आले आहे.

१) केंद्र पुरस्कृत प्रधानमंत्री आवास योजनाचा देशातील विविध राज्यातील प्रगतीचा आढावा घेणे.

२) प्रधानमंत्री आवास योजनामुळे झालेल्या प्रभावाचा आढावा घेणे.

संशोधन पद्धती :

सदर शोधनिबंध लिहिताना द्वितीय समकांचा वापर करण्यात आलेला आहे तसेच काही संकेतस्थळावर प्रकाशित माहितीचा सुद्धा वापर करण्यात आला आहे.

प्रधानमंत्री आवास योजनेचा पूर्व इतिहास :

प्रधानमंत्री आवास योजना म्हणजे स्त्री-पुरुषांना भारतीय घटनेच्या मार्गदर्शक तत्वांमध्ये अंतर्भूत असलेल्या निवाऱ्याच्या समान हक्क मान्य करण्याचा दृष्टीने टाकलेले पहिले पाऊल होय. शहरी झोपडपट्टी व ग्रामीण भागातील आर्थिक मागास, बेघर, महिला, वृद्ध, अपंग ज्यांना राहण्यासाठी घर नसून त्यांच्या आर्थिक व सामाजिक स्थितीमध्ये राहणीमानाच्या दर्जामध्ये सुधारणा करण्यासाठी सरकारने आवास योजना सुरु केली आहे. स्वातंत्र्यानंतर स्थलांतरीत लोकांचे पुनर्वसन करण्यासाठी भारतात एक आवास कार्यक्रम १९५७ ला सुरु करण्यात आला त्याचे नाव व्हिलेज हाऊसिंग प्रोग्राम (VHP) आहे. वर्ष १९६० पर्यंत भारतात विविध भागात

जवळपास पाच लाख कुटुंबाला घरे उपलब्ध झाली. या कार्यक्रमांतर्गत लोकांना व सहकारी समित्यांना प्रति कुटुंब पाच हजार रुपये पर्यंत कर्ज दिले गेले. पाचवी पंचवार्षिक (१९७४-१९७९) योजनेच्या शेवटपर्यंत योजना अंतर्गत फक्त ६७ हजार आवास निर्माण केले गेले. जून १९८५ ला इंदिरा आवास योजना सुरु करण्यात आली. त्यामध्ये अनुसूचित जाती व अनुसूचित जमाती लोकांसाठी ही योजना सुरु करण्यात आली. १ जानेवारी १९९६ पासून इंदिरा आवास योजना स्वतंत्रपणे सुरु करण्यात येवून त्यामध्ये दारिद्र्य रेषेखाली लोकांचा समावेश करण्यात आला आहे.

वर्ष २०१५ पासून इंदिरा आवास योजना हे नाव बदलून केंद्र सरकारमार्फत प्रधानमंत्री आवास योजना हे नवीन नाव या योजनेला देण्यात आले या योजनांमध्ये घरबांधणीसाठी मैदानी क्षेत्रात १ लाख २० हजार रुपये व पूर्व - उत्तर राज्यांसाठी तसेच पहाडी क्षेत्रात राहणाऱ्या लोकांसाठी १ लाख ३० हजार रुपये आर्थिक मदत दिल्या जाते.

चंद्रपूर जिल्ह्याची संक्षिप्त माहिती :

प्राचीन काळात 'लोकापूर' या नावाने ओळखला जाणारा जिल्हा चंद्रपूर नावाने प्रचलित आहे. काही काळानंतर त्याचे नाव इंद्रपूर आणि चंद्रपूर असे करण्यात आले. मात्र ब्रिटिशांच्या काळात हा जिल्हा चांदा या नावाने ओळखला जात होता. या प्रदेशात हिंदू आणि बौद्ध राज्याची सत्ता बऱ्याच काळापर्यंत होती. सन १२४० ते १७५१ या काळात येते मराठ्यांची सत्ता स्थापित होईपर्यंत गोंड राजाचीच सत्ता होती. मराठी राजे रघुजी भोसले हे सन १८५३ मध्ये विनावारस मृत्यू पावल्यानंतर नागपूर प्रांतासहित साम्राज्याला देण्यात आला. सन १९७४ पासून चंद्रपूर जिल्हा स्वातंत्र जिल्हा म्हणून गणला जाऊ लागला प्रशासकीय सुविधासाठी जिल्ह्याचे २६ ऑगस्ट १९८२ रोजी विभाजन करून गडचिरोली हा महाराष्ट्र राज्यातील ३० जिल्हा निर्माण करण्यात आला.

महाराष्ट्र राज्यातील एकूण ३६ जिल्ह्यांपैकी चंद्रपूर हा एक जिल्हा असून त्याचे क्षेत्रफळ ११,४४३ चौरस किलोमीटर एवढे आहे. जिल्ह्याच्या पूर्वेस गडचिरोली, उत्तर व पश्चिमेस नागपूर, वर्धा व भंडारा दक्षिणेस तेलंगणामधील आदिलाबाद जिल्हा आहे. चंद्रपूर जिल्हा महाराष्ट्राच्या पूर्वेकडील भागात असून जिल्ह्याच्या पूर्व सीमेवर उत्तरेकडून दक्षिणेकडे वाहणारी वैनगंगा आणि पश्चिम सीमेवर वाहणाऱ्या वर्धा नदीने जिल्ह्याच्या दोन नैसर्गिक सीमा आखल्या आहे. या जिल्ह्यातील संपूर्ण नद्या उत्तरेकडून दक्षिणेकडे वाहतात. सपाट भागाची सर्वसाधारण उंची जिल्ह्याच्या उत्तर भागात समुद्र सपाटीपासून ९०० फूट उंच असून जिल्ह्याच्या दक्षिणेकडील सपाट भागाची उंची ४०६ फूट आहे. प्रशासकीय रचनेमध्ये जिल्ह्यात एकूण शहराची संख्या १२

असून १ महानगरपालिका, ६ नगरपालिका, १५ पंचायत समित्या, ८२७ ग्रामपंचायत व गट ग्रामपंचायत असून १५ तालुके आहेत.

२०११ च्या जनगणनेनुसार जिल्ह्याचे एकूण लोकसंख्या २२,०४,३०७ असून त्यापैकी ११,२३,८३४ पुरुष व १०,८०,४७३ स्त्रिया आहेत. जिल्ह्याचा लोकसंख्या वृद्धीदर २००१ ते २०११ या दहा वर्षांचा काळात ६.४ टक्के एवढा आहे. २०११ च्या जनगणनेनुसार एकूण लोकसंख्यापैकी चंद्रपूर तालुक्यात सर्वाधिक २१.८ टक्के लोक राहतात. पोंभूर्णा तालुक्यात सर्वात कमी २.३ टक्के लोक राहतात. तसेच एकूण लोकसंख्येपैकी ६४.८ टक्के लोक ग्रामीण भागात तर ३५.२ टक्के लोक शहरात राहतात. जिल्ह्यात साक्षरतेचे प्रमाण ८० टक्के असून ग्रामीण साक्षरतेचे प्रमाण ७५.५ टक्के व शहरी साक्षरतेचे प्रमाण ८८.२ टक्के एवढे आहे. जिल्ह्यात एकूण काम करणाऱ्यांची संख्या १०,५८,१७२ असून ती एकूण लोकसंख्येच्या ४८.८ टक्के आहे. २०.९ टक्के शेतकरी, ४४.८ टक्के शेतमजूर, २ टक्के घरगुती उद्योग, ३२.३ टक्के लोक इतर सेवेत गुंतलेले आहे. चंद्रपूर जिल्हा औद्योगिकदृष्ट्या प्रगत जिल्हा म्हणून ओळखला जातो. जिल्ह्यातील विपुल खनिज संपत्तीमुळे ११२१ नोंदणीकृत लघुउद्योग, ३१ मोठे उद्योग स्थापन झाले आहेत. या मोठ्या उद्योगात प्रामुख्याने ए.सी.सी., अंबुजा, माणिकगड, अल्ट्राटेक, मुरली ऍग्रो असे पाच मोठे उद्योग समूह बल्लारपूर पेपर मिल, लोह पोलाद उद्योग, उद्योग रेफ्रिजरेटर कारखाना, आयुध निर्माण केंद्र या उद्योगाचा समावेश आहे. सध्या स्थितीत १३ औद्योगिक वसाहती, ४० कोळशाच्या खाणी, स्पंज आर्यन निर्माण करणारे ६३ उद्योग व आशिया खंडातील सर्वात मोठे औष्णिक वीज निर्मिती केंद्र आहे.

चंद्रपूर जिल्ह्याचा प्रमुख व्यवसाय शेती असून त्यातून तांदूळ, तूर, हरभरा, ज्वारी, गहू, सोयाबीन, कापूस ही पिके घेतली जातात. त्याचबरोबर २०१२ च्या पशु जनगणनेनुसार एकूण पशुधन ८,४६,०४५ एवढे आहे. गायी व बैल ६१.१ टक्के, म्हशी व रेडे ८.७ टक्के, मेंढ्या व बकऱ्या ३० टक्के तर घोडे शिंगळे ३ टक्के असून एकूण कुक्कुटपक्षी ५,७५,३७२ इतकी आहे. तसेच सन २०१८-१९ वर्षात १९,३८९ हेक्टर क्षेत्र मत्स्य उत्पादनासाठी अनुकूल असून उपयोगात आणलेले एकूण क्षेत्र मात्र १७,१३२ हेक्टर आहे. चंद्रपूर जिल्ह्यातील प्रधानमंत्री आवास योजना अंतर्गत अनुसूचित जातीमधील लाभार्थी २०१८ -१९ या वर्षात ग्रामीण भागातील संख्या १९७ व शहरी भागातील संख्या ३१७ एवढी आहे तर अनुसूचित जमातीमधील लाभार्थी ग्रामीण भागातील संख्या ६५७ व शहरी भागातील १८४ एवढी आहे. तसेच अल्पसंख्याकांची ग्रामीण भागातील संख्या २ व शहरी भागातील संख्या १११ एवढी आहे. अशा प्रकारे एकूण ग्रामीण भागातील लाभार्थी संख्या १६५२ व शहरी भागातील एकूण संख्या २५१० एवढी आहे.

जिल्हा :		चंद्रपूर जिल्ह्यातील प्रधानमंत्री आवास योजना														
अ. क्र.		संदर्भ वर्ष १ एप्रिल २०१९ ते ३१ मार्च २०२०														
		मंजूर केलेल्या घरकुलांची संख्या						पूर्ण झालेल्या घरकुलांची संख्या								
		अ. जा.	अ.ज.	अल्प	इतर	एकूण	अ. जा.	अ. ज.	अल्प	इतर	एकूण	अ. जा.	अ. ज.	अल्प	इतर	एकूण
१ वरोरा	ग्रामीण	३	७५	०	२५०	३२८	५८	११८	०	२०५	३८१					
	नागरी	०	०	०	०	०	०	०	०	०	०					
२ चिमूर	ग्रामीण	२५	७१३	०	४०८	११४६	२५४	३५५	१२२४	४५५	१०७६					
	नागरी	०	०	०	०	०	०	०	०	०	०					
३ नागभिंड	ग्रामीण	२०	१४३	०	४९१	६५४	१३२	१२७	१२	२५५	५२६					
	नागरी	७०	१३८	४	३०१	५१३	०	०	०	०	५५					
४ ब्रम्हपूरी	ग्रामीण	८२	१६४	०	९७३	१२१९	२९८	२४२	१०	४१७	९६७					
	नागरी	०	०	०	०	०	०	०	०	०	०					
५ सावली	ग्रामीण	५	९२	०	२१६	३१३	१४२	२२५	२०	२८४	६७१					
	नागरी	०	०	०	०	०	०	०	०	०	०					
६ सिंदेवाही	ग्रामीण	१८	५२३	०	२१४	४८५	१४०	१८०	१०	१७२	५०२					
	नागरी	३५	१०	२	८८	१३५	०	०	०	०	०					
७ भद्रावती	ग्रामीण	७	१८३	०	१४३	३३३	५१	१९७	०	१६५	४१३					
	नागरी	०	०	०	०	०	०	०	०	०	०					

८ चंद्रपुर	ग्रामीण	३	१०६	०	२१६	३२५	५१	१८४	१२	२२८	४७५
	नागरी	०	०	०	०	०	११	२	०	६१	७४
९ मूल	ग्रामीण	२	९१	०	४३	१३६	१४८	२७०	२०	३०४	७७८
	नागरी	०	०	०	०	०	०	०	०	०	०
१० पौष्पूना	ग्रामीण	११	७६	०	१२७	२१४	५७	११४	०	१७३	३४४
	नागरी	०	०	०	३६	३६	०	०	०	०	०
११ बल्लारपुर	ग्रामीण	०	३	०	२८	३१	२२	४५	१२	८१	१६०
	नागरी	०	०	०	०	०	०	०	०	०	०
१२ कोरपना	ग्रामीण	०	८८	०	७५	१६३	२५	६०	०	१२१	२०६
	नागरी	११	४	१९	१५३	१८७	०	०	१	७	८
१३ राजुरा	ग्रामीण	२	१९	०	९५	११६	५६	९६	०	१३६	२८८
	नागरी	०	०	०	०	०	६	३	५	५१	६५
१४ गोंडपिपरी	ग्रामीण	९	९५	०	८४	१८८	९८	२००	१२	२२६	५३६
	नागरी	१२	३०	३	१३८	१८३	०	०	०	०	०
१५ जिवती	ग्रामीण	६३	१६६	०	२४६	४७५	११०	१५२	०	११५	३७७
	नागरी	०	०	०	०	०	०	०	०	०	०
	ग्रामीण	२५०	२२६७	०	३६०९	६१२६	१६७८	२५६५	१२०	३३३७	७७००
	नागरी	१२८	१८२	२८	७१६	१०५४	१७	५	६	१२४	१५२

स्त्रोत : अर्थ व सांख्यिकी विभाग चंद्रपूर जिल्हा, महाराष्ट्र शासन.

१ एप्रिल २०१९ ते ३१ मार्च २०२० या कालावधीत प्रधानमंत्री आवास योजना अंतर्गत चंद्रपूर जिल्ह्यात ग्रामीण भागातील मंजूर केलेल्या घरकुलाची एकूण संख्या ६१२६ असून त्यापैकी पूर्ण झालेल्या घरकुलाची संख्या ७७०० आहे, तसेच शहरी भागात मंजूर केलेल्या घरकुलांची एकूण संख्या १०५४ आणि पूर्ण झालेल्या घरकुलांची एकूण संख्या १५२ आहे.

प्रधानमंत्री आवास योजनेची विशेषता :

१) प्रधानमंत्री आवास योजना अंतर्गत केंद्र सरकारमार्फत मैदानी क्षेत्रात घर बांधण्यासाठी १ लाख २० हजार व पहाडी क्षेत्रासाठी १ लाख ३० हजार रुपये निधी दिला जातो. तसेच केंद्र व राज्य सरकारमार्फत या योजनांचा खर्च ७५ : २५ या प्रमाणात निधी पुरवठा केला जातो.

२) शौचालय बांधून देण्यासाठी स्वच्छ भारत मिशन अंतर्गत केंद्र सरकार मार्फत १२ हजार रुपये निधी उपलब्ध करून देण्यात येतो.

३) प्रधानमंत्री आवास योजनेअंतर्गत उत्पन्नानुसार वर्गीकरण करून कमी व्याजाच्या दराने कर्ज घेण्याची व्यवस्था करण्यात आली आहे.

४) प्रधानमंत्री आवास योजनेमार्फत देण्यात येणारी घरे महिलांच्या नावाने देण्यात येत आहे.

५) प्रधानमंत्री आवास योजनेमध्ये घरासोबत स्वयंपाक रुमची व्यवस्था करण्यात आल्यामुळे पूर्वीपेक्षा भूभाग क्षेत्र वाढवण्यात आले आहे.

६) शुद्ध पाणी, एलपीजी गॅस कनेक्शन, विज कनेक्शन इत्यादी योजनेमार्फत उपलब्ध करून देण्यात येत आहे.

७) प्रधानमंत्री आवास योजनेमुळे ग्रामीण भागातील बेकारी वर्गांना रोजगार प्राप्त होत आहे.

८) घर बांधण्यासाठी आवश्यक असलेल्या वस्तूंना मागणी वाढल्याने संबंधित उद्योगांचा विस्तार होत आहे.

प्रधानमंत्री आवास योजनेचा उद्देश :

१) आर्थिकदृष्ट्या दुर्बल वर्गसमूहाला मदत करणे.

२) श्रीमंत व गरीब या दोन वर्गात असलेली विषमता कमी करणे.

३) वर्ष २०२२ पर्यंत १ करोड घरे आर्थिकदृष्ट्या दुर्बल वर्गाला उपलब्ध करून देणे.

४) रिटायर व शहीद सैनिकांच्या कुटुंबांना घरे मंजूर करून देऊन आर्थिक सहाय्य करणे.

५) विधवा महिला, विकलांग व्यक्ती व अल्पसंख्याकांना मदत करणे.

प्रधानमंत्री आवास योजनासाठी लाभार्थी पात्रता :

आवास योजना अंतर्गत घरकुल मिळण्यासाठी पुढील प्रमाणे पात्रता असणे आवश्यक आहे.

१) **कौटुंबिक स्थिती :** पती, पत्नी आणि अविवाहित मुलांचे कुटुंब हे प्रधानमंत्री आवास योजनेअंतर्गत निर्धारित केलेल्या मापदंडानुसार घरे मानले जाते. या योजनेअंतर्गत लाभार्थी अर्ज करणाऱ्या लाभार्थीकडे भारताच्या कोणत्याही भागात त्यांच्या नावावर किंवा त्यांच्या कुटुंबातील कोणत्याही सदस्याच्या नावावर पक्के घर नसावे.

२) घराची मालकी : २१ चौरस मीटरपेक्षा कमी पक्के घर असलेल्या लोकांना सध्याच्या प्रधानमंत्री आवास योजनेमध्ये समावेश केले जाऊ शकते.

३) वैवाहिक स्थिती : विवाहित जोडप्यांच्या बाबतीत पती पत्नीपैकी एक किंवा दोघेही एकत्र मालकीमध्ये एकाच घरासाठी पात्र असतील, जर त्यांनी योजनेअंतर्गत कुटुंबाच्या उत्पन्नाचा पात्रतेचा निकासाची पूर्तता केली असेल.

४) श्रेणी : ई. डब्ल्यू. एस. (EWS) श्रेणीतील लाभार्थी मिशनच्या चारही अनुलंबामध्ये पात्र आहे तर LIG/MIG श्रेणी केवळ मिशनच्या (CLSS) घटकांतर्गत पात्र आहे. एस. सी. व एस. टी.तसेच ओ.बी.सी. प्रवर्गातील लोक EWS आणि LIG मधील महिला देखील प्रधानमंत्री आवास योजनेअंतर्गत लाभ घेण्यास पात्र आहे.

सन २०२३ मध्ये प्रधानमंत्री आवास योजनेची प्रगती :

तक्ता क्र. २

अ. क्र.	राज्य	लक्ष्य	राज्याने मंजूर केलेली घरे	२४ मार्च २०२३ पर्यंत पूर्ण झालेली घरे
१	अरुणाचल प्रदेश	३८,३८४	३६,२५५	१२,५५५
२	आसाम	२०,८४,०७०	१८,२९,९७२	१०,९६,५७१
३	बिहार	३८,६४,५६५	३७,०३,९३४	३५,१८,०३४
४	छत्तीसगढ	११,७६,१५०	११,७६,०६१	८,५५,३४९
५	गोवा	१,७०७	२५७	१४३
६	गुजरात	६,३३,७७२	५,८०,८६९	४,०४,६१०
७	हरियाणा	३०,७८९	२९,३४१	२४,२७७
८	हिमाचल प्रदेश	१५,४८३	१५,४५१	१२,२५६
९	जम्मू व काश्मीर	२,०१,२३०	१,९९,४५४	१,३९,५०२
१०	झारखंड	१६,०३,२६८	१५,९२,८२४	१४,७०,०९१
११	केरळ	४२,२१२	३५,२३१	२७,८९८
१२	मध्य प्रदेश	३७,७६,५८४	३७,५८,२१८	३३,२३,१०६
१३	महाराष्ट्र	१४,७१,३५९	१४,१३,४२३	१०,२८,८४७
१४	मणिपूर	४६,१६६	४३,३०८	२०,०२०
१५	मेघालय	८०,८४८	७०,११३	३५,१७१
१६	मिझोरम	२०,५१८	२०,५१२	६,५२४
१७	नागालँड	२४,७७५	२२,९८७	५,८७३
१८	ओरिसा	२६,९५,८३७	२६,५१,८२२	१७,१७,३९९
१९	पंजाब	४१,११७	४०,३२२	२७,२७०

२०	राजस्थान	१७,३३,९५९	१७,२०,३७९	१६,०२,३६५
२१	सिक्कीम	१,४०९	१,४०९	१,१०२
२२	तामिळनाडू	८,१७,४३९	७,८०,११६	४,९९,८६२
२३	त्रिपुरा	२,८२,२३८	२,५६,१७५	२,११,९५६
२४	उत्तर प्रदेश	३४,७८,७१८	३४,७२,५१८	२६,०६,९३४
२५	उत्तराखंड	४७,६५४	४६,७७१	२७,९७६
२६	पश्चिम बंगाल	४६,१८,८४७	४५,७०,३४४	३३,९९,६२७
२७	अंदमान व निकोबार	१,६३१	१,३४७	१,१९५
२८	दादर व नगर हवेली	-	-	-
२९	दमन व दीव	६,८३१	६,३४३	३,४५१
३०	लक्ष्यद्विप	५३	५३	४४
३१	पुडुचेरी	-	-	-
३२	आंध्र प्रदेश	२,५६,२७०	२,४६,४२५	४८,८५७
३३	कर्नाटक	३,०७,७४६	१,८६,५७५	१,०१,६७८
३४	तेलंगाणा	-	-	-
३५	लडाख	१,९९२	१,९०६	१,४२९
	एकूण	२,९४,०३,६२१	२,८५,०९,९१५	२,२२,३१,९७२

स्त्रोत: गृहनिर्माण मंत्रालय, भारत सरकार.

प्रधानमंत्री आवास योजनेचा परिणाम :

प्रधानमंत्री आवास योजना ही देशातील गरीबी निर्मूलन, सामाजिक व आर्थिक स्थितीमध्ये सुधारणा करण्यासाठी सुरु करण्यात आली आहे. सदर योजनाचा पुढीलप्रमाणे परिणाम झालेला दिसून येतो.

१) **महिला सशक्तिकरण** : प्रधानमंत्री आवास योजनेअंतर्गत महिलांच्या नावाने घर उपलब्ध होत असल्यामुळे महिलांकडे बघण्याचा दृष्टिकोन बदलून महिला सक्षमीकरण स्थापीत होत आहे.

२) **मूलभूत सुविधा** : प्रधानमंत्री आवास योजनेमार्फत घरबांधणी बरोबर इतर सुविधा उपलब्ध करून देण्यात येत आहे. उदा. वीज कनेक्शन, गॅस कनेक्शन, स्वच्छ पाण्याची सोय इत्यादी यामुळे ग्रामीण भागातील राहणीमानात सुधारणा होण्यास मदत होत आहे.

३) **ग्रामीण अर्थव्यवस्थेला गती** : आवास योजना मोठ्या प्रमाणात सुरु करण्यात आल्यामुळे आर्थिक घटकांना प्रोत्साहन मिळून गुंतवणूक होत आहे, त्यांचा परिणाम होऊन रोजगार निर्मिती झाली, त्यामुळे लोकांना रोजगार मिळून ग्रामीण अर्थव्यवस्थेला गती प्राप्त झाली आहे.

४) **गरिबी निर्मूलन** : सरकारमार्फत गरीब लोकांना घर उपलब्ध होत असल्यामुळे एक प्रकारची आर्थिक सहाय्य मिळत आहे. त्यांच्या जीवनात सुधारणा होत आहे. गरीबी दूर करण्याचा आवास योजना मार्फत प्रयत्न सरकार करीत असल्याचे दिसून येतात.

५) **सकारात्मक पर्यावरणीय प्रभाव** : प्रधानमंत्री आवास योजनेअंतर्गत सक्षम घरबांधणी सोबत मूलभूत सुविधा उपलब्ध होत आहे. उदा. गॅस कनेक्शन, स्वच्छ पाणी पुरवठा, शौचालय इत्यादी त्यामुळे पर्यावरणावर सकारात्मक परिणाम होत आहे.

६) **सामाजिक समानता** : अनुसूचित जाती, अनुसूचित जमाती, मजदूर, अल्पसंख्या आणि विकलांग व्यक्ती इत्यादी दुर्बल घटकांना प्रधानमंत्री आवास योजनेमध्ये प्राथमिकता दिल्यामुळे समाजामध्ये सामाजिक न्याय प्रस्थापित होऊन समानता निर्माण होत आहे.

निष्कर्ष :

देशातील ग्रामीण भागातील घरांची कमतरता दूर करण्यासाठी सरकारने इंदिरा आवास योजनांची पुनर्रचना प्रधानमंत्री आवास योजना ग्रामीण भागामध्ये १ एप्रिल २०१६ पासून केली आहे. प्रधानमंत्री आवास योजनाचा कार्यक्रम भारतातील खेड्यापाड्यातील कच्च्या घरांच्या जागी पक्की घरे आणण्याचे उद्दिष्ट आहे. डिसेंबर २०२१ मध्ये मंत्रिमंडळाने प्रधानमंत्री आवास योजनाला मार्च २०२४ पर्यंत मुदतवाढ देण्यात मान्यता दिली आहे. प्रधानमंत्री आवास योजना ग्रामीण अंतर्गत २.९५ कोटी घरांच्या एकूण उद्दिष्ट पैकी २.८५ कोटी घरे राज्यांना वाटप करण्यात आली आहे. ७४,०८,०८६ पूर्णपणे महिलांच्या नावावर आणि १,२६,०८,६७३ पती आणि पत्नी नावावर संयुक्तपणे मंजूर करण्यात आले आहे. प्रधानमंत्री आवास योजनेमुळे महिला सक्षमीकरण, रोजगार निर्मिती, गरिबीमध्ये कमी, सामाजिक समता इत्यादी बाबींवर प्रभाव पडून ग्रामीण विकास होत आहे. देशाच्या विकासाच्या दृष्टिकोनातून प्रधानमंत्री आवास योजना एक गेम चेंजर म्हणून समोर येत आहे.

संदर्भ :

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**चंद्रपूर जिल्ह्यातील बदलते भूमी उपयोजन
२०११-२०२१**

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प्रस्तावना :

मानवाच्या ज्या मुलभूत अशा गरजा आहेत त्या म्हणजे हवा, पाणी व अन्न हे होय. पाण्याशिवाय काही तास तर अन्नाशिवाय काही दिवसच जिवंत राहू शकतो. यातील सर्व गरजांचा भूमीशी संबंध आहे. मानव त्याच्या गरजेनुसार भूमीचा वापर करित असतो. ज्या प्रकारची गरज असेल त्या पद्धतीने भूमी उपयोजना केले जाते. भूमी उपयोजन हे स्थळ काळ सापेक्ष असते. म्हणजेच भूमी उपयोजन हे स्थलानुसार व काळानुसार बदलत असते. म्हणजे एखाद्या ठिकाणी दहा वर्षांपूर्वी शेती केली जात असेल तर आज त्या ठिकाणी वस्ती निर्माण झाली असेल किंवा कार्यासाठी भूमीचा उपयोग केला जात असते. कोणत्याही प्रदेशाचा विचार करतांना भूमी हा महत्त्वाचा घटक मानला जातो. भूमी ही कोणत्याही प्रदेशातील अशी संपत्ती असते जे अस्थानांतरीत असते. भूमी उपयोगाचा अभ्यास हा कृती संभावता समजून घेण्यासाठी आवश्यक आहे. भूमीचा योग्य उपयोग करून घेतल्यास त्या प्रदेशाचा आर्थिक विकास होत असतो. मानवाच्या गरजानुसार भूगोलाच्या उपयोगात बदल होत असतो. तर एखादी भूभाग पूर्वी दुसऱ्या कार्याऐवजी दुसऱ्या कार्यासाठी वापरली जाते.

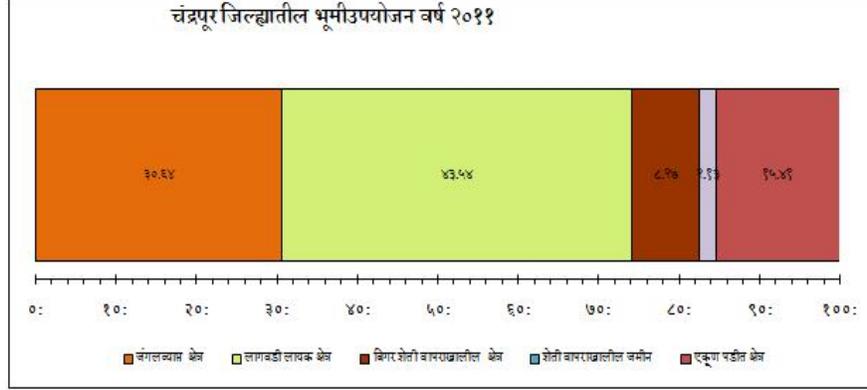
कुट शब्द : भूमी, उपयोजन, पिक क्षेत्र, लागवड, पडीक .

“विशिष्ट क्षेत्रात, विशिष्ट वेळेला, विशिष्ट ठिकाणी विकसित व अविकसित भूमीचा केला गेलेला वापर म्हणजे भूमी उपयोजन होय”. भूमी उपयोजनाची कार्ये हे भूमी, पाणी, हवा व मानव यांच्याशी संबंधीत असते. भूमी हे जर शरीर मानले तर पाणी हे त्यातील रक्त वाहिन्यांचे कार्य करते व त्यांच्यासाठी हवा ही अत्यंत आवश्यक असते आणि या तिन्ही घटकाचा उपयोग मानव आपल्या सुखासाठी करत असतो

चंद्रपूर जिल्ह्यातील जमिनीचा उपयोग हा फारच अनियोजित स्वरूपाचा आहे. जमिनीचा ज्या उद्देशाने उपयोग केला, हा जिल्हा औद्योगिक क्षेत्र म्हणून प्रसिद्ध आहे त्यामुळे, संशोधनाकरिता चंद्रपूर जिल्हा भूमिउपयोजन निवडण्यात आले आहे त्या उद्देशाने भूमीचे वर्गीकरण पुढील पाच विभागण्यात आले आहे.

२.१ स्थान व विस्तार :

चंद्रपूर जिल्ह्याचा अक्षांश विस्तार १९°२७'५०" उत्तर ते २०°४३'४७" अक्षांश व रेखांश विस्तार ७८°४८' पूर्व ते ८०°६०' पूर्ण रेखांश पर्यंत आहे. चंद्रपूर जिल्याचे भौगोलिक क्षेत्रफळ



स्रोत :- सामाजिक आर्थिक सर्वेक्षण चंद्रपूर जिल्हा २०११

स्रोत : सामाजिक आर्थिक सर्वेक्षण चंद्रपूर जिल्हा २०११ भूमी उपयोजना मध्ये एकूण पडीक जमिनीची आकडेवारी पाहल्यास असे लक्षात येते कि २०११ ला पडीक जमिनीचे क्षेत्र हे १७१०९६ हेक्टर (१५.४१%) एवढी होती तर २०२१ ला हे क्षेत्र १०६४२० हेक्टर (१२.१९%) एवढे होते. २०११ च्या तुलनेत २०२१ ला पडीक जमीन क्षेत्र मध्ये ३% घट झाली आहे म्हणजेच हि जमीन इतर कोणत्या उपयोजनासाठी वापरली गेली आहे.

एकूण भूमि उपयोजनमध्ये लागवडी लायकक्षेत्र ४८३४०३ हेक्टर (४३.५४%) एवढे होते जे २०२१ मध्ये ५०७९३२ हेक्टर (५८.१८%) एवढे वाढलेले दिसून येते हि वाढ (१४.६४%) एवढी आहे जी खूप महत्त्वपूर्ण आहे. तर चंद्रपूर जिल्ह्यात बिगर शेती वापराखालील क्षेत्र हे २०११ मध्ये ९१८१८ हेक्टर (८.२७%) एवढे होती जी २०२१ मध्ये ४६९६३ हेक्टर (५.३८%) इतके असून (२.८९%) ने कमी झाले आहे.

वरील आकडेवारी वरून असे लक्षात येते कि बिगर शेती वापर खालील जमीन टक्केवारी इतर घटकांच्या तुलनेत कमी आहे. २०११ च्या आकडेवारीचे अवलोकन किल्ले असता असे लक्षात येते कि शेती वापर खालील जमीन २३६५४ हेक्टर (२.१३%) एवढी होती. जी २०२१ ला ४६९६३ हेक्टर (५.३८%) एवढी होती म्हणजेच २०११ च्या तुलनेत २०२१ ला शेती वापर खालील जमिनीत (३.२५%) येवढी वाढ झाली आहे. जी खूप जास्त आहे म्हणजेच कृषी शेतात वाढ झाली आहे.

चंद्रपूर जिल्ह्यातील भूमी उपयोजन वर्ष २०२१

अनु. क्र.	क्षेत्र	क्षेत्र हेक्टरमध्ये	टक्केवारी
१	जंगल व्यास क्षेत्र	१६८४२०	१८.८७
२	एकूण पडीतक्षेत्र	१०६४२०	१२.१९
३	लागवडी लायक क्षेत्र	५०७९३२	५८.१८
४	बिगर शेती वापराखालीलक्षेत्र	४६९६३	५.३८
५	शेती वापराखालील जमीन	४६९६३	५.३८
	एकूण	८७२९९८	१००%

स्रोत : सामाजिक आर्थिक सर्वेक्षण चंद्रपूर जिल्हा २०११

निष्कर्ष :

एकंदरीतच लागवडी खालील क्षेत्र हे २०११ व २०२१ ला जास्त आहे . तर जंगलव्याप्त क्षेत्र ही २०११ च्या तुलनेत २०२१ ला कमी झाले आहे. एकूण पडीक जमिनीच्या शेतात दोन्ही कालावधीमध्ये अल्प बदल झाला आहे. शेती वापराखालील जमीन व बिगर शेती वापराखालील क्षेत्र हे २०११ व २०२१ ला इतर घटकांच्या तुलनेत अल्प टक्केवारी दिसून येते

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भारतातील आरोग्य पायाभूत सुविधांचा मानवी विकासावरील प्रभाव

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सारांश :

२१ व्या शतकामध्ये राजकीय, आर्थिक, सामाजिक, शैक्षणिक अशा सर्वच स्तरांवर मानव विकास निर्देशांकाचे महत्त्व आहे. मानव विकास ही एक व्यापक संकल्पना असून यामध्ये मानवाच्या सर्वांगीण कल्याणाचा विचार महत्त्वाचा आहे. आरोग्य हे राहणीमानाशी तर शिक्षण हे जीवनाच्या गरजा पूर्ण करण्याशी संबंधित आहे. आरोग्य व शिक्षण या दोन्हीमुळे मानवी शक्ततांमध्ये वाढ होते जी विकासाशी संबंधित आहे. मानव विकास केवळ राष्ट्रीय उत्पादनावरून न मोजता त्याला लोक केंद्रित (लोकाभिमुख) केले जावे, ही यामागची भूमिका होती. मानवी विकासासाठी विविध घटक कारणीभूत असले तरी त्यात सामाजिक पायाभूत सुविधा महत्त्वाची भूमिका बजावतात. सामाजिक पायाभूत सुविधांच्या निर्मितीसाठी प्रयत्न करणे हे कोणत्याही सरकारचे सर्वात महत्त्वाचे प्राधान्य असते. आरोग्यविषयक पायाभूत सुविधा हे देशातील आरोग्य सेवा धोरण आणि कल्याणकारी यंत्रणेला चालना देण्यासाठी महत्त्वाचे मार्गदर्शक आहे. संपूर्ण देशभरात आरोग्य सेवा सुविधा उपलब्ध करून देण्यावर भर दिला जातो. उत्पादनक्षम आणि अर्थपूर्ण पद्धतीने सार्वजनिक आरोग्य उपक्रमांच्या वितरणासाठी पायाभूत सुविधांचे वर्णन केले गेले आहे. आरोग्य पायाभूत सुविधांचे पाच घटक आहेत. कुशल कर्मचारी, एकात्मिक इलेक्ट्रॉनिक माहिती प्रणाली, सार्वजनिक आरोग्य संस्था, संसाधने आणि संशोधन. जेव्हा लोक आरोग्याच्या पायाभूत सुविधांच्या विकासाकडे लक्ष देत आहेत, तेव्हा या पैलूंच्या विकासावरही लक्ष केंद्रित करण्याची गरज आहे. हा अभ्यास भारतातील विविध राज्यांच्या मानवी विकास निर्देशांकावर (HDI) शासन, आरोग्य आणि शिक्षण यासारख्या सामाजिक पायाभूत सुविधांच्या योगदानाचे मूल्यमापन करण्याचा प्रयत्न आहे.

कुट शब्द : आरोग्य पायाभूत सुविधा, सार्वजनिक आरोग्य संस्था, आरोग्य सेवा धोरण, मानव विकास निर्देशांक.

प्रस्तावना :

देशाचे कल्याण हे त्याच्या जीडीपीच्या आधारावर ठरवले जातेच असे नाही. केवळ आर्थिक निर्देशक असण्याने कल्याण किंवा मानवी विकासाचे खरे मूल्य दिसून येत नाही. तर आर्थिक व्यतिरिक्त विविध घटक विचारात घेतले पाहिजेत. मानव विकास निर्देशांक (HDI) हा

सर्वतोपरी योग्य नसला तरी एखाद्या देशातील मानवी विकास किंवा कल्याणाचा एक कार्यक्षम उपाय मानला जातो. UNDP ने केलेली मानवी विकासाची व्याख्या ही मूलभूत शिक्षण आणि मानवी हक्कांसह निरोगी जीवन जगण्यासाठी लोकांची निवड आणि क्षमता वाढवण्याची प्रक्रिया होय. तथापि, मानवी विकासाची पातळी केवळ सर्व देशांमध्येच बदलत नाही तर विविध घटकांमुळे देशांतही बदलते. आरोग्य सामाजिक पायाभूत सुविधा ही मानवी विकासात महत्त्वाची भूमिका बजावणाऱ्या घटकांपैकी एक आहे. सामाजिक पायाभूत सुविधा म्हणजे सर्व अपरिहार्य सुविधांच्या एकत्रीकरणाशिवाय दुसरे काहीही नाही ज्याशिवाय मानवी विकास होऊ शकत नाही. ज्यावेळी सामाजिक पायाभूत सुविधांचा विचार केला जाऊ शकतो त्यावेळी सामाजिक सेवांना समर्थन देतात व त्या सुविधा किंवा संस्था तयार करणे आणि त्यांची देखभाल करणे. जसे - रुग्णालये, नर्सिंग होम इत्यादी.

संशोधन साहित्याचा आढावा :

१) सर्वसाधारण सामाजिक आधार संरचना भांडवल (वरकड भांडवल) ही संज्ञा सर्वप्रथम एच. डब्ल्यू. सिंगर (H. W. Singer) यांनी वापरलेली दिसून येते. आर्थिक विकासासंबंधी रॅग्र नर्क्स, डब्ल्यू. डब्ल्यू. रोस्टोव, अल्बर्ट हर्षमन व रोजेन्सटीन रोडान यांनी जे विविध सिद्धांत मांडले त्यात आर्थिक विकासासाठी पायाभूत सुविधा हा मुख्य मुद्दा होता. परंतु त्याचा उल्लेख पायाभूत सुविधा असा न करता सामाजिक आधार संरचना भांडवल (Social Overhead Capital) असा केलेला दिसून येतो.

२) आर्थिक विकासासाठी उत्प्रेरक म्हणून पायाभूत सुविधांच्या भूमिकेला महत्त्व दिले आहे; जे संसाधनांच्या सुलभतेत मदत करू शकते आणि धोरणांचा प्रभाव वाढवू शकते. (अशौअर - १९९०, वर्ल्ड बँक-१९९४).

३) पायाभूत सुविधा म्हणजे शालेय शिक्षण, वैद्यकीय सेवा, स्थानिक क्षेत्र सुधारणे, वेतन प्रसार, काम आणि सामाजिक सरकारी सहाय्य या साधनांच्या संदर्भात संसाधनांची बेरीज आहे. पायाभूत सेवा विविध दृष्टीकोनातून व्यक्तींवर प्रभाव टाकतात. व्यक्ती अशा सेवांचा वापर त्यांच्या घरांना उबदार आणि प्रकाश देण्यासाठी, वस्तूंचे वितरण आणि उत्पादन करण्यासाठी आणि एकमेकांशी बोलण्यासाठी करतात. पायाभूत सुविधांची सुलभता (वाहतूक, कच्च्या सामग्री) ही व्यावसायिक क्षेत्रांमध्ये पूर्ण झालेल्या वस्तूंच्या अभिसरणासाठी आवश्यक असते म्हणून व्यवसायाच्या फायद्यावर आणि तीव्रतेवर प्रभाव पाडते. (जेकोबी - २००२).

४) आर्थिक आणि सामाजिक पायाभूत सुविधा विकसित आणि अविकसित दोन्ही देशांमध्ये वाढ आणि विकासासाठी आधार म्हणून कार्य करते. (फॅमिलोनी - २००६).

५) दक्षिण आशियावर आधारित अभ्यासातून, पायाभूत सुविधांमध्ये वाढ झाल्यास उत्पादनात लक्षणीय वाढ होऊ शकते. तसेच मानवी भांडवल, श्रमशक्ती, आंतरराष्ट्रीय व्यापार आणि सकल देशांतर्गत भांडवल निर्मिती सोबत पायाभूत सुविधा आणि उत्पादन यांच्यात दीर्घकालीन समतोल संबंध आहे. (साहू आणि डॅश - २०१२).

अभ्यासाची उद्दिष्टे व समंक स्रोत :

संशोधनाच्या अभ्यासासाठी भारतातील विविध राज्यांमधील मानवी विकासातील फरकाचा अभ्यास, आरोग्य पायाभूत सुविधांमध्ये खाजगी क्षेत्राच्या योगदानाचा अभ्यास, आरोग्य पायाभूत सुविधांचे निर्देशक अभ्यासणे व भारतातील विविध राज्यांमध्ये मानवी विकासावर आरोग्य सामाजिक पायाभूत सुविधांच्या प्रभावाचे मूल्यांकन करणे इत्यादी उद्दिष्टे आहे. भारतातील विविध राज्यांमधील मानवी विकासावर सामाजिक पायाभूत सुविधांच्या प्रभावाचे मूल्यांकन करण्यासाठी शासन व आरोग्य पायाभूत सुविधा या चलांचा समावेश केला आहे. या चलांचा वापर करण्यामागील तर्क आहे की, विकासाचा फायदा सर्व लोकांना आणि संपूर्ण देशाला होतो; हे सुनिश्चित करण्यासाठी न्याय्य आणि प्रभावी शासन महत्वाचे आहे. याशिवाय, मानवी क्षमता विकसित करण्यासाठी आरोग्याच्या पायाभूत सुविधा आवश्यक आहेत. मानवी क्षमता केवळ समाजाची उत्पादक क्षमता वाढवत नाही तर जीवनमान सुधारण्यासही हातभार लावते. आरोग्य पायाभूत सुविधांवरील आकडेवारी भारत सरकारचे आरोग्य आणि कुटुंब कल्याण मंत्रालय, राष्ट्रीय ग्रामीण आरोग्य अभियान व राष्ट्रीय मानव विकास अहवालातून माहिती संकलित करण्यात आली आहे.

गृहीतके :

- १) भारतातील राज्यनिहाय मानव निर्देशांकात भिन्नता आहे.
- २) मानवी विकासाचा आरोग्य सामाजिक पायाभूत सुविधांशी सकारात्मक संबंध आहे.

अभ्यासाचे महत्व:

नवीन आर्थिक धोरणाची प्रक्रिया अधिक गतीमान करतांना आणि या प्रक्रियेपासून अधिक लाभ मिळविण्यासाठी देशाच्या अंतर्गत पातळीवर पायाभूत सुविधांचे मजबूतीकरण आवश्यक आहे. त्यासाठी विविध राष्ट्रांत, राज्यात, विभागात वाहतूक, दळणवळण, बँक, शिक्षणसंस्था, आरोग्यसंस्था यासारखे घटक पूरेशा प्रमाणात उपलब्ध पाहिजेत. तरच, आंतरराष्ट्रीय पातळीवरील परकीय गुंतवणूक आकर्षित करून देशाची आर्थिक वृद्धी साध्य करता येईल. २०४५ पर्यंत विकसित भारत बनविण्याचे स्वप्न पायाभूत सोयींच्या विकासाद्वारे साधता येईल. त्यासाठी पायाभूत सोयींच्या निर्मितीवर अधिक भर देण्याची आवश्यकता पंतप्रधान यांनी व्यक्त केली आहे. पायाभूत सुविधांचा आर्थिक विकास संयुक्त व प्रत्यक्ष आणि अप्रत्यक्ष संबंध असतो. तसेच पायाभूत सुविधांची वाढ आणि अर्थव्यवस्थेचे राष्ट्रीय उत्पन्न यांच्यात सकारात्मक संबंध आहे. पायाभूत सुविधा अधिक उत्पादक क्रियाकलाप, जीवनाचा दर्जा सुधारणे आणि अर्थव्यवस्थेतील उच्च स्तरावरील उत्पन्न किंवा उत्पादन सुलभ करण्यासाठी अर्थव्यवस्थेसाठी समर्थन प्रणाली म्हणून कार्य करते.

मानव विकास निर्देशांक :

मानव विकास अहवालानुसार (१९९०), मानव विकास म्हणजे लोकांना मिळणाऱ्या संधीचा परीघ मोठा करण्याची एक प्रक्रिया होय. मानव विकास निर्देशांक हा स्थूलमानाने आयुर्मान, ज्ञान प्राप्ती व चांगले राहणीमान या तीन सामाजिक घटकांची सरासरी होय. या

निर्देशांकाचे मूल्य ते १ च्या दरम्यान असून निर्देशांक जेवढा १ या अंकाच्या जवळ असेल तेवढा देशाचा विकास चांगला असतो. मानकांचे अधिकतम व न्यूनतम मूल्य विचारात घेण्याऐवजी चांगला प्रतिसाद मूल्य, कमी प्रतिसाद मूल्य व जिल्हास्तरीय प्रतिसाद मूल्य विचारात घेतले होते. अशा भारतातील राज्यांत वेगवेगळ्या स्तरावर वेगवेगळी मानके विचारात घ्यावयाचे महत्वाचे कारण म्हणजे, संबंधित मानकाची सांख्यिकीय आकडेवारी उपलब्धता होय. आयुर्मान, साक्षरता, प्रतिव्यक्ति उत्पन्न, लिंगभेद विरहित सामाजिक सुरक्षितता, बालमृत्युदर यासारख्या निर्देशांकाच्या आधारावर मानव विकास निर्देशांकाचे मापन करून २०११ मध्ये भारताचा दुसरा मानव विकास अहवाल प्रसिद्ध झाला.

तक्ता क्र. १ - भारतातील प्रमुख राज्यांचा मानव विकास निर्देशांक

राज्य	१९८१		१९९१		२००१		२०११	
	गुणांक	क्रम	गुणांक	क्रम	गुणांक	क्रम	गुणांक	क्रम
केरळ	०.५००	१	०.५९१	१	०.६३८	१	०.७९०	१
पंजाब	०.४११	२	०.५३७	२	०.५३७	२	०.६०५	४
तमिळनाडू	०.३४३	७	०.४६६	३	०.५३१	३	०.५७०	६
महाराष्ट्र	०.३६३	३	०.४५२	४	०.५२३	४	०.५७२	५
हरियाणा	०.३६०	५	०.४४३	५	०.५०९	५	०.५५२	७
गुजरात	०.३६०	४	०.४३१	६	०.४७९	६	०.५२७	८
कर्नाटक	०.३४६	६	०.४१२	७	०.४७८	७	०.५१९	९
प. बंगाल	०.३०५	८	०.४०४	८	०.४७२	८	०.४९२	१०
राजस्थान	०.२५६	१२	०.३४७	९	०.४२४	९	०.४३४	१३
आंध्रप्रदेश	०.२९८	९	०.३७७	९	०.४१६	१०	०.४७३	११
ओरिसा	०.२६७	११	०.३४५	१२	०.४०४	११	०.३६२	१५
मध्यप्रदेश	०.२४५	१४	०.३२८	१३	०.३९४	१२	०.३७५	१६
उत्तरप्रदेश	०.२५५	१३	०.३१४	१४	०.३८८	१३	०.३८०	१४
आसाम	०.२७२	१०	०.३४८	१०	०.३८६	१४	०.४४४	१२
बिहार	०.२३७	१५	०.३०८	१५	०.३६७	१५	०.३६७	-
भारत	०.३०२	-	०.३८१	-	०.४७२	-	०.४६७	-

स्रोत : राष्ट्रीय मानव विकास अहवाल (२००१, २०११).

प्रमुख राज्यांचे मानव विकास निर्देशांक मूल्य लक्षात घेता केरळ, पंजाब, तमिळनाडू आणि महाराष्ट्र ह्या चार राज्यांचे मानव विकास निर्देशांक मूल्य भारताच्या मुल्यांपेक्षा जास्त असल्याचे दिसून येते. भारतातील राज्यांचा मानव विकासाचा विचार करता महाराष्ट्र राज्य हे राष्ट्रीय पातळीवरील पुढारलेले राज्य असल्याचे दिसून येते. प्रतिव्यक्ति उत्पन्न इतर राज्यांच्या तुलनेत जास्त असले तरी दारिद्रेपेखालील लोकसंख्येचे प्रमाण अन्य राज्यांपेक्षा जास्त आहे. याचाच अर्थ गरीबीचे प्रमाण जास्त असण्याचे कारण म्हणजे रोजगार उपलब्धतेचे प्रमाण कमी आहे. **भारतातील सामाजिक पायाभूत सुविधा :**

कृषी, उद्योग आणि सेवा क्षेत्राच्या विकासासाठी पायाभूत सुविधा महत्वाच्या आहेत.

१९९१ मध्ये भारताच्या आर्थिक सुधारणांपासून, सरकारने पायाभूत सुविधांच्या विकासावर लक्षणीय भर दिला आहे. पायाभूत सुविधांचे दोन भागात वर्गीकरण करता येते. पहिले आर्थिक पायाभूत सुविधा (ऊर्जा, वाहतूक आणि दळणवळण) आर्थिक पायाभूत सुविधांचा अर्थव्यवस्थेतील उत्पादन आणि वितरण प्रक्रियेवर थेट सकारात्मक प्रभाव पडतो. ही पायाभूत सुविधा आर्थिक व्यवस्थेला थेट आधार देते. दुसरे, सामाजिक पायाभूत सुविधा (शिक्षण, आरोग्य आणि प्रशिक्षण). यामध्ये मानवी संसाधनांची गुणवत्ता वाढवणाऱ्या सर्व सेवा प्रदान करणे समाविष्ट आहे. सामाजिक पायाभूत सुविधांचा आर्थिक व्यवस्थेवर थेट प्रभाव पडत नाही; तथापि काही सामाजिक उद्दिष्टे साध्य करून त्याचा अर्थव्यवस्थेवर अप्रत्यक्ष परिणाम होतो.

आरोग्य : सामाजिक पायाभूत सुविधा व सद्यःस्थिती :

आरोग्याची व्याख्या केवळ आजारपणाची अनुपस्थितीच नाही तर एखाद्याच्या पूर्ण क्षमतेपर्यंत पोहोचण्याची क्षमता देखील आहे. आरोग्य ही देशाच्या संपूर्ण वाढ आणि विकासाशी संबंधित सर्वसमावेशक प्रक्रिया आहे. आरोग्य पायाभूत सुविधांमध्ये डॉक्टर, परिचारिका, रुग्णालये आणि विविध पॅरामेडिकल व्यावसायिक, रुग्णालयांमध्ये आवश्यक उपकरणे व खाटा आणि औषध यांचा समावेश आहे. आरोग्याच्या पायाभूत सुविधांचा विकास करून, एक देश वस्तू आणि सेवांच्या उत्पादनासाठी निरोगी मनुष्यबळ सुनिश्चित करू शकतो. हे तेव्हाच शक्य आहे जेव्हा आरोग्याच्या पायाभूत सुविधा सर्वांना उपलब्ध असतील. भारताने आरोग्याच्या चांगल्या पायाभूत सुविधांची उभारणी करून लोकांच्या आरोग्याच्या सुधारणेत लक्षणीय प्रगती केली आहे. तद्वतच आरोग्य पायाभूत सुविधांचा विस्तार केला आहे.

तक्ता क्र. २ भारतातील सार्वजनिक आरोग्य पायाभूत सुविधा (१९५१-२०१८)

निर्देशक	१९५१	१९८१	२०००	२०१८
रुग्णालये	२६९४	६८०५	१५८८८	२५७७८
खाटा (सरकारी)	११७०००	५०४५३८	७१९८६१	७१३९८६
प्राथमिक आरोग्य केंद्रे (PHCs)	७२५	९११५	२२८४२	२५७४३
उप-केंद्रे (Sub-centers)	-	८४७३६	१३७३११	१५८४१७
सामुदायिक आरोग्य केंद्रे (CHCs)	-	७६१	३०४३	५६२४
दवाखाने	६६००	१६७४५	२३०६५	२७९५१

स्त्रोत- आरोग्य आणि कुटुंब कल्याण मंत्रालय, भारत सरकार, नवी दिल्ली, २००५: www.cbidhs.nic.in. स्वातंत्र्यानंतर, आरोग्य सेवांच्या भौतिक तरतूदीमध्ये लक्षणीय वाढ झाली आहे. १९५१ - २०१८ या कालावधीत दवाखाने आणि रुग्णालयांची संख्या ९,२९४ वरून ५३,७२९ झाली आहे; अॅलोपॅथिक डॉक्टरांची संख्या ६२,००० वरून ११.५ लाख झाली आहे आणि नर्सिंग कर्मचारी १८,००० वरून ३० लाख झाले आहेत. ४०९५ आयुष्य रुग्णालये असून ८ लाख नोंदणीकृत डॉक्टर्स आहेत.

नीती आयोगाच्या अहवालानुसार, देशात एका लाखामागे २२ सर्जनची गरज असतांना फक्त ८.८ सर्जन, १९ वर्षाखालील बालकांसाठी एका लाखामागे ३२ बाल-रोगतज्ज्ञांची गरज

असतांना ११.२ बाल - रोगतज्ज्ञ उपलब्ध आहेत. WHO च्या निकषानुसार, एका लाखामागे १० प्रसूती तज्ज्ञांची गरज असून सध्या देशात लाखामागे फक्त ४.२ प्रसूतीतज्ज्ञ आहेत. भारतात एकूण उपलब्ध सरकारी दवाखान्यांपैकी ७४ टक्के दवाखाने ग्रामीण तर २६ टक्के शहरी भागात आहेत. रिझर्व्ह बँकेद्वारे प्रकाशित अहवाल (२०२२) नुसार, भारतामध्ये ६,९१,६२७ रुग्ण खाटांची संख्या सार्वजनिक दवाखान्यांमध्ये उपलब्ध आहेत. यापैकी फक्त ३५ टक्के ग्रामीण तर ६५ टक्के शहरी भागात आहेत. सार्वजनिक दवाखान्यांमध्ये उपलब्ध खाटांचा विचार करता भारतामध्ये सरासरी ४१ रुग्णसंख्या असून यापैकी ग्रामीण भागात फक्त १६ तर शहरी भागांमध्ये १०० रुग्ण खाटांची संख्या उपलब्ध आहेत. भारतामध्ये ३६,८२६ शासकीय दवाखान्यांची संख्या उपलब्ध असून यापैकी ७४ टक्के ग्रामीण तर २६ टक्के शहरी भागात आहेत.

आरोग्य पायाभूत सुविधांमध्ये खाजगी क्षेत्राची भूमिका :

देशातील जनतेला आरोग्यविषयक सुविधा पुरविण्याची जबाबदारी केंद्र आणि राज्य शासनाची असल्याने जास्तीत जास्त खर्च शासनाने करणे अपेक्षित आहे. खाजगी क्षेत्र भारतातील ७० टक्के पेक्षा जास्त रुग्णालये चालवते ते रुग्णालयातील सुमारे दोन-पंचमांश खाटांवर नियंत्रण ठेवतात. हेच खाजगी क्षेत्र जवळपास ६० टक्के दवाखाने चालवते ते ८० टक्के बाह्यरुग्ण आणि ४६ टक्के आंतररुग्णांना आरोग्य सेवा देतात. अलिकडच्या वर्षांत, खाजगी क्षेत्राने वैद्यकीय शिक्षण आणि प्रशिक्षण, वैद्यकीय तंत्रज्ञान आणि निदान, फार्मास्युटिकल उत्पादन आणि वितरण, रुग्णालय विकास आणि वैद्यकीय सेवा तरतुदींमध्ये महत्त्वपूर्ण भूमिका बजावली आहे. २००१-०२ मध्ये २२ लाख लोकांना रोजगार देणारे १३ लाखांहून अधिक वैद्यकीय उद्योग होते आणि त्यापैकी ८० टक्के पेक्षा जास्त एकल - व्यक्तीच्या मालकीचे आहेत. जगातील काही प्रमुख देशांद्वारे २०२१ मध्ये करण्यात आलेला आरोग्यावरील आवश्यक आणि ऐच्छिक खर्च खालीलप्रमाणे:

तक्ता क्र. ३ - जगातील प्रमुख देशातील आरोग्यावरील सार्वजनिक आणि खाजगी खर्च (जीडीपी- टक्के) २०२१

देश	सार्वजनिक खर्च	खाजगी खर्च
अमेरिका	१५.९५	२.८७
जर्मनी	११.०७	१.८
इंग्लंड	९.९	२.०४
कॅनडा	८.७	२.९७
जपान	९.३	१.८५
ऑस्ट्रेलिया	७.६१	३.०३
द. आफ्रिका	४.३	४.७२
मेक्सिको	३.३	२.९४
चीन	३.०	२.३५
भारत	१.०	२.०

स्त्रोत : राष्ट्रीय आरोग्य लेखा अंदाज - २०१८-१९ (एमएचएफडब्लू, २०२२).

भारतात २००५ मध्ये राष्ट्रीय ग्रामीण आरोग्य अभियानाची अंमलबजावणी केल्यानंतर, आरोग्यावरील खर्च जीडीपीच्या २-३ टक्क्याने वाढविण्याची योजना होती. परंतु, जीडीपीच्या टक्केवारीनुसार खर्चात जरी वाढ झाली असली तरी ती लक्षित मूल्यापेक्षा कमी असल्याचे दिसून येते. जागतिक पातळीवर विचार करता शासनाद्वारे करण्यात आलेला आवश्यक खर्च हा ऐच्छिक खर्चापेक्षा अधिक आहे. फक्त दक्षिण आफ्रिका आणि भारत या देशांमध्येच ऐच्छिक खर्च हा शासनाच्या खर्चापेक्षा अधिक आहे. तसेच अमेरिका, जर्मनी, इंग्लंड, कॅनडा, जपान आणि ऑस्ट्रेलिया या देशांमधील आरोग्यावरील खर्च हा जीडीपीच्या दहा टक्क्यांपेक्षा जास्त आहे. तर दक्षिण आफ्रिका, मेक्सिको, चीन आणि भारत या देशांमधील आरोग्यावरील खर्च १० टक्क्यांपेक्षा कमी आहे. आकडेवारीवरून असे आढळून येते की, इतर अनेक देशांच्या तुलनेत भारत आरोग्यावर खूप कमी खर्च करतो.

आरोग्य पायाभूत सुविधांचे निर्देशक :

देशाच्या आरोग्य स्थितीचे मूल्यांकन करण्यासाठी बालमृत्यू आणि माता मृत्यूदर, आयुर्मान आणि पोषण पातळी, तसेच संसर्गजन्य आणि गैर-संसर्गजन्य आजाराने प्रमाण यासारख्या निर्देशकांचा वापर केला जाऊ शकतो. आरोग्य क्षेत्रातील सरकारच्या भूमिकेचा विस्तार व्हायला हवा. उदा. एकूण जीडीपीच्या ३.७ टक्के आरोग्यसेवा खर्चाचा वाटा असल्याचे आकडेवारीवरून दिसून आले आहे. इतर विकसित आणि विकसनशील देशांच्या तुलनेत हे प्रमाण खूपच कमी आहे. सध्या, २० टक्के पेक्षा कमी लोक सार्वजनिक आरोग्य सुविधा वापरतात. एका सर्वेक्षणानुसार, फक्त ३८ टक्के PHC मध्ये आवश्यक डॉक्टर आहेत आणि फक्त ३० टक्के PHC मध्ये पुरेशा प्रमाणात औषधे आहेत. आरोग्यस्थितीची सांख्यिकीय माहिती खालीलप्रमाणे.

तक्ता क्र. ४ - भारतातील आरोग्यविषयक स्थिती निर्देशक

निर्देशक	NFHS-1 (९२-९३)	NFHS-2 (९८-९९)	NFHS-3 (०५-०६)	NFHS-4 (१५-१६)	NFHS-5 (१९-२१)
प्रजनन दर	३.४	२.९	२.७	२.२	२
लिंग गुणोत्तर	-	-	९१४	९१९	९२९
बालमृत्युदर (१००० जिवंत जन्मामागे)	७८.५	६७.६	५७	४०.७	३५.२
५ वर्षाखालील बालमृत्युदर (१००० जिवंत जन्मामागे)	१०९.३	९४.९	७४.३	४९.७	४१.९
गरोदर स्त्रिया १५-४९ वर्षे रक्तक्षय	५१.८	५७.९	५०.४	५२.२	५१.८
स्वच्छता सुविधा	-	१७.६	२९.१	४८.५	७०.२
स्वच्छ इंधन	-	-	२५.६	४३.८	५८.६

स्रोत - आर्थिक सर्वेक्षण (२०२२). (NFHS - National Family Health Survey).

सांख्यिकीय आकडेवारीवरून, १९९२-९३ ते २०१९ - २१ या कालावधीत जननदर ३.४ टक्के वरून २टक्के पर्यंत कमी झाला. मात्र तो पुरेसा आहे असे दिसत नाही. कारण भारत लोकसंख्येच्या बाबतीत जगात प्रथम क्रमांकावर आहे ही भूषणावह आणि आनंददायी बाब नाही. पाच वर्षांखालील बाल मृत्यूदरातही घट झाली असली, तरी ती पुरेशी आहे असे वाटत नाही. कारण तो दर ४ टक्के पेक्षा अधिक असणे ही चांगली गोष्ट नाही. १५-४९ वर्षे वयोगटातील गरोदर स्त्रियांतील रक्तक्षयाचे प्रमाण ५२टक्के पर्यंत स्थिर राहिले आहे. नायजेरिया, कोंगो, चीन यांच्याबरोबरच भारतातही सर्वात अधिक बालमृत्यूदर आहे. न्यूमोनिया, मलेरिया, डायरिया यांसारखे आजार आणि उच्च कुपोषण यामुळे बालमृत्यूचे प्रमाण अधिक आहे; ही प्रमुख कारणे आहेत.

जागतिक बँक अहवाल (२०१९) नुसार, २०१६ मध्ये जागतिक स्तरावर इतर राष्ट्रांच्या तुलनेत भारतातील लहान मुलांचे लसीकरण (घटसर्प, धनुर्वात व खोकला - DTP) प्रमाण ८९ टक्के असून हेच प्रमाण चीन, अमेरिका व श्रीलंका राष्ट्रांतील अनुक्रमे ८९, ९४ व ९९ टक्के एवढे आहे. तर आरोग्यावरील चालू खर्चाच्या खिशाबाहेरच्या खर्चाचे प्रमाण भारत, चीन, अमेरिका व श्रीलंका राष्ट्रांतील अनुक्रमे ६५, ३६, ११.१ व ५० टक्के एवढे आहे. याचाच अर्थ, इतर राष्ट्रांच्या तुलनेत भारत व आरोग्यावरील खिशाबाहेरचा खर्च व बालमृत्यू प्रमाणाच्या बाबतीत पुढे तर लसीकरण व सरकारी खर्चाच्या बाबतीत मागे असल्याचे निदर्शनास येते.

आरोग्य पायाभूत सुविधांची ग्रामीण-शहरी विभागणी :

भारतातील ७० टक्के लोकसंख्या ग्रामीण भागात राहते हे तथ्य असूनही, त्यातील केवळ एक पंचमांश रुग्णालये (खाजगी रुग्णालयांसह) ग्रामीण भागात आहेत. ग्रामीण भारतात दवाखान्यांची संख्या जवळपास निम्मी आहे. सरकारी रुग्णालयांमध्ये ७.१३ लाख खाटांपैकी ३० टक्के खाटा ग्रामीण भागात आहेत. परिणामी, ग्रामीण भागातील रहिवाशांना पुरेशा आरोग्यसेवा पायाभूत सुविधांचा अभाव आहे. यामुळे लोकांच्या आरोग्याच्या स्थितीत विषमता निर्माण झाली आहे. ग्रामीण भागात दर एक लाख लोकसंख्येमागे फक्त ०.३६ रुग्णालये आहेत, तर शहरी भागात तितक्याच लोकसंख्येसाठी ३.६ रुग्णालये आहेत. ग्रामीण भागात पीएचसी क्ष-किरण किंवा रक्त तपासणी सेवा देखील मिळत नाहीत; ज्या शहरवासीयांसाठी अत्यावश्यक वैद्यकीय सेवा मानल्या जातात. बिहार, मध्यप्रदेश, राजस्थान आणि उत्तरप्रदेश ही राज्ये आरोग्यसेवा पायाभूत सुविधांच्या बाबतीत मागे आहेत. अलिकडच्या वर्षांत ग्रामीण भागातील ज्यांना योग्य उपचार मिळत नाहीत अशा लोकांची टक्केवारी वाढली आहे. गावकऱ्यांना बालरोग, स्त्रीरोग, बधिरता किंवा प्रसूतीशास्त्र यासारख्या विशेष वैद्यकीय सेवांमध्ये प्रवेश नाही. ५३० मान्यताप्राप्त वैद्यकीय संस्था दरवर्षी सुमारे ५०,००० वैद्यकीय पदवीधर तयार करतात हे तथ्य असूनही, ग्रामीण भागात अजूनही डॉक्टरांची कमतरता आहे. यापैकी एक - पंचमांश डॉक्टर पदवीधारक चांगल्या आर्थिक संधींसाठी देश सोडून जातात, तर इतर अनेकांनी प्रामुख्याने शहरी भागात असलेल्या खाजगी रुग्णालयात काम करणे पसंत केले आहे. शहरी आणि ग्रामीण भागातील सर्वात गरीब २० टक्के भारतीय त्यांच्या उत्पन्नाच्या १२ टक्के आरोग्यसेवेवर खर्च करतात तर श्रीमंत फक्त २ टक्के खर्च करतात.

आरोग्य पायाभूत सुविधांचे मूल्यांकन :

१) सध्याची आरोग्य सेवा संस्था आणि मनुष्यबळाच्या असमान वितरणामुळे ग्रस्त आहे. भारतातील सुमारे ७० टक्के लोकसंख्या ग्रामीण भागात वास्तव्यास असून एकूण रुग्णालयांपैकी फक्त २० टक्के रुग्णालये तेथे आहेत. बहुतांश आधुनिक आरोग्य सुविधा फक्त शहरी भागातच उपलब्ध आहेत.

२) AIDS (अक्वायर्ड इम्यून डेफिशियन्सी सिंड्रोम), HIV (ह्युमन इम्युनो डेफिशियन्सी व्हायरस), आणि SARS (गंभीर तीव्र श्वसन सिंड्रोम) यांसारखे संसर्गजन्य आजार टाळण्यासाठी कार्यक्षम नियंत्रण पद्धतींनी अधिक लक्ष केंद्रित करणे आवश्यक आहे.

३) ग्रामीण आणि शहरी दोन्ही स्वच्छता व्यवस्था भयंकर आहेत. शहरी भागातील सुमारे ३० टक्के घरांमध्ये शौचालयाची सुविधा नाही; तर ग्रामीण भागात परिस्थिती आणखी वाईट आहे. स्वच्छताविषयक सुविधा सुधारणे ही लोकांच्या आरोग्याची अत्यावश्यक गरज आहे.

४) भारतात दरवर्षी ५०,००० वैद्यकीय पदवीधर निर्माण होत असले तरी, मनुष्यबळाची मोठी कमतरता आहे. सार्वजनिक क्षेत्रात योग्य आरोग्य आराखडा तयार करण्यात फारसे प्रभावी ठरले नाही. लोकांच्या आरोग्य सेवेच्या गरजा पूर्ण करण्यासाठी, सार्वजनिक आणि खाजगी क्षेत्रांनी अधिक जवळून काम करणे आवश्यक आहे. सरकारने या कमतरतांवर मात करण्यासाठी ठोस उपाययोजना केल्या पाहिजेत, कारण वाढीव उत्पादकता आणि आर्थिक वाढीसाठी सुधारित आरोग्य आवश्यक आहे.

५) भारतात राज्यनिहाय मानव विकास निर्देशांकात खूप भिन्नता आहे. प्रत्येक राज्यातील नैसर्गिक संसाधने, सरकारची धोरणे या कारणांमुळे मानव विकास निर्देशांकात भिन्नता दिसून येते.

मानवी विकासाचा आरोग्य पायाभूत सुविधांशी सकारात्मक संबंध आहे परंतु भारतातील शैक्षणिक पायाभूत सुविधांशी नकारात्मक संबंध आहे. हे परिणाम सूचित करतात की, आरोग्य पायाभूत सुविधांवरील सार्वजनिक गुंतवणूक त्याच्या अपेक्षित उद्दिष्टांमध्ये योगदान देत आहे. मात्र, शिक्षणाच्या पायाभूत सुविधांना आपले अपेक्षित उद्दिष्ट साध्य करता येत नाही. म्हणून असा निष्कर्ष काढू शकतो की, केवळ पायाभूत सुविधांमुळे आपल्याला उच्च मानवी विकास स्तरावर नेऊ शकत नाही. कार्यरत कार्यक्षमता, संख्येची पर्याप्तता, त्यांची अंमलबजावणी आणि देखभाल व कार्यक्षमता असणे तितकेच महत्त्वाचे आहे.

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शाश्वत शेतीचे ग्रामीण विकासात योगदान : संधी आणि आव्हाने

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सारांश:

ग्रामीण विकासात शाश्वत शेती ही महत्त्वपूर्ण भूमिका बजावते, कारण ती पर्यावरणीय स्थिरता, आर्थिक प्रगती, आणि सामाजिक समृद्धी साध्य करण्यास मदत करते. पारंपरिक शेतीतील समस्यांवर मात करत शाश्वत शेती पर्यावरणपूरक आणि दीर्घकालीन दृष्टिकोन प्रदान करते. शाश्वत शेतीत जैविक व सेंद्रिय उत्पादन, जल व मृदा संवर्धन, ऊर्जा कार्यक्षमता, आणि स्थानिक जैवविविधतेचा समावेश होतो. ही शेती पद्धती अन्नसुरक्षा, रोजगार निर्मिती, आणि ग्रामीण अर्थव्यवस्थेचा विकास यासाठी प्रभावी ठरते. आधुनिक तंत्रज्ञानाचा उपयोग, ठिबक सिंचन, सौर ऊर्जा, आणि क्लायमेट - स्मार्ट पद्धतींचा वापर करून उत्पादनक्षमता वाढवता येते. शासनाच्या राष्ट्रीय शाश्वत शेती अभियान, मृदा आरोग्य कार्ड योजना, आणि परंपरागत कृषि विकास योजना यांसारख्या योजनांनी ग्रामीण भागात शाश्वत शेतीचा प्रसार केला आहे. यामुळे केवळ शेतकऱ्यांचे उत्पन्न वाढत नाही तर ग्रामीण अर्थव्यवस्थेतील इतर व्यवसायांनाही चालना मिळते. हवामान बदल, शिक्षणाचा अभाव, तांत्रिक सुविधांची कमतरता, आणि पारंपरिक पद्धतींचा अडथळा ही आव्हाने आहेत त्यासाठी योग्य धोरणांची अंमलबजावणी, शेतकऱ्यांचे सक्षमीकरण, आणि आर्थिक पाठबळ मिळाल्यास शाश्वत शेती ग्रामीण विकासासाठी मोठा आधार ठरू शकते. शाश्वत शेती ग्रामीण विकासासाठी एक प्रभावी साधन आहे. ती शेतकऱ्यांना आर्थिक स्थैर्य, पर्यावरणीय संवर्धन, आणि सामाजिक प्रगतीसाठी सक्षम करते, ज्यामुळे ग्रामीण भागाचा सर्वांगीण विकास साध्य होतो. ग्रामीण भागात शाश्वत शेतीचा अवलंब करताना अनेक समस्या देखील निर्माण होतात ज्यामुळे ग्रामीण विकास साध्य करता येत नाही. ग्रामीण भागातील शेतकरी अज्ञानी असल्याने त्यांना तांत्रिक ज्ञानाबद्दल पुरेशी माहिती नसते, खर्चाचे व उत्पन्नाचे नियोजन कसे करावे, सरकारी धोरणाचा अभाव, धोरणाच्या अंमलबजावणी विषयी जागरूकता नसणे, सरकारी धोरणतील त्रुटी, बाजारपेठीतील स्पर्धा, दलालांची मध्यस्थी इत्यादी.

यासाठी शाश्वत शेती ग्रामीण विकासाच्या दृष्टीने किती महत्त्वाची आहे हे समजून घेणे महत्त्वाचे आहे.

कुट शब्द : आर्थिक स्थैर्य, पर्यावरणीय संवर्धन, शाश्वत विकास, जैवविविधता, सुरक्षित आरोग्य

प्रस्तावना :

ग्रामीण विकास हा देशाच्या सामाजिक आणि आर्थिक प्रगतीचा महत्त्वाचा भाग असून भारतासारख्या कृषिप्रधान देशात ग्रामीण अर्थव्यवस्थेचा मूळ आधार शेती आणि तिच्याशी संबंधित उद्योग विकास आणि शेती यांचा अविभाज्य व जवळचा संबंध आहे. वर्तमान शेती पद्धतींमुळे निसर्गावर पडणारा ताण, जमिनीची गुणवत्ता खालावणे, पाण्याचा अपव्यय, आणि हवामान बदल यांसारख्या समस्यांनी शेतकरी त्रासलेला आहे. त्यामुळे शाश्वत शेती ही ग्रामीण भागातील आर्थिक, पर्यावरणीय, आणि सामाजिक विकासासाठी एक उपयुक्त पर्याय म्हणून पुढे येत आहे. शाश्वत शेती म्हणजे नैसर्गिक संसाधनांचा समतोल राखत उत्पादन घेणारी शेती होय. शेती केवळ पर्यावरणपूरतीच मर्यादित नसून ती शेतकऱ्यांच्या आर्थिक स्वावलंबनासाठी देखील महत्त्वाची आहे. पारंपरिक शेतीच्या तुलनेत शाश्वत शेतीत नैसर्गिक खतांचा वापर, जलसंवर्धन, मातीची सुपीकता टिकवणे, आणि जैवविविधतेचे संरक्षण यावर भर दिला जातो. त्यामुळे ती शेतीतील नवनवीन समस्या सोडवण्याचा प्रभावी साधन म्हणून शाश्वत शेतीकडे पाहिले जाते. ग्रामीण भागातील लोकसंख्येचा मोठा हिस्सा शेतीवर अवलंबून आहे. शाश्वत शेती ग्रामीण विकासाला चालना देण्यास उपयुक्त ठरते. उत्पादनाचा दर्जा वाढवणे, स्थानिक बाजारपेठेचा विकास, शेतमालाला चांगला भाव मिळवून देणे, आणि रोजगाराच्या संधी उपलब्ध करणे याकरिता शाश्वत शेतीची ग्रामीण विकासात महत्वपूर्ण भूमिका आहे.

ग्रामीण विकासाचा अर्थ

ग्रामीण विकास म्हणजे ग्रामीण भागातील लोकांचे जीवनमान उंचावण्यासाठी आणि तेथील आर्थिक, सामाजिक, सांस्कृतिक, व पर्यावरणीय स्थिती सुधारण्यासाठी केलेले प्रयत्न. यातमध्ये ग्रामीण भागातील गरिबी कमी करणे, रोजगाराच्या संधी निर्माण करणे, पायाभूत सुविधा उभारणे, आणि सामाजिक न्याय प्रस्थापित करणे यावर भर दिला जातो. ग्रामीण विकास हा शाश्वत आणि सर्वसमावेशक असावा ज्यामुळे समाजाच्या प्रत्येक घटकाला प्रगतीच्या समान संधी प्राप्त होण्यास मदत मिळते.

ग्रामीण विकासाची उद्दिष्टे:

ग्रामीण विकासाचे मुख्य उद्दिष्ट ग्रामीण भागाचा सर्वांगीण आणि शाश्वत विकास साधणे हे आहे. पुढीलप्रमाणे ग्रामीण विकासाची प्रमुख उद्दिष्टे आहेत:

१. आर्थिक विकास:

शेती आणि शेतमाल प्रक्रिया संबंधित उद्योगांचा विकास करण्यात तसेच ग्रामीण अर्थव्यवस्थेत शेतीचा मोठा वाटा असल्याने उत्पादनक्षम शेती व पूरक उद्योग विकसित करणे. ग्रामीण भागातील शेतकरी व मजूर वर्गाना स्वयंरोजगाराची निर्मिती व्हावी यासाठी लघु व मध्यम उद्योग निर्मितीस प्रोत्साहन देण्याचा प्रयत्न करणे. शेती व बिगर शेती क्षेत्रांना गतिमान करून हस्तकला, दुग्धव्यावसाय, कुकूटपालन, सेंद्रिय खत निर्मिती संबंधित उद्योग निर्माण करून देण्यास प्रोत्साहित करणे रोजगार निर्मिती संबंधित प्रचार व प्रसार करणे.

२. सामाजिक प्रगती:

सामाजिक समानता प्रस्थापित करण्याकरिता अनुसूचित जाती, जमाती आणि तत्सम दुर्बल घटकांना मुख्य प्रवाहात आणण्यासाठी अनुदान व रोजगार विषयक मार्गदर्शन करणे. शिक्षणाचा प्रचार व प्रसार करून मूलभूत शिक्षणाची व्यवस्था करून प्रौढ साक्षरता, व व्यावसायिक शिक्षणाला महत्व देणे. ग्रामीण भागातील युवकांच्या कार्यकुशलतेसाठी कौशल्य विकास कार्यक्रमाची आखणी करणे अपेक्षित आहे. महिलाकरिता उपयोगी शिक्षण देऊन महिला व युवक सक्षमीकरणासाठी कौशल्यभिमुख कार्यक्रमाचे आयोजन व महिला स्वयंसहायता गटांची निर्मिती ग्रामीण भागात केल्यास ग्रामीण विकासाला गती प्राप्त करता येऊ शकते. परिणामी शाश्वत विकास साध्य करता येऊन यश संपादित करता येते.

३. पायाभूत सुविधा निर्माण:

ग्रामीण विकास उन्नत राखण्यासाठी ग्रामीण आरोग्य केंद्रे, सार्वजनिक वाहतूक व्यवस्थाची उपलब्धता निर्माण करणे. रस्ते, वीज, पाणीपुरवठा आणि गृहनिर्माण इत्यादी सेवा भविष्याकालीन दृष्टीने निर्माण करणे. आधुनिक युगात होत असलेल्या बदलाचा ग्रामीण लोकांना ज्ञान प्राप्त व्हावे याकरिता इंटरनेट सुविधाचे ज्ञान देऊन आधुनिक युगाशी जोडण्याचा प्रयत्न संचार व तंत्रज्ञानाचा प्रसार करून सहज होऊ शकतो.

४. गरीबी निर्मूलन:

आर्थिक स्थिती ग्रामीण भागाची परिवर्तित करण्याकरिता आर्थिक साक्षरता निर्माण करणे अधिक महत्वाचे आहे. ग्रामीण भागातील गरीब कुटुंबासाठी कल्याणकारी योजना निर्माण करून त्याची उत्तम दिशादर्शक धोरणे तयार असावी ज्यामुळे गरीबीचे दृष्टचक्र तोडणे सहज शक्य होईल. रोजगार हमी योजना (MGNREGA) च्या माध्यमातून रोजगार हमी देऊन त्याची अंमलबजावणी करणे विकासाकरिता आवश्यक आहे. या योजनाची निरंतरता व सातत्य भविष्याकालीन स्थितीला नियंत्रित करण्याकरिता उपयुक्त ठरते.

५. पर्यावरण संवर्धन:

ग्रामीण विकास खऱ्या अर्थाने देशाच्या विकासाला कारणीभूत असतो. देशातील जास्तीत जास्त नैसर्गिक संसाधने ग्रामीण भागातच उपलब्ध होतात. अशा नैसर्गिक संसाधनाच्या घटकाचे जतन करून त्याचे संवर्धन करणे विकासाकरिता महत्वाचा आहे. ग्रामीण क्षेत्रात वनक्षेत्र विकसित करून हरित विकासाला चालना देण्याचा प्रयत्न होणे विकास व शाश्वत विकासाकरिता अधिक उपयुक्त ठरतो. ग्रामीण भागातील पर्यावरणकारिता सेंद्रिय शेती व जलसंधारण विषयक उपाययोजन केंद्र स्थानी घेऊन निसर्गाचे जतन करता येते.

६. आरोग्य सुधारणा:

आधुनिक युगात होत असलेल्या रासायनिक व कीटकनाशकामुळे अनेक समस्या निर्माण होऊन प्रणिमात्रांचे जीवन धोक्यात येत आहे. परिणामी सेंद्रिय व परंपरागत शेती व ग्रामीण प्राथमिक आरोग्य सेवा केंद्राची निर्मिती करून लोकांमध्ये आरोग्यविषयक जनजागृती करणे गरजेचे आहे. पौष्टिक आहाराचे महत्व, स्वच्छ पिण्याच्या पाण्याची सोय यामधून अपेक्षित आहे. त्यासाठी विशेष शाश्वत योजना प्रशासनमार्फत राबविणे आवश्यक आहे.

७. सामुदायिक सहभाग :

स्थानिक स्वराज्य संस्था लोकांच्या गरजा पूर्णतः वास नेण्याकरिता महत्वाची भूमिका घेत असते त्यासाठी स्थानिक लोकांच्या गरजांनुसार योजना तयार करणे. गावापातळीवर त्यासाठी ग्रामपंचायती सक्षम असणे ही तितकेच आवश्यक आहे. परिणामी सहकारी संस्था व स्वयंसेवी संस्थांनी आपला सहभाग नोंदवून त्यात दक्ष असणे भविष्याच्या दृष्टीने जास्त अपेक्षित आहे.

८. शाश्वत विकास:

ग्रामीण भागातील हरित आणि पुनर्निविनीकरणीय ऊर्जा स्रोतांचा लोकमध्ये प्रसार होणे ज्यामुळे शाश्वत विकास अपेक्षित उद्दीष्ट साध्य होऊ शकते. ग्रामीण भागातील नैसर्गिक पर्यावरणीय पायाभूत सुविधा कायम ठेऊन सुदृढ स्वरूपात राखता येईल यासाठी विशेष प्रयत्न करणे शाश्वत विकासासाठी गरजेचे आहे. सरकारी यंत्रणा नियम यांची योग्य अंमलबजावणी ही शाश्वत विकासाची खरी नियोजनपूर्णता ठरेल.

ग्रामीण विकासाचे महत्त्व :

१) ग्रामीण भागाच्या प्रगतीमुळे देशाच्या GDP मध्ये वाढ होते. त्यामुळे राष्ट्रीय उत्पन्न वाढण्यास मदत मिळते.

२) शहरीकरणाचा भार कमी करणे: ग्रामीण विकासामुळे लोक शहरांकडे स्थलांतरित होत नाही त्यामुळे शहरी क्षेत्रात अतिरिक्त भार पडत नाही.

३) आर्थिक व सामाजिक असमानता कमी करून ग्रामीण भागात शांती व स्थैर्य प्रस्थापित होऊन सामाजिक स्थैर्य प्रस्थापित होते.

शाश्वत शेतीची संकल्पना:

शाश्वत शेती म्हणजे अशी शेती पद्धत जी पर्यावरण, समाज, आणि अर्थव्यवस्थेच्या दीर्घकालीन स्थिरतेसाठी अनुकूल असते. यात नैसर्गिक संसाधनांचा जबाबदारीने वापर करणे, मातीची गुणवत्ता जोपासणे, पाण्याचे योग्य नियोजन करणे, जैवविविधतेचे संरक्षण, आणि हवामान बदलाशी लढा देण्यावर विशेष भर दिला जातो. शाश्वत शेतीत उत्पादनाची गुणवत्ता टिकवून पर्यावरणाचे संवर्धन करून संतुलन कायम ठेवले जाते आणि भावी पिढ्यांसाठी संसाधने संरक्षित केली जातात.

शाश्वत शेतीचे उद्दिष्टे:

शाश्वत शेतीकरिता ग्रामीण क्षेत्राबरोबरच देशाचा मुख्य आधार आहे. त्यासाठी पुढील उद्दिष्ट नियोजित करणे महत्वाचे आहे. त्यातून पुढील उद्दिष्ट साध्य होतात.

- १) पर्यावरणाचा समतोल राखणे.
- २) शेतकऱ्यांचे जीवनमान उंचावणे.
- ३) भावी पिढ्यांसाठी संसाधने टिकवून ठेवणे.
- ४) ग्रामीण भागाचा सर्वांगीण विकास घडवणे.

शाश्वत शेतीचे प्रकार :

शाश्वत शेती ही विविध पद्धती आणि तंत्रांवर आधारित असून पर्यावरणीय स्थिरता,

उत्पादनशक्ती, आणि शेतकऱ्यांचे आर्थिक कल्याण यावर भर देते. शाश्वत शेतीचे पुढीलप्रमाणे प्रकार पडतात जे ग्रामीण विकासात भूमिका घेतात.

१. जैविक शेती (Organic Farming) :

रासायनिक खते व कीटकनाशकांचा वापर न करता सेंद्रिय पदार्थांचा उपयोग करून शेती करणे म्हणजे सेंद्रिय शेती होय. गायीचे शेण, कंपोस्ट खत, आणि वनस्पतीजन्य कीटकनाशकांचा वापर प्रामुख्याने केला जातो. मातीची सुपीकता वाढवण्यासाठी पिकांची फेरपालट आणि आंतरपीक पद्धतींचा अवलंब या प्रकारामध्ये केला जातो.

२. नैसर्गिक शेती (Natural Farming):

पूर्णतः नैसर्गिक संसाधनांचा वापर करून शेती केलेली शेती म्हणजे नैसर्गिक शेती होय. रासायनिक खते व कीटकनाशके न वापरता, जैवविविधतेचा आधार घेऊन अशा प्रकारची शेती केली जाते. नैसर्गिक शेती झिरो बजेट नेचरल फार्मिंग (ZBNF) म्हणजेच किमान खर्चात शेती म्हणून ओळखल्या जाते.

३. सेंद्रिय शेती (Integrated Farming System):

या शेती प्रकारात पशुपालन, मत्स्यपालन, आणि फलोत्पादन यांचा एकत्रित समावेश केला जातो. उत्पादन क्षमता वाढविण्यासाठी संसाधनाचा कार्यक्षम वापर करून जैवविविधतेला विशेष महत्त्व दिल्या जाते. ग्रामीण भागात अशी संसाधने जास्तीत जास्त प्रमाणात उपलब्ध असल्याने सेंद्रिय शेती पद्धतीचा अवलंब केला जातो.

४. पुनरुत्पादक शेती (Regenerative Agriculture):

मातीची उत्पादकता सुधारणे, जमिनीचे नैसर्गिक चक्र पुन्हा प्रस्थापित करण्याची पद्धती म्हणजे पुनरुत्पादक शेती होय. अन्नसाखळीला पर्यावरण पूरक बनवून हवामान बदलाशी साम्येतील करून कार्बन चे प्रमाण वाढविण्याचे कार्य केले जाते.

५. अचूक शेती (Precision Agriculture) :

आधुनिक तंत्रज्ञानाचा वापर करून शेतात अन्नद्रव्यांचे योग्य व्यवस्थापन करणे जमिनीतील पोषणमूल्ये आणि पाण्याच्या गरजांची मोजणी करण्यासाठी उपकरणे वापरणे अचूक शेती म्हणून ओळखली जाते.

६. उत्पादनवर्धक शेती (Agroforestry):

शेती व वनव्यवस्थापन यांचे एकत्रित व्यवस्थापन करून जमिनीच्या उत्पादकतेसाठी झाडांची लागवड आणि पिकांची एकत्रित शेती म्हणजे उत्पादन वर्धक शेती पद्धती होय.

७. हायड्रोपोनिक्स व अँकापोनिक्स (Hydroponics & Aquaponics):

मातीशिवाय पिके वाढवणे (हायड्रोपोनिक्स), माशांचे संगोपन व पिके एकत्र वाढवणे (अँकापोनिक्स) ही एक आधुनिक पीक पद्धती म्हणून ओळखली जाते ज्यामुळे पर्यावरण वर ताण न येता पूर्णतः क्रियाशील तत्वावर ही शेती केली जाते.

८. संधारण शेती (Conservation Agriculture):

मृदा संधारण व पाणी संवर्धनावर भर देऊन जमिनीच्या सुपीकतेचे संवर्धन करण्यासाठी व जमिनीचा पोत सुधारण्याचा प्रयत्न या शेतीप्रकारामध्ये केला जातो.

शाश्वत शेतीची मुलतत्त्वे :

शाश्वत शेतीच्या मूलभूत तत्त्वांमध्ये पर्यावरण, अर्थव्यवस्था, आणि समाजाच्या गरजांचा समतोल राखणे महत्त्वाचे आहे प्रामुख्याने पुढील तत्त्वे शाश्वत शेतीचे अधिष्ठान तयार करतात

१) नैसर्गिक संसाधनांचे संरक्षण:

निसर्गमध्ये अनेक प्रकारचे संसाधने माती, पाणी व जैवविविधता उपलब्ध आहेत या सर्वांचे संरक्षण करणे, मातीची सुपीकता नष्ट न होऊ देता ती टिकवून ठेवणे यासाठी सेंद्रिय खतांचा वापर करणे, पाण्याचा योग्य प्रमाणात व कार्यक्षम पणे वापर करून पुनर्भरण ची व्यवस्था करणे शेती विकासाकरिता महत्त्वाची आहे

२) जैवविविधतेचे संवर्धन:

शेती विकासाकरिता पीक पद्धतीचे सविस्तर ज्ञान असणे गरजेचे आहे. शेतीमध्ये पिकांची एकच पीका ऐवजी विविध पीक पद्धतीचा अवलंब करून शेतीची गुणवत्ता सुधारते. त्यासाठी शेतकरी वर्ग जागृत राहून परिवर्तनशील पीक रचनाचा वापर करून जास्तीत जास्त लाभ प्राप्त करू शकतात. परिणामी उत्पादनात वाढ तर होतेच शिवाय वनस्पतीचे देखील संरक्षण होते.

जैवविविधता टिकवून ठेवण्यासाठी विविध पीक पद्धती व लागवड पद्धतीने शेतीकरणे, वनस्पती, प्राणी आणि सूक्ष्मजीवांचे संवर्धन करून परंपरागात वाण टिकवून ठेवता येतो. ज्यामुळे शाश्वत शेती विकसित होऊन ग्रामीण विकासात निश्चितच भर घालता येते.

३) आर्थिक सक्षमता :

उत्पादनात वाढ करण्यासाठी व खर्च कमी करण्यामध्ये शाश्वत शेतीची महत्त्वाची भूमिका आहे. शेतकऱ्यांना जास्तीत जास्त नफा प्राप्त करण्याचे एक साधन म्हणून शाश्वत शेतीकडे बघितले जाते. अशा शेतीला स्थानिक मालाला जागतिक बाजारपेठेशी जोडून अतिरिक्त नफा प्राप्ती व आर्थिक सक्षम बनविण्यात एक उत्तम माध्यम शाश्वत शेती घेऊ शकते.

४) सामाजिक उत्तरदायित्व:

शाश्वत शेतीला प्राधान्य देताना स्थानिक समुदायांना समाविष्ट करून घेणे प्रत्येक व्यक्तीचे उत्तरदायित्व समजून त्याचे कार्य अवगत करणे आवश्यक आहे. त्यासाठी महिला सोबतच नवीन युवकांना आधुनिक शेतीकरिता सशक्त प्रेरणा देणे आवश्यक आहे.

शाश्वत शेती ही आधुनिक काळातील शेतीसाठी एक क्रांतिकारी संकल्पना असून, ती कृषिक्षेत्राला दीर्घकालीन स्थिरता आणि प्रगतीकडे घेऊन जाते.

शाश्वत शेतीत वापरण्यात येणारे तंत्रज्ञान :

शाश्वत शेतीत आधुनिक तंत्रज्ञानाचा वापर केल्यास उत्पादनात वाढ होत जाते. पर्यावरणीय नुकसान कमी होण्याच्या दृष्टीने पुढील तंत्रज्ञान प्रामुख्याने वापरले जाते

१. GIS आणि सॅटेलाइट तंत्रज्ञान :

जमिनीचा नकाशा तयार करून मातीची सुपीकता, पाण्याची उपलब्धता, आणि उत्पादनशक्तीचे विश्लेषण करणारे तंत्रज्ञान शेती व्यवस्थापन करण्यासाठी उपयुक्त केले जाते.

२. ड्रोन तंत्रज्ञान:

पिकावर कीटकनाशके फवारणे, पाण्याचा वापर तपासणे, आणि उत्पादन क्षेत्राचे निरीक्षण पिकांचे आरोग्य व हानीचे विश्लेषण या तंत्रमुळे केले जाते.

३. IOT (Internet of Things) तंत्रज्ञान :

स्मार्ट सिंचन यंत्रणा, हवामान अंदाज प्रणाली, आणि मातीतील अन्नद्रव्ये मोजण्यासाठी सेन्सर्सचा वापर या तंत्रप्रणालीमध्ये केला जातो. तसेच माहितीचे संकलन व त्याचे विश्लेषण कारण्यासाठी देखील उपयुक्त तंत्र आहे.

१. अचूक सिंचन तंत्रज्ञान (Precision Irrigation):

ठिबक सिंचन आणि फवारणी पद्धतींचा वापर करून पाण्याचा कार्यक्षम वापर या तंत्रमुळे होतो. शेताच्या विविध भागांपर्यंत आवश्यकतेनुसार पाणीपुरवठा करण्यासाठी हे तंत्र फायदेशीर ठरते.

२. सौर व नूतन ऊर्जा तंत्रज्ञान :

सौर ऊर्जेवर चालणाऱ्या पंप आणि यंत्रसामग्रीचा वापर करून पर्यावरणाला हानी होणार नाही व नैसर्गिक साधनाचा पुरेपूर उपयोग करून पर्यावरणपूरक तंत्रज्ञानाचा अवलंब केला जातो.

६. जैवतंत्रज्ञान (Biotechnology) :

पिकांची गुणवत्ता सुधारण्यासाठी जैविक संशोधन उपयुक्त आहे. रासायनिक खते आणि कीटकनाशकांचा पर्याय म्हणून सूक्ष्मजीवांचा वापर करून जैविक शेती अधिक उपयुक्त ठरते.

७. डेटा अॅनालिटिक्स आणि कृत्रिम बुद्धिमत्ता (AI):

पिकांचे उत्पादन व गुणवत्ता वाढवण्यासाठी डेटा चालित निर्णय प्रक्रिया घेण्यासाठी तसेच हवामानाचा अंदाज व समस्यांचे निराकरण करण्यासाठी AI हे तंत्रज्ञान उपयुक्त ठरते.

८. हवामान स्मार्ट शेती (Climate Smart Agriculture):

हवामान बदलाना सामोरे जाण्यासाठी उष्णतेस सहनशील करून पाण्याचे नियोजित व्यवस्थापन व ऊर्जेचे संवर्धन करण्याचे कार्य या तंत्राद्वारे केले जाते.

शाश्वत शेतीचे ग्रामीण विकासातील योगदान :

शाश्वत शेतीच्या उपयोगामुळे ग्रामीण विकासाला चालना मिळते. परिणामी अनेक संबधित घटक कार्यान्वित होऊन परिवर्तनशील होत जातात. त्यातील मुख्य घटक पुढील प्रमाणे दर्शविले आहे.

१. आर्थिक प्रगतीला चालना :

शेतकऱ्यांना जास्तीत जास्त लाभ प्राप्त करता यावा यासाठी शाश्वत शेतीच उत्तम मार्ग आहे. शाश्वत शेतीद्वारे शेतकऱ्यांना शेतीकरिता लागणारा लागत खर्च कमी येतो, उत्पादनाचा दर्जा देखील सुधारतो, परिणामी लाभ प्राप्ती जास्तीत जास्त होते. त्यामुळे शेतकऱ्यांची आर्थिक प्रगतीला चालना मिळते.

२. पर्यावरणाचे संरक्षण व संवर्धन :

पर्यावरणाचे संवर्धन करणे काळाची गरज आहे. ग्रामीण क्षेत्रात अनेक जैवविविधता

आढळून येते जे पर्यावरणाला पोषक व अतिआवश्यक असतात. अशा पर्यावरणीय जैवविविधतेचा समतोल राखणे, जमिनीची गुणवत्ता सुधारणे, जमिनीची पोत टिकवून ठेवणे आणि पाण्याचा ताळमेळ राखणे यासाठी शाश्वत शेती उपयुक्त ठरते.

३. सामाजिक परिवर्तन :

ग्रामीण भागातील परिस्थिती परिवर्तित करण्याचं कार्य शाश्वत शेती करित असते. रोजगाराच्या संधी निर्माण करणे, महिलांना आणि युवकांना सशक्त करून युवकामध्ये स्वावलंबीची प्रेरणा जागृत करणे तसेच शिक्षणासोबतच आरोग्य सेवा सुधारणे यामध्ये देखील शाश्वत शेतीचा मोठा वाटा असतो.

४. तांत्रिक सुधारणा :

ग्रामीण भागात शाश्वत शेतीकरिता आधुनिक तंत्रज्ञानाचा वापर केला जाऊ शकतो. त्यात अपेक्षित कोणते तंत्र वापरावे आणि किती प्रमाणात त्याचा वापर करावा हे शाश्वत विकासाचे उद्दिष्ट निश्चित करून त्याचा अवलंब करणे गरजेचे असते. ग्रामीण भागात शेतीकरिता ड्रोन, GIS (Geographic Information System) पाणी व्यवस्थापन, पीक व्यवस्थापन, माती परीक्षण इत्यादी करिता अचूक शेती तंत्रज्ञानाद्वारे उत्पादन प्रक्रिया अधिक प्रभावी होऊ शकतात.

भविष्यात शाश्वत शेतीसाठी निर्माण होणाऱ्या संधी आणि आव्हाने:

शाश्वत शेतीच्या विकासात भविष्यात अनेक संधी आणि आव्हाने निर्माण होणार आहेत. अन्नसुरक्षा, पर्यावरणीय स्थिरता, आणि ग्रामीण भागाचा समृद्ध विकास यावर शाश्वत शेतीचा महत्त्वपूर्ण प्रभाव आहे. खाली या संदर्भातील संधी आणि आव्हाने सविस्तरपणे दिल्या आहेत.

भविष्यातील संधी (Opportunities):

१. जैविक आणि सेंद्रिय उत्पादनांची वाढती मागणी :

लोक आरोग्याबद्दल अधिक जागरूक होत आहेत, त्यामुळे जैविक अन्नपदार्थांना बाजारपेठेत जास्त मागणी होत आहे. परिणामी जागतिक बाजारपेठेमध्ये मागणी वाढल्याने निर्यातीच्या संधी वाढून आंतरराष्ट्रीय बाजारात मोठी ओळख निर्माण झालेली आहे.

२. आधुनिक तंत्रज्ञानाचा वापर:

स्मार्ट शेती: ड्रोन, LOT, GIS, आणि सेन्सर तंत्रज्ञानाच्या मदतीने उत्पादनक्षमता वाढवणे. डिजिटल शेतीद्वारे शेतकरी ई-कॉमर्स प्लॅटफॉर्मद्वारे थेट ग्राहकांशी जोडले जाऊ शकतात.

३. शासनाच्या धोरणांचा पाठिंबा :

विविध सरकारी योजना व अनुदानामुळे शेतकऱ्यांना आधुनिक तंत्रज्ञान व शाश्वत शेतीच्या पद्धती अंगिकारता येतात. जलसंवर्धन आणि मृदासंवर्धनाच्या माध्यमातून शाश्वत शेतीस चालना सहज उपलब्ध होऊ शकते.

४. रोजगाराच्या संधी:

जैविक शेती, प्रक्रिया उद्योग, आणि पॅकेजिंग उद्योग यामध्ये रोजगाराच्या संधी वाढतील त्यामुळे ग्रामीण भागात कृषी स्टार्टअप्स स्थापन करून तरुणांना रोजगार सहज उपलब्ध होईल.

५. जलस्रोत आणि ऊर्जा संवर्धनाच्या संधी :

ठिबक सिंचन व सौर ऊर्जा यांसारख्या तंत्रज्ञानाच्या मदतीने पाण्याचा कार्यक्षम वापर करता येईल आणि नवीन ऊर्जा स्रोतांचा वापर शाश्वत शेतीकरिता करता येईल.

६. क्लायमेट - स्मार्ट शेतीची गरज :

हवामान बदलामुळे शाश्वत शेतीची गरज वाढेल, जी दीर्घकालीन उत्पादनासाठी निश्चितच महत्त्वाची ठरेल. जलवायू अनुकूल वाणांचा विकास आणि उत्पादनासाठी बाजारपेठेतील संधी देखील निर्माण होतील.

७. जैवविविधतेचे संवर्धन :

स्थानिक वाण, पारंपरिक पिके, आणि देशी तंत्रज्ञानाच्या संवर्धनासाठी शाश्वत शेती उत्तम माध्यम ठरू शकेल. वनशेती (Agroforestry) आणि मिश्रशेतीसाठी मोठ्या प्रमाणात गुंतवणूक प्राप्त होईल.

८. अन्नसुरक्षेची हमी:

शाश्वत शेती पद्धतीमुळे पोषणमूल्ये असलेल्या अन्नधान्याचे उत्पादन वाढेल, ज्यामुळे अन्नसुरक्षा सुनिश्चित होईल.

भविष्यातील आव्हाने (Challenges) :

१. हवामान बदलाचे परिणाम :

पाऊसमानातील अनियमितता आणि तापमानवाढीमुळे शेतकऱ्यांना उत्पादनात अडचणी येतील. जलस्रोतांची टंचाई आणि निसर्गातील बदलांशी जुळवून घेण्याची आवश्यकता निर्माण होईल.

२. तंत्रज्ञानाचा अभाव आणि खर्च:

आधुनिक तंत्रज्ञान शेतकऱ्यांसाठी जास्त महागडे असल्याने लहान व मध्यम शेतकऱ्यांना ते परवडणार नाही. डिजिटल शिक्षणाचा अभावही तंत्रज्ञानाचा प्रभावी वापर करण्यास अडथळा निर्माण करू शकतो.

३. जमिनीच्या गुणवत्तेतील घट:

अति-शेतीमुळे मातीचा कस कमी होतो, जो शाश्वत शेतीसाठी एक मोठा अडथळा ठरतो. मृदासंवर्धनाच्या तंत्रज्ञानाचा वापर तितकासा उपयुक्त ठरत नाही.

४. जैविक शेतीतील प्रमाणन व बाजारपेठेची समस्या :

जैविक उत्पादनांचे प्रमाणपत्र मिळवण्याची प्रक्रिया अतिशय किचकट आणि खर्चिक आहे परिणामी शेतकरी यापासून दूर जातो. शेतकऱ्यांना त्यांचा माल चांगल्या किंमतीत विकण्यासाठी बाजारपेठेची विशेष सोय उपलब्ध नाही.

५. शिक्षण व जागरूकतेचा अभाव:

ग्रामीण भागात अनेक शेतकऱ्यांना शाश्वत शेतीचेपुढे ज्ञान, महत्त्व आणि पद्धतीबद्दल पुरेशी माहिती नसते. पारंपरिक शेतीतील बदल स्वीकारण्यास शेतकरी संथगतीने पुढे येतात.

६. जलस्रोतांचे संकट:

जलस्रोतांचा तुटवडा हा भविष्यातील शाश्वत शेतीचा मोठा अडथळा ठरू शकतो. सिंचनासाठी आधुनिक तंत्रज्ञानाचा वापर अजूनही पुरेशा प्रमाणात झालेला नाही.

७. भांडवलाची कमतरता:

शाश्वत शेतीसाठी आवश्यक पायाभूत सुविधा आणि साधनांमध्ये गुंतवणुकीची आवश्यकता आहे, जी लहान शेतकऱ्यांना परवडत नाही.

८. रासायनिक शेतीची पारंपरिक सवय :

अनेक शेतकऱ्यांनी अद्याप रासायनिक खते व कीटकनाशकांवर अवलंबून राहणे थांबवलेले नाही. जैविक व सेंद्रिय पद्धती स्वीकारण्यासाठी मोठ्या प्रमाणावर मानसिकता बदलाची विशेष आवश्यकता असते.

निष्कर्ष :

१) ग्रामीण विकास आणि शाश्वत शेती यांचा परस्परपूरक संबंध हा आजच्या काळातील विकास धोरणांचा आधार आहे. ग्रामीण भागातील आर्थिक स्थैर्य आणि पर्यावरण संवर्धन हे शाश्वत शेतीतून साध्य होऊ शकते. भविष्यातील पिढ्यांसाठी संसाधनांची शाश्वतता टिकवण्यासाठी शाश्वत शेती ही केवळ गरज नाही, तर एका हरित क्रांतीकडे नेणारी दिशाही आहे. त्यामुळे, ग्रामीण विकासाच्या व्यापक दृष्टिकोनातून शाश्वत शेतीचा अभ्यास आणि अंमलबजावणी ही काळाची गरज आहे.

२) ग्रामीण विकास हा एक व्यापक प्रक्रिया आहे ज्यामुळे शेती, उद्योग, पर्यावरण, आणि सामाजिक प्रणालींच्या एकात्मिक विकासाला चालना मिळते. यासाठी सर्वसमावेशक दृष्टिकोनाची गरज आहे.

३) शाश्वत शेतीच्या प्रकार आणि तंत्रज्ञानाच्या योग्य वापरामुळे शेतकऱ्यांना दीर्घकालीन फायदा मिळतो आणि पर्यावरणाचे संरक्षण होते. ही शेती पद्धती ग्रामीण भागाच्या सर्वांगीण विकासाला चालना देते आणि अन्नसुरक्षेला बळकटी प्रदान करते.

४) शासनाच्या या विविध योजना आणि धोरणांमुळे शेतकऱ्यांना शाश्वत शेतीच्या दिशेने पुढे जाण्यास चालना मिळते. यामुळे केवळ शेतकऱ्यांचे उत्पन्न वाढत नाही, तर पर्यावरण संरक्षण, अन्नसुरक्षा, आणि ग्रामीण विकास साध्य होतो. शाश्वत शेतीसाठी या धोरणाची प्रभावी अंमलबजावणी केल्यास दीर्घकालीन आर्थिक व सामाजिक स्थिरता प्राप्त होऊ शकते.

५) भविष्यात शाश्वत शेतीसाठी प्रचंड संधी उपलब्ध आहेत परंतु त्याचबरोबर अनेक आव्हानांनाही तोंड द्यावे लागेल. योग्य तंत्रज्ञानाचा अवलंब, शेतकऱ्यांना आर्थिक सहाय्य, आणि पर्यावरणपूरक धोरणांची अंमलबजावणी केली गेल्यास शाश्वत शेतीचा विकास अधिक प्रभावी होईल आणि ग्रामीण भागाचा सर्वांगीण विकास साध्य होईल.

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गडचिरोली जिल्ह्यातील ग्रामीण रोजगार निर्मितीमध्ये टसर रेशीम उद्योगाचे योगदान (सन २०१०-११ ते २०१९-२०)

सुरेंद्र पंढरीनाथ बोरडे

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सारांश :

घनदाट जंगले, विरल लोकसंख्या आणि त्यामुळे निसर्ग रम्यतेबरोबरच अतीव शांतता हे गडचिरोली जिल्ह्याचे प्रमुख वैशिष्ट्ये आहे. या जिल्ह्यात अजे अनेक भाग आहेत जिथे नागरी भागातील माणसाची पावले पोहचलेली नाहीत. याच जंगलामध्ये आदीवासी नागरीक आपल्या संस्कृतीसह आधुनिकतेशी मेळ घालत जीवन जगत आहे. हा जिल्हा घनदाट जंगलाचा जिल्हा त्याचबरोबर अत्यंत मागासलेल्या, आदीवासीचा जिल्हा, उद्योग विरहीत जिल्हा म्हणून ओळखला जातो. आणखीन एका महत्वाच्या मुद्यामुळे या जिल्हास प्रसिध्दी मिळाली आहे तो म्हणजे नक्षलवाद.

गडचिरोली जिल्ह्यातील मुळात ग्रामीण भागाची अर्थव्यवस्था शेती व वन आधारीत व्यवसायावर अवलंबून आहे. शेतीचे हंगामी स्वरूप, ओलितांच्या सोयीची कमतरता यामुळे येथील लोकांना हंगामी बेरोजगारीचा सामना करावा लागतो. शेती पासून मिळणारे उत्पन्न अल्प असल्याने दारिद्र्याचे प्रमाण खूप जास्त आहेत. जिल्ह्यात ग्रामीण भागामध्ये जंगलाचे प्रमाण जास्त असल्याने त्यावर आधारीत अनेक व्यवसाय येथील लोक वर्षानुवर्षे करून आपल्या कुटूंबाचा उदरनिर्वाह करित आहे. करतात त्यापैकी वनावर आधारीत टसर रेशीम उद्योग तेथील आदीवासी व ढिवर समाजाचे लोक वर्षानुवर्षे पारंपारीकरित्या करित असून त्यामुळे तेथील स्थानिक लोकांना रोजगार उपलब्ध होवून तेथील ग्रामीण भागाची आर्थिक परिस्थिती सुधारण्यास मदत झाली आहे.

कुट शब्द : टसर रेशीम, कोष, बेरोजगारी, खाद्यवृक्ष, दारिद्र्य.

प्रस्तावना :

भारत देश हा खेड्यात वसलेला आहे. "'मा. गांधीजीनी खेड्याकडे चला" हा संदेश दिला. देशाच्या एकूण लोकसंख्येपैकी ६७ टक्के लोकसंख्या ग्रामीण भागामध्ये आहे. पुर्वी खेडी स्वयंपूर्ण होती आज ती ओस पडू लागली. मोठ्या प्रमाणात रोजगाराच्या दृष्टीने शहरांकडे स्थलांतरण होत आहे. ग्रामीण क्षेत्रामध्ये मुख्य व्यवसाय शेती असल्याने त्यावर लोकसंख्येचा दबाव दिवसेंदिवस वाढत आहे. या क्षेत्रामध्ये मोठ्या प्रमाणात छुपी बेरोजगारी पहावयास मिळतात. शेतकरी व शेतमजूर वर्गाला बारामाही काम मिळत नाही. शेतीचा हंगाम संपला का बेरोजगारीचा सामना करावा लागतो. त्यामुळे त्या कालावधीतील श्रम वाया न जाता त्या श्रमाला योग्य वेळी व तिथेच स्थानिक परिसरामध्ये काम मिळाले तर त्याच्या उत्पन्नात वाढ होईल.

शेतीला पुरक असे अनेक व्यवसाय आहेत. त्यापैकी टसर रेशीम उत्पादन हा वनआधारित पर्यावरण पुरक व्यवसाय असून अत्यंत कमी खर्चात व शेतकऱ्यांकडे उपलब्ध साहित्यातून करता येतो. रेशीम कोषापासून धागा निर्माण करण्यासाठी सूध्दा मनुष्य बळाची गरज भासते. अर्थप्राप्ती व रोजगाराचे दालन खुलणारा असा व्यवसाय आहे. ग्रामीण भागातील बेरोजगारी, पारंपारीक धान्य शेतीला या व्यवसायाची जोड दिल्यास स्त्रियांना, अल्पभूधारक, अशिक्षित व सूशिक्षित बेकारांना स्वयंरोजगार प्राप्त होण्यास मदत होईल.

संशोधनाची उद्दिष्टे :

- १) गडचिरोली जिल्ह्यातील टसर रेशीम उद्योगाचा अभ्यास करणे.
- २) गडचिरोली जिल्ह्यातील टसर रेशीम उद्योगातील रोजगाराच्या संधी व भविष्यातील उपलब्धता याचा आढावा घेणे.

गृहितकृत्ये :

- १) टसर रेशीम उद्योगामुळे गडचिरोली जिल्ह्यातील ग्रामीण भागात रोजगार निर्मिती झाली आहे.
- २) टसर रेशीम उद्योगामुळे टसर रेशीम लाभार्थ्यांचे जिवनमान उंचावले आहे.

संशोधन पध्दती :

प्रस्तूत संशोधन लेख “गडचिरोली जिल्ह्यातील ग्रामीण रोजगार निर्मितीमध्ये टसर रेशीम उद्योगाचे योगदान” या विषयावर असून प्रस्तूत संशोधन व्दितीय संमकावर आधारित असून तो वर्णनात्मक आहे. उपलब्ध माहितीचे विश्लेषण तुलानात्मक रित्या करून निष्कर्ष काढण्यात आले आहे. संशोधनाचा कालावधी २०१०-२० असा १० वर्षांचा घेतला आहे. ज्या संदर्भ साहित्याचा वापर लेखासाठी केला आहे. त्याची संपूर्ण माहिती शेवटी संदर्भ ग्रंथात देण्यात आली आहे.

गडचिरोली जिल्ह्यातील ग्रामीण रोजगाराची स्थिती :

सन २०११ च्या जनगणनेनुसार गडचिरोली जिल्ह्याची एकूण लोकसंख्या १०,७२९४२ असून एकूण लोकसंख्येपैकी ८९.० टक्के लोकसंख्या ग्रामीण भागात वास्तव्यास राहतात. तसेच महाराष्ट्रातील असा एकमेव जिल्हा आहे की, जिल्ह्याच्या एकूण भौगोलिक क्षेत्रापैकी ८९ टक्के क्षेत्र वनाने व्यापले आहे. ग्रामीण भागातील लोकसंख्या ही प्रत्यक्ष व अप्रत्यक्ष शेतीवर व वनावर अवलंबून आहे. शेतीचे स्वरूप हंगामी असल्याने लोकांना बारमाही रोजगार मिळत नाही. त्यामुळे इतर काळात लोकांना रोजगाराचे साधन उपलब्ध नसल्याने त्यांचे दरडोई उत्पन्नाचे प्रमाण फार कमी आहे. जिल्ह्यातील ग्रामीण भागामध्ये दारिद्र्य रेषेखाली असलेल्या कुटूंबाची संख्या ५४.७ टक्के आहे. ग्रामीण भागातील दारिद्र्याचे प्रमाण जास्त असल्यामुळे तिथे भांडवलाशी समस्या निर्माण झालेली आहे. भांडवलाच्या अभावामुळे ग्रामीण भागात लघू व कुटीर उद्योगाचे प्रमाण अल्प प्रमाणात आहेत. तसेच ग्रामीण भागातील लोकांना सरकारी योजनाबद्दल माहितीचा अभाव असल्याने शासकीय योजनांचा लाभ ग्रामीण भागातील लोकांना मिळत नाही. ग्रामीण भागात भांडवलाचा अभाव, उद्योगाची कमतरता, शासकीय योजनेची माहिती नसणे, शिक्षणाचा अभाव, हंगामी बेरोजगारी या कारणामुळे ग्रामीण भागातील बारमाही रोजगार उपलब्ध होत नाही. भारत सरकारने ग्रामीण भागातील लोकांना जास्तीत जास्त रोजगार उपलब्ध व्हावा यासाठी

सन २००५ मध्ये रोजगार हमी योजना सुरू केली. या योजने अंतर्गत कुटूंबातील १८ वर्षे पूर्ण करण्याच्या व्यक्तीला १०० दिवस रोजगार उपलब्ध करून देण्याची गॅरंटी सरकारने दिलेली आहे. परंतु प्रत्यक्षात ग्रामीण भागात जनतेला १०० दिवस रोजगार मिळू शकत नाही म्हणून ग्रामीण भागातील लोकांना बेरोजगार राहावे लागते. यामुळे ग्रामीण भागात गरिबी व दारिद्र्याचे प्रमाण खुप जास्त आहेत.

गडचिरोली जिल्ह्यातील टसर रेशीम उद्योग :

वन ही मानवास मिळालेली नैसर्गिक संपत्ती आहे. महाराष्ट्रातील पुर्व विदर्भात चंद्रपूर, गडचिरोली, भंडारा, गोंदीया या जिल्ह्यांमध्ये मोठ्या प्रमाणावर वनाचे प्रमाण आढळतात. गडचिरोली जिल्ह्यातील वनक्षेत्र १२८९७ चौ.कि.मी. असून जिल्ह्याचा एकुण भौगोलिक क्षेत्रापैकी ८९ टक्के आहेत. या वनावर आधारीत अनेक व्यवसाय पारंपारीक पध्दतीने मोठ्या प्रमाणात पूर्वीपासून चालत आहे. त्यापैकी एक टसर रेशीम उद्योग गडचिरोली जिल्ह्यांमध्ये २००-२५० वर्षांपासून सुमारे ७०० ते ८०० आदिवासी व ढिवर समाजाचे लोक पारंपारीक रित्या टसर कोषाचे उत्पादन घेत आहे. टसर रेशीम उद्योग पूर्णतः नैसर्गिक व वनावर आधारीत असल्याने त्याला वन्य रेशीम सुध्दा म्हटले जाते. गडचिरोली जिल्ह्यामध्ये नैसर्गिक रित्या उष्णकटीबंधीय जंगलात टसर अळीसाठी लागणारे ऐन व अर्जुन खाद्यवृक्ष मोठ्या प्रमाणात उपलब्ध आहे. उष्ण कटीबंधीय टसर रेशीम किटक एन्थरिया मायलेटा परिवाराचा सदस्य असून या जंगली किड्याची खाद्य झाडे ५० पेक्षा जास्त आहेत. त्यापैकी प्राथमिक श्रेणीत ऐन व अर्जुन या खाद्यवृक्षांचा समावेश होतो.

टसर रेशीम कोष उत्पादक हे बहुतेक दारिद्र्य रेषेखाली असल्याने त्यांचेकरीता राज्य व केंद्र शासनाच्या विविध योजना रेशीम संचालनामार्फत राबविण्यात येत असून त्यांचे जीवनमान उंचावण्याचा सतत प्रयत्न करण्यात येत आहे. जंगलात टसर कोष उत्पादन करणाऱ्या लाभार्थ्यांकरिता वनसंवर्धन कायदा शिथिल करण्यात आला आहे. हा उद्योग कमी भांडवलात होत असल्याने इतरही समाजातील लोक सुशिक्षित, बेरोजगार इत्यादी या उद्योगाकडे वळत आहे. शासनाने टसर रेशीम उद्योगाच्या विकासासाठी गडचिरोली जिल्ह्यातील आरमोरी येथे जिल्हा टसर रेशीम कार्यालयाची स्थापना केली असून त्यामार्फत ७ शासकीय फार्मवर ४०० हेक्टर क्षेत्रावर ऐन व अर्जुन वृक्षाची लागवड करण्यात आली आहे. तसेच गडचिरोली जिल्ह्यात आरमोरी येथे ०४ अंडीपुंजनिर्मिती केंद्र असून त्या ठिकाणी वर्षभरात ०३ वेळा अंडीपुंज निर्मिती करून लाभार्थ्यांना अंडीपुंजाचा पुरवठा केला जातो. जिल्हा रेशीम कार्यालयात टसर कोषापासून धागा निर्मितीचे काम “काम तितका मोबदला” या तत्वावर टसर धागा निर्मितीचे कामकाज वर्षभर चालते. या ठिकाणी ४० ते ५० स्त्रिया वर्षभर कामकाज करतात. टसर रेशीम लाभार्थ्यांना कार्यालयातून वेळोवेळी तांत्रिक मार्गदर्शन व ७५ टक्के अनुदानावर अंडीपुंज वाटप केली जातात. टसर अळीचे जिवन चक्र ४ अवस्थेमध्ये होते - १) अंडा २) अळी ३) प्युमा ४) पंतग यापैकी अळी खाद्यवृक्षाची पाने खावून वाढत असते व पुर्ण विकसित झाल्यावर आपल्या भोवती रेशीम धाग्याचे आवरण तयार करून कोष तयार करते. टसर अळीचे संगोपन कार्य खुल्या वातावरणात जंगलामध्ये केल्या जाते. नवजात किटकांना पोषणासाठी खाद्यवृक्षावर टाकले जाते. अळी झाडाची पाने खाऊन वाढत असतात. झाडाची पाने पुर्णता संपल्यावर या अळ्यांना दुसऱ्या

झाडावर खाद्यकरीता स्थानांतरीत केल्या जातात. झाडाच्या पानाचा उपयोग खाद्यकरीता वर्षातून एकदाच केला जातो. टसर रेशीम कोषाचे उत्पादन वर्षातून तिनदा घेतात. शासन कोषाची खरेदी हमीभावाने लाभार्थ्यांकडून करतात.

टसर कोष उत्पादकांना पारंपारीक किटक संगोपन पध्दतीने लाभ मिळतो. टसर कोष उत्पादन कार्यात घरातील स्त्रिया, वयोवृद्ध, मुले मदत करतात. साधारणता : १ परिवारास ६० ते ७० दिवस परिश्रम करून ४०० ते ५०० अंडीपुजा पासून १६००० ते २०००० कोष उत्पादन होते व त्यापासून त्यांना २८८०० ते ३६००० रू पर्यंत उत्पन्न मिळू शकते.

गडचिरोली जिल्ह्यातील टसर रेशीम उद्योगाचा विस्तार

(आधार वर्ष २०१०-११)

(सन २०१०-११ ते २०१९-२०)

वर्ष	जंगल क्षेत्राचा वापर (हेक्टर्स)	अंडीपुंज वाटप (लक्ष)	लाभार्थी संख्या (हजार)	कोष उत्पादन (लक्ष नग)	धागा निर्मिती (कि. ग्रॅम.)
२०१०-११	२०५७	१७४४५९	७३३	३२४७६३२	६९८
२०११-१२	२०९७ (१.९)	३१३००० (७९.४)	१०२२ (३९.४)	८९९८००० (१७७.०)	३५९९ (४१५.६)
२०१२-१३	३२५७ (५५.३)	३४३००० (९.५)	७७७ (-२३.९)	६७७८००० (-२४.६)	२७११ (-२४.६)
२०१३-१४	२०९४ (-३५.७)	२०९००० (-३९.०)	४४५ (-४२.७)	५३५८००० (-२०.९)	२९२० (७.७)
२०१४-१५	३९९६ (९०.८)	४१६००० (९९.०)	११०६ (१४८.५)	९९९०००० (८६.४)	५०२३ (७२.०)
२०१५-१६	३७६० (-५.९)	३७३८६७ (-१०.१)	७६० (-३१.२)	१५२८८२०० (५३.०)	८३३० (६५.८)
२०१६-१७	४५०६ (१९.८)	४५०६५५ (२०.५)	७५० (-१.३)	१८३२६४६७ (१९.८)	९९८७ (१९.८)
२०१७-१८	३५१७ (-२१.९)	३५१७९१ (-२१.९)	६५६ (-१२.५)	११२७८६६० (-३८.४)	५९४५ (-४०.४)
२०१८-१९	२८२० (-१९.८)	२८४१७५ (-१९.२)	५५२ (-१५.८)	१०३३९४३५ (८.३)	५६३४ (-५.२)
२०१९-२०	३३४९ (१८.७)	३३४९६५ (१७.८)	५७९ (४.८)	१०९६२४०८ (६.०)	५९७४ (६.०)
आधार वर्षाच्या तुलनेत	६२.८ (६.९)	९२.० (१०.२)	-२१.८ (-२.३)	२३७.५ (२६.३)	७५५ (८३.९)

संदर्भ : जिल्हा टसर रेशीम कार्यालय, आरमोरी जि. गडचिरोली

टिप : कंसातील अंक वार्षिक अभिवृद्धीदर दर्शवतात.

वरील तक्तावरून दिसून येते की, सन २०१४-१५ मध्ये मागील वर्षाच्या तुलनेत ३९९६ हेक्टर्स जंगल क्षेत्राच्या वापरामध्ये सर्वाधिक वाढ झाली आहे. तर सन २०१९-२० मध्ये गडचिरोली जिल्ह्यात आधार वर्षाच्या तुलनेत ६२.०८ टक्के वाढ झाली आहे. यावरून जंगल क्षेत्राच्या वापर प्रतिवर्ष सरासरी ६.९ टक्के वाढ झाल्याचे स्पष्ट होते. लाभार्थ्यांना अंडीपुजाचे वाटप सर्वाधिक सन २०१४-१५ मध्ये ४१६००० लाख (९९.० टक्के) करण्यात आले. आधार वर्षाच्या तुलनेत सन २०१९-२० मध्ये ९२.० टक्के वाढ झाली आहे. यावरून शेतकऱ्याला अंडीपुज वाटपात प्रतिवर्ष सरासरी १०.२ टक्के वाढ झाली आहे. मागील वर्षाच्या तुलनेत टसर रेशीम लाभार्थी संख्येत सन २०१४-१५ मध्ये ११०६ हजार (१४८.५ टक्के) सर्वाधिक वाढ दिसून आली. तर इतर वर्षात लाभार्थी संख्येत घट झालेली आहे. सन २०१९-२० मध्ये जिल्ह्यात आधार वर्षाच्या तुलनेत -२१.० टक्के घट झाली आहे. यावरून टसर रेशीम लाभार्थी संख्येत प्रतिवर्ष सरासरी -२.३ टक्के घट झाल्याचे स्पष्ट होते. कोष उत्पादनाचा विचार करता सन २०११-१२ मध्ये मागील वर्षाच्या तुलनेत ८९९८००० लक्ष कोष (१७७.० टक्के) सर्वाधिक वाढ झाली. सन २०१९-२० मध्ये जिल्ह्यात आधार वर्षाच्या तुलनेत २३७.५ टक्के कोष उत्पादनात वाढ होऊन प्रतिवर्ष सरासरी वाढ २६.३ टक्के आहे. टसर धागानिर्मितीमध्ये सर्वाधिक वाढ सन २०११-१२ मध्ये मागील वर्षाच्या तुलनेत ३५९९ किलोग्रॅम (४१५.६ टक्के) वाढ झाली. आधार वर्षाच्या तुलनेत सन २०१९-२० मध्ये ७५५ टक्के वाढ झाली आहे. यावरून टसर धागा निर्मितीमध्ये प्रतिवर्ष सरासरी वाढ ८३.९ टक्के झाल्याचे स्पष्ट होते.

ग्रामीण रोजगार निर्मितीत टसर रेशीम उद्योगाची भूमिका :

ग्रामीण भागात रोजगार निर्मितीचे साधन म्हणून टसर रेशीम उद्योगाचे योगदान खालील प्रमाणे सांगता येईल.

१) अंडीपुंज निर्मिती :

शासकीय रेशीम केंद्रावर अंडीपुंज निर्मिती केंद्र आहेत. खाजगीस्तरावर अंडीपुंज निर्मितीचे प्रशिक्षण देवून तरूण बेरोजगाराला मोठ्या प्रमाणात रोजगार उपलब्ध होण्यास मदत होईल. अंडीपुंज निर्मितीसाठी शासनाकडून अनुदान दिले जाते.

२) खाद्यवृक्ष लागवड :

महात्मा गांधी ग्रामीण रोजगार हमी (मनरेगा) योजना अंतर्गत टसर वृक्षाची लागवड करण्यासाठी मंजूरी व सामग्री स्वरूपात अनुदान दिले जाते. गडचिरोली जिल्ह्यात याच कार्यक्रमाव्दारे शासकीय फार्म वर ४०० हेक्टर्सवर एन व अर्जुन वृक्षाची लागवड करण्यात आली असून त्याव्दारे ग्रामीण भागात रोजगार उपलब्ध झाला आहे.

३) कोष उत्पादन :

टसर कोष उत्पादनाच्या माध्यमातून ग्रामीण भागात मोठ्या प्रमाणात रोजगार मिळाला आहे. गडचिरोली जिल्ह्यामध्ये जवळपास ७५० ते ८०० शेतकरी कोष उत्पादनाचे कार्य २०० ते २५०

वर्षापासून करत आहे. ७५ टक्के अनुदानावर अंडीपुजाचा पुरवठा शासनाकडून लाभाध्याना कोष उत्पादनासाठी केला जातो. भविष्यात ग्रामीण भागात मोठ्या प्रमाणात रोजगाराची दालने उघडणारा व्यवसाय म्हणून या उद्योगाकडे पाहिले जाते.

४) धागानिर्मिती :

धागानिर्मितीसाठी शासन व व्यापारी लाभार्थ्याकडून कोषाची खरेदी हमी भावाने करतात. जिल्हा टसर रेशीम केंद्रावर मोठ्या प्रमाणात धागा निर्मितीचे काम “काम तितका मोबदला” या तत्वावर टसर रेशीम धागा निर्मितीचे कामकाज वर्षभर चालते. रेशीम संचालनालय नागपूर यांचे मार्फत व्यापाऱ्यांना रेशीम सूताची विक्री केल्या जाते. धागानिर्मिती कार्यात ४० ते ५० स्त्रिया वर्षभर कामकाज करतात. सुशिक्षित बेरोजगारांना एक स्वयं रोजगाराचे साधन उपलब्ध व्हावे यासाठी एकात्मिक रेशीम विकास योजना “सिल्क समग्र” केंद्रीय रेशीम मंडळामार्फत टसर कोषापासून धागाकरण यंत्र खरेदी करण्यासाठी ७५ टक्के अनुदान दिले जाते.

५) कापड निर्मिती :

रेशीम धाग्यापासून कापड निर्मिती व विविध शोभिवंत वस्तू बनविले जातात. स्थानिक ग्रामीण भागात टसर रेशीम कापडनिर्मिती उद्योग सुरू झाल्यास ग्रामीण भागात रोजगार निर्मिती होण्यास मदत होईल.

६) पुरक व्यवसाय :

टसर रेशीम कोष उत्पादन कमी कालावधीत, अल्प गुंतवणूकीत जास्त लाभ मिळवून देणारा व्यवसाय आहे इतर व्यवसायाबरोबर पुरक व्यवसाय म्हणून कोष निर्मितीचे कार्य करता येतात. हंगामी बेरोजगाराला सुध्दा रोजगाराचे एक साधन या व्यवसायातून उपलब्ध झाले आहे.

७) स्थलांतरण कमी करण्यासाठी :

ग्रामीण भागात शेती क्षेत्रामध्ये हंगामी बेरोजगारीचे प्रमाण मोठ्या प्रमाणात असल्याने कामाच्या शोधात लोकांचे स्थलांतरण शहराकडे किंवा दुसऱ्या राज्यात पहावयास मिळते. टसर रेशीम उद्योगामुळे ग्रामीण भागात स्थानिक परिसरात रोजगाराची संधी उपलब्ध झाल्याने स्थलांतराचे प्रमाण कमी होण्यास मदत होईल.

८) वनावर आधारीत :

ग्रामीण लोकांना टसर रेशीम उद्योगामुळे एक स्वयंरोजगाराचे साधन उपलब्ध झाले आहे.

निष्कर्ष :

वनावर आधारीत टसर रेशीम उद्योग हा ग्रामीण भागात विकासाचे व तेथील लोकांच्या नगदी उत्पन्नाचे महत्वाचे साधन आहे. टसर रेशीम उद्योगामध्ये कोष उत्पादन व्यतिरिक्त कोषोत्तर उत्पादनामध्ये कोषाचे धागाकरण, कापड, विणकाम व विक्री इ. मध्ये मोठ्या प्रमाणात लोकांना ग्रामीण भागात रोजगार निर्मिती झाली आहे. आज देशात विदेशात टसर रेशीम कापडाची मागणी सातत्याने वाढत असल्याने टसर रेशीम उत्पादनाने पारंपारिक कार्यापासून उद्योगाचे रूप धारण केले आहे. शेती व इतर व्यवसायाला पुरक असणाऱ्या टसर रेशीम उद्योगात कूशल व अकूशल तसेच बेरोजगारांना विविध कामासाठी ग्रामीण भागात रोजगार निर्मिती होत आहे.

नैसर्गिक जंगलामध्ये खाद्यवृक्ष उपलब्ध असल्याने लागवडीचा खर्च येत नसल्याने. अल्प गुंतवणुकीत अधिक लाभ टसर रेशीम उद्योगाद्वारे मिळतो. या उद्योगाला शासनामार्फत सोई-सुविधा, अनुदान मिळाल्याने या उद्योगाचा मोठ्या प्रमाणात विस्तार होवून अशिक्षित आदिवासी समाजाला, स्त्रियांना, युवकांना रोजगाराची मोठी संधी मिळाली आहे. टसर रेशीम उद्योग हा पर्यावरण पुरक व्यवसाय असल्याने टसर लाभार्थ्यांना जास्त प्रमाणात वन जमीन क्षेत्राच्या वापराला प्राधान्य दिल्यास भविष्यात ग्रामीण भागात रोजगाराची मोठी संधी या उद्योगाद्वारे उपलब्ध होईल.

संदर्भ :

- १) आगलावे प्रदीप : सामाजिक संशोधन पध्दती
- २) कलंत्री डॉ. ल. भि. : टसर रेशीम उद्योगाचे तंत्र व मंत्र
- ३) जिल्हा टसर रेशीम कार्यालय, आरमोरी, गडचिरोली
- ४) रेशीम संचालनालय, नागपूर - mahasilk.maharashtra.gov.in
- ५) जिल्हा सामाजिक व आर्थिक समालोचन - २०२० जिल्हा, गडचिरोली



भारतात खताचा उपयोग आणि उत्पादन : एक विश्लेषण

प्रभाकर मंगरुजी बडोले

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सारांश:

खत हा भारतातील एक अत्यंत महत्त्वाचे क्षेत्र आहे. कृषी उत्पादनाकरिता हा एक आवश्यक आधार आहे. कृषी उत्पादन वाढीस खत हे महत्त्वाची भूमिका बजावतात. हया शोधनिबंधात खत क्षेत्राच्या विश्लेषणात भारतातील खताचा खप किंवा उपयोग आणि त्याच्या उत्पादनाची राज्य/केंद्रशासित राज्यवार स्थितीचे विश्लेषण केले आहे. हा वैचारीक आणि वर्णनात्मक स्वरूपाचा शोधनिबंध आहे. हा द्वितीयक माहितीवर आधारित आहे. शेतकऱ्यांची खताची आवश्यक गरज यानुसार उद्योगांचे (कंपन्या) उत्पादन आणि वितरणाचे नियोजन करित असतात. आज शेतकरी असे कोणतेही उत्पादन स्विकारायला तयार नसतो, जे त्याला समाधान देत नाही. खताच्या खपात किंवा उपयोगात सतत होत असलेल्या वाढीमुळे भारतात पीक उत्पादनात वाढ होत आहे. परंतु युरीयाचा अति वापर हा खताच्या आदर्श प्रमाणाला असंतुलित करून प्रभावित करतो. म्हणून शेतकरी एकल खताकडून एन. पी. के. मिश्र खताकडे वळतांना दिसून येत आहे. जेणेकरून शेतीला आणि पिकाला अत्यावश्यक पोषक तत्त्वे अधिक प्रमाणात मिळून पीक उत्पादनाचे प्रमाण सुधारण्यास मदत होईल. त्याचबरोबर वाढत्या लोकसंख्येची अन्न-धान्याची वाढती मागणी पूर्ण करणे ही सध्या सरकार आणि शेती क्षेत्रासमोरील मोठी समस्या आहे. यातून मार्ग काढण्यासाठी सरकार शेतकऱ्यांना खताच्या वापरात वाढ करून पीक उत्पादनात वाढ करण्यासाठी प्रेरित करित असल्याचे दिसून येते.

कुट शब्द : खते, कृषी, अन्न-धान्य, खत उत्पादन, खपाची राज्यवार स्थिती.

प्रस्तावना :

भारत हा जगातील जुन्या कृषी अर्थव्यवस्थांपैकी एक आहे. कृषी ही भारतीय अर्थव्यवस्थेची चाबी आहे. किटक शेतीचे नुकसान करतात आणि शेती उत्पादनात घट होते. त्यामुळे लोकसंख्येची अन्नाची वाढती गरज पूर्ण करण्यासाठी आवश्यक असलेला अन्न पिकांचा साठा अपर्याप्त होतो आणि म्हणून रासायनिक खतांच्या उपयोगाचे महत्त्व वाढते. खते हा भारताचा एक मुख्य उद्योग आहे, जो कृषी उत्पादनाकरिता प्रमुख भूमिका बजावित असतो. आपल्या देशात कृषी उत्पादनातील वाढीला खताच्या उत्पादनात आणि त्याच्या उपभोगात होणारी वाढ ही प्रामुख्याने जबाबदार आहे.

खते हा भारतातील महत्वाचा उद्योग आहे. कृषीच्या वाढीत खतांच्या उत्पादनातील आणि त्याच्या उपभोगातील वाढीचे लक्षणीय योगदान आहे. असा अंदाज आहे की, पाणी आणि खत यांच्या योग्य प्रमाणात वापरामुळे कृषीच्या उत्पादनात साधारणतः ७० टक्के वाढ शक्य आहे. हे सत्य आहे की, खते हे कृषी आदानातील महागडे साधन असले तरी कृषीचे प्रती एकक उत्पादन खर्च कमी करण्यात याची महत्वाची भूमिका आहे. खते ही जैविक आणि अजैविक अशा दोन्ही प्रकारची असतात. जे नैसर्गिक किंवा कृत्रिम स्रोतापासून प्राप्त करून जमिनीत मिसळविले जाते. जैविक खत ज्यात एक किंवा एकापेक्षा अधिक स्रोत समावेशित असतात. ज्यात गुरांचे शेणखत, घरगुती कचरा, वनस्पतीपासून मिळणारे पदार्थ, जमिनीतील जैविक घटक यात पीक अवशेष (CUops Residues) इत्यादींचा समावेश आहे. जैविक शेतीमुळे जमिनीची गुणवत्ता वाढते त्याचबरोबर जमिनीच्या रासायनिक आणि जैविक क्रियाकलापात वाढ होते. तर अजैविक खत वनस्पतींच्या वाढीसाठी पोषक तत्त्वे पुरवठा करतात. यात नत्र (नायट्रोजन), स्फुरद (फॉस्फरस) आणि पोटॅशियम यांचा समावेश होतो. द्वितीयक अजैविक पोषक तत्त्वामध्ये कॅल्शियम, मॅग्नेशियम, सोडीयम आणि सल्फर यांचा समावेश होतो. अजैविक खतामध्ये थोड्या प्रमाणात BoUon, Copper, IUon, Manganese इत्यादीचे सुक्ष्म पोषक तत्त्व आवश्यक असतात. जैविक आणि अजैविक खतापासून खताच्या कंपन्यांची निर्मिती झाली जसे, IPL, SPIC, MFL, KRIBHCO, IFFCO, RCF, CoUOMONDEL आणि FACT इत्यादी. दिवसेंदिवस देशातील लोकसंख्या वाढत आहे आणि वाढत्या लोकसंख्येला अन्न-धान्य पुरविणे आपल्या देशासमोर एक मोठे आव्हान आहे. कारण देशातील शेतीच्या भूमीमध्ये आपण वाढ करू शकत नाही. खतांचा उपयोग हा कदाचित उत्पन्नातील उच्च मर्यादेपर्यंत वाढीचा मार्ग होऊ शकेल. या शोधनिबंधाचा उद्देश खताच्या क्षेत्रातील विविध पैलूंची चर्चा करणे हा आहे. भारतात खताच्या उत्पादनाची सुरुवात १९६० या वर्षी झाली. ज्याच्या परिणामामुळे EID Parry's ने एकल सुपर फॉस्फेट (SSP) ची सुरुवात (रानीपेट) चेन्नई व तामिलनाडू येथे केली.

सन १९६० च्या दशकात भारताने 'हरित क्रांती'च्याद्वारे पीक उत्पादनात आत्मनिर्भरता प्राप्त केली. त्यापूर्वी भारताला आपल्या देशातील लोकांची अन्नाची गरज पूर्ण करण्यासाठी अमेरिका आणि मेक्सिकोतून अन्न-धान्याची आयात करावी लागत होती. जवळपास 'हरित क्रांती' च्या ६४ वर्षांनंतर भारत अन्न-धान्याच्या बाबतीत फक्त आत्मनिर्भर झाला नाही तर इतर देशांना अन्नधान्य निर्यात करण्यास सुद्धा सक्षम झाला आहे. भारत हा स्फुरद (फॉस्फरस) आणि पोटॅशियम खताच्या बाबतीत अजूनही आयातीवर अवलंबून आहे. खताच्या उत्पादनाची परिस्थिती, विविध राज्यांना खताची वाहतूक करणे, खताची आवश्यकता, परवडणारी किंमत आणि सर्व शेतकऱ्यांना उपलब्धता यावर खताचा केंद्रिय व्यवस्थापन विभाग कार्य करीत असते.

भारतात शक्य तितक्या प्रभावीपणे खताचा उपयोग आणि त्याच्या उपलब्धतेच्या बाबतीत सुधारणा करणे याबाबत भारत सरकार सक्रीय कार्य करीत आहे. भारताने खताची वेळेवर उपलब्धता आणि तुलनात्मक प्रमाणात वितरण याची खात्री करणारे धोरण स्विकारले आहे. खत निर्मिती उद्योगांसाठी लागणारे दोन्ही प्रकारचे अनुदान सरकारी तत्त्वावर मंजूर करण्यात आले आहेत उदा. उत्पादन अनुदान आणि माल वाहतूक अनुदान.

१९६० च्या दशकात 'हरित क्रांती' चा स्विकार केल्याचा मोठा परिणाम देशाच्या अन्न-धान्य उत्पादनावर झाला. जी पूर्वी मागणी पूर्ण करण्यासाठी मोठ्या प्रमाणात विदेशी आयातीवर अवलंबून होते. पुढे अनुभव हे दर्शवितो की, उत्पादकता आणि उत्पादनातील वाढ ही खतांच्या प्रमाणबद्ध वाढीमुळे झालेली आहे. म्हणून खत हे भारतीय कृषी क्षेत्राच्या उत्पन्न वाढीचे अविभाज्य अंग आहे. खताच्या खपाला प्रभावित करणारे अनेक घटक आहेत. जसे की, सिंचन, अधिक उत्पन्न देणारे बियाणे, कृषी पत किंवा कर्जाचा आकार इत्यादी. अधिक उत्पन्न देणाऱ्या वाणाखालील क्षेत्रातील वाढीमुळे अन्न-धान्याच्या उत्पादनात वृद्धी होत आहे.

नत्र (नायट्रोजन), स्फुरद (फॉस्फोरस) आणि पोटॅशियम ही पिकांच्या वाढीसाठी आवश्यक पोषक तत्त्वे आहेत, जे खताच्याद्वारे जमिनीमध्ये घातले जातात. यासोबतच सुक्ष्म पोषक तत्त्वे हे सुद्धा घालणे आवश्यक आहे. जसे कॅल्शियम, मॅग्नेशियम, मॅंग्रीज, बोरॉन इत्यादी. नत्र, स्फुरद आणि पोटॅशियम या तीन्ही घटकांच्या प्रमाणात संतुलन असणे आवश्यक आहे.

विभिन्न राज्ये याबाबतीत काळजीपूर्वक योग्य उपाययोजना आखतात किंवा अंमलात आणतांना दिसत आहेत. भारतात मागील काही वर्षांत खताचा भरपूर खप वाढला आहे. पीक उत्पादन वर्धित करणे आणि वाढलेले उत्पादन टिकविण्यासाठी, वनस्पतींच्या वाढीकरीता पोषक अन्नद्रव्यांचा योग्य प्रमाणात वापर करणे आवश्यक आहे. साधारणतः खताची मागणी ही पिकांच्या किंमती, खताच्या किंमती आणि खताला पुरक असलेल्या उत्पादन घटकांच्या किंमतीवर अवलंबून आहे. स्वातंत्र्य प्राप्तीनंतर लोकसंख्येत झपाट्याने वाढझाली. नैसर्गिक पावसावर आधारित शेतीमुळे मोठ्या प्रमाणात अन्न-धान्याचे उत्पादन करणे शेतकऱ्याला शक्य नव्हते त्या कारणाने १९५० ते १९६० च्या दशकात सरकार अन्नधान्याची आयात करित असल्याचे आपण अनुभवले आहे.

'हरित क्रांती'ची सुरुवात १९६० च्या दशकात झाली. हा काळ काहीतरी वेगळ्या पद्धतीने सुरु करण्याचा काळ होता. भारताने अन्न-धान्य उत्पादनाच्या संदर्भात आत्मनिर्भरतेकडे हळूहळू वाटचाल करायचे लक्ष गाठले. पिकांच्या लागवडीत आणि अन्न-धान्य वाढीत खताने लक्षणीय भूमिका बजावली. ज्यात खताने जमिनीची प्रजनन क्षमता, उत्पादन क्षमता वाढविली. त्यामुळे शेतकरी त्याचा वापर मोठ्या प्रमाणावर करू लागला आहे. त्यामुळे एवढ्या मोठ्या प्रमाणात खताचे उत्पादन करण्यात भारत सद्यस्थितीत असमर्थ आहे. कारण वेळेवर शेतकऱ्यांची खताची गरज पूर्ण होणे आवश्यक आहे. ती गरज सरकार पूर्ण न करू शकल्यामुळे त्याची आयात करावी लागते. म्हणून सरकारने भारताबाहेर सुद्धा काही संयुक्त उपक्रम स्थापन केले आहेत. सद्या भारत सरकारचे विदेशात सात संयुक्त उपक्रम सुरु आहेत ते खालीलप्रमाणे :

- FOSKOR (Pty) Limited, South Africa - फॉस्फोरिक अॅसिडचा पुरवठा
- FCS Senfel & ICS Sengel (exp.)- फॉस्फोरिक अॅसिडचा पुरवठा
- MaUoc Phosphore S.A. (TMACID), MoUocco फॉस्फोरिक फॉस्फोरिक अॅसिडचा पुरवठा
- Tunisian Indian Fertilizers (TIFERT), Skhira Tunisia अॅसिडचा पुरवठा

- Jordan Inda Fertilizer Company, Eshidiya, Jordan — फॉस्फोरिक अॅसिडच्या
- पुरवठ्याकरीता Oman India Fertilizer Company, Muscut, Oman — फॉस्फोरिक अॅसिडच्या पुरवठ्याकरीता
- एक संयुक्त उपक्रम ज्याचे प्रस्तावित नाव JV Gabon येथे.

साहित्य पुनरावलोकन

● ज्योतिका बहल (२०१५) शोधनिबंधात खताच्या उत्पादकतेतील वाढीसंदर्भात आणि किटकनाशके यातील संशोधन आणि वृद्धीच्या भूमिकेचे यात परीक्षण करण्यात आलेले आहे. याचबरोबर भारतीय खत आणि किटकनाशक क्षेत्रातील उद्योग स्थरावरील माहितीचे अनुभवजन्य विश्लेषण, एकूण घटक उत्पादकतेचा (TFP) अंदाज घेण्यासाठी परीक्षण करण्यात आले.

● विजय पॉल शर्मा (२०११) शोधनिबंध हे सुचवतो की, भारतात टिकाऊ कृषी उत्पादनासाठी परवडणाऱ्या किंमतीत खतांच्या उपलब्धतेची खात्री करून घेण्याचा प्रयत्न आहे. यात देशातील खताची मागणी हे दर्शविते की, उत्तर आणि पश्चिम क्षेत्रापेक्षा पूर्वेकडील आणि दक्षिणेकडील क्षेत्रामध्ये खताच्या उपयोगात वाढ अधिक होत आहे.

● अभिषेक पाठक, पुष्कर दुबे, संजय पांडे (२०१७) या शोधनिबंधात बाजाराचे स्थूल अवलोकन, तेथील परिस्थिती, भारतीय बाजारातील सामान्यतः खताच्या श्रेणीची परिस्थिती मांडली आहे. खताचे बाजार हे खताच्या गरजेची आवश्यकता पूर्ण करण्यात अत्यंत महत्त्वपूर्ण भूमिका बजावत आहेत.

● राजेश कुमार बिष्नोई आणि अभिजित दास (२०२०) शोधनिबंध हा भारतातील खत क्षेत्राच्या वाढीचे दर मागणी आणि पुरवठा बाजू यावर प्रकाश टाकतो. यात भारताच्या संदर्भात राज्यवार खताच्या खपाच्या प्रवृत्तीची चर्चा केलेली आहे. यात द्वितीयक माहिती सार्वजनिक उपलब्धतेच्या स्रोतातून प्राप्त केल्याचे नमुद केले आहे.

संशोधनाचे उद्देश :

- १) भारतातील खताच्या खपाचे अध्ययन करणे.
- २) अन्न-धान्याच्या उत्पादनात खतांची भूमिका जाणून घेणे.

भारतातील खत खपाची स्थिती

तक्ता क्र. १

भारतातील खत खपाची स्थिती दर्शक तक्ता

(लक्ष टनामध्ये)

वर्ष	युरीया	DAP	MOP	NPK	SSP
२००९-१०	२६६.७३	१०४.९२	४६.३४	८०.२५	२६.५१
१०१०-११	२८१.१३	१०८.७	३९.३२	९५.६४	३८.२५
२०११-१२	२९५.६५	१०१.९१	३०.२९	१०३.९५	४७.४६
२०१२-१३	३००.०२	९१.५४	२२.११	७५.२७	४०.३
२०१३-१४	३०६.००	७३.५७	२२.८	७२.६४	३८.७९

२०१४-१५	३०६.१५	७६.२६	२८.५३	८२.७८	३९.८९
२०१५-१६	३०६.३५	९१.०७	२४.६७	८८.२१	४२.५३
२०१६-१७	२९६.१४	८९.६४	२८.६३	८४.१४	३७.५७
२०१७-१८	२९८.९४	९२.९२	३१.५८	८५.९६	३४.३९
२०१८-१९	३१४.१८	९२.११	२९.५७	९०.२८	३५.७९
२०१९-२०	३३६.९५	१०१.००	२७.८७	९८.५७	४४.०३
२०२०-२१	३५०.४३	११९.११	३४.२५	११८.११	४४.८९
२०२१-२२	३४१.८	९२.७२	२४.५७	११४.७९	५६.८१
२०२२-२३	३५७.२५	१०५.३१	१६.३२	१००.७३	५०.१८

स्त्रोत : फर्टिलायझर असोसिएशन ऑफ इंडिया

तक्ता क्र. १ मध्ये युरीया, DAP, MOP, NPK आणि SSP या खताच्या खपाची २००९-१० ते २०२२-२३ या कालावधीकरीता देश पातळीवरील आकडेवारी आहे. यात युरीयाचा खप सुरुवातीच्या काळाच्या तुलनेत नंतरच्या काळात उत्तरोत्तर वाढ होत आहे. २००९-१० ते २०११-१२ आणि २०१९-२० ते २०२२-२३ च्या तुलनेत २०१२-१३ ते २०१८-१९ या काळात DAP च्या खपात घट होतांना दिसून येते. MOP च्या खपात २००९-१० ते २०२२-२३ या सर्व काळात चढ-उतार दिसून येतो. NPK आणि SSP च्या खपाच्या बाबतीत २००९-१० ते २०२२-२३ या काळात उत्तरोत्तर वृद्धी होत आहे.

युरीया आणि DAP चा राज्यवार प्रति कि. ग्रा. प्रति हेक्टर उपयोग (खप)

तक्ता क्र. २

अ. क्र.	राज्य / केंद्रशासित राज्य	२०२०-२१		२०२१-२२		२०२२-२३	
		युरीया	DAP	युरीया	DAP	युरीया	DAP
१	आंध्रप्रदेश	१८०.६१	४८.३२	१७१.६५	४१.७१	१९७.४५	५७.७२
२	तेलंगणा	२०३.७७	३६.४८	२१६.२३	३७.६८	२०६.५६	४०.७२
३	कर्नाटक	१०५.८५	४३.९२	११४.०२	३६.६३	११५.९६	३९.५६
४	केरळ	२५.२०	४.१९	२२.६२	२.७६	२२.२६	३.६५
५	तामिळनाडू	१४५.७६	४०.११	१४०.६६	३२.३७	१३२.३८	३६.३७
६	पाँडेचेरी	३६३.३६	२९.७५	३८१.२०	२६.३७	४२८.१९	४२.८२
७	अंदमान/निकोबार	६.१५	००.००	०.२५	१.२४	३.७९	१०.८८
८	गुजरात	१६५.५६	४५.५४	१५२.५०	३४.०७	१७४.०७	४२.९१
९	मध्यप्रदेश	१०५.९३	५६.४२	१०४.४६	४३.०७	११४.१५	४८.८०

१०	छत्तीसगढ	१३९.८२	६८.७९	१२१.३४	५३.५३	१२८.२५	४८.०५
११	महाराष्ट्र	९३.२३	३०.९२	९०.१४	२२.३४	८९.८३	२६.१४
१२	राजस्थान	८७.८७	३४.७१	८१.४६	२१.९९	८९.४४	३०.१०
१३	गोवा	२६.७८	५.४२	२१.२७	०.९७	२०.०६	४.३६
१४	दमन आणि दिव	०.००	०.००	०.००	०.००	०.००	०.००
१५	दादर, नगर हवेली	४५.४०	४२.६४	२७.०७	१०.१०	३५.८१	१०.०२
१६	हरीयाणा	३३१.७३	९७.३६	३३१.३०	७९.१२	३२३.९६	८८.५६
१७	पंजाब	३७४.७०	९८.६५	४००.४८	८०.१७	३७५.६३	९१.४९
१८	उत्तरप्रदेश	२६६.४८	९२.६०	२४९.६१	७४.४०	२५३.५४	७५.९५
१९	उत्तराखंड	२०५.१८	३२.२८	१८१.२४	२७.३२	१७८.९०	४५.०६
२०	हिमाचल प्रदेश	७८.५८	२.०९	८१.१४	०.१६	८०.५२	१.९५
२१	जम्मू आणि काश्मिर	१३३.६९	४९.७६	१०३.०८	२७.२७	९७.६१	२९.०५
२२	दिल्ली	२२५.४१	३८.१९	२७३.९९	३५.६२	२८१.४५	५४.८८
२३	बिहार	२५६.३२	८९.३८	२१९.१०	५६.१६	२१६.२४	५६.६९
२४	झारखंड	७०.०५	२९.३५	७०.२१	२४.७३	१०३.४९	३१.०२
२५	ओरिसा	६६.३४	३१.६५	६९.४३	२९.७६	६४.१९	२२.१८
२६	पश्चिम बंगाल	३४.१९	४१.३६	१३९.५३	२८.३५	१४७.४१	३९.५८
२७	आसाम	७३.१६	१६.७७	७६.४०	१०.९७	७१.२९	१२.६३
२८	त्रिपूरा	२६.४९	८.७४	३५.४५	१.५७	४०.०४	३.३८
२९	मनिपुर	६९.२६	१०.७३	३९.४५	१.७८	८२.२०	१०.४४
३०	मेघालय	०.००	०.००	०.००	०.००	०.००	०.००
३१	नागालैंड	१.२५	०.१२	४.२७	०.००	-	-
३२	अरुणाचल प्रदेश	०.००	०.००	०.००	०.००	३.०१	०.००
३३	मिझोरम	१६.२२	१.५७	९.८०	०.००	७८.९२	९.८०
	भारत	१५२.४६	५१.८४	१४७.६६	४०.०३	१५१.९८	४४.८०

Source: Ministry of Agriculture and Farmers Welfare.

वरील तक्त्यात राज्य / केंद्रशासित प्रदेशात २०२०-२१ ते २०२२-२३ या कालावधीतील युरिया आणि DAP या खताच्या खपाची माहिती दर्शविलेली आहे.

झारखंड, आसाम, पश्चिम बंगाल आणि ओरिसा ही राज्ये पूर्व क्षेत्रात येतात. राजस्थान, मध्यप्रदेश, गुजरात, गोवा आणि महाराष्ट्र ही राज्ये पश्चिम क्षेत्रात येतात. दिल्ली, जम्मू आणि काश्मिर, पंजाब, हरियाणा, उत्तराखंड, हिमाचल प्रदेश आणि उत्तरप्रदेश ही राज्ये उत्तरेकडील क्षेत्रात येतात. कर्नाटक, लक्षद्वीप, केरळ, तामिळनाडू आणि आंध्रप्रदेश ही राज्ये दक्षिण क्षेत्रात येतात. सिक्किम, त्रिपुरा, मिझोरम, मेघालय नागालँड आणि अरुणाचल प्रदेश ही राज्ये उत्तर-पूर्व क्षेत्रात मोडतात.

भारतात खताचे उत्पादन आणि वापर किंवा खप

तक्ता क्र. ३

अ.क्र.	वर्ष	एकूण खताचे उत्पादन (००० टनामध्ये)	एकूण खताचा खप (००० टनामध्ये)
१	२०११-१२	३८,८५८.३०	२७,७९०.२०
२	२०१२-१३	३७,६०६.९०	२५,५३६.२०
३	२०१३-१४	३८,१८०.६०	२४,४८२.४०
४	२०१४-१५	३८,७१८.८०	२५,५८१.३०
५	२०१५-१६	४१,५९७.७०	२६,७५२.६०
६	२०१६-१७	४१,४२७.२०	२५,९४९.९०
७	२०१७-१८	४१,५६०.८०	२६,५९३.४०
८	२०१८-१९	४१,५६४.००	२७,२२८.२०
९	२०१९-२०	४२,७५२.२०	२९,३७०.४०
१०	२०२०-२१	४३,४८३.५०	३२,५३५.६०
११	२०२१-२२	४३,७४३.००	२९,७९६.३०

स्रोत : फर्टिलायझर असोसिएशन ऑफ इंडिया

२०११-१२ ते २०२१-२२ या कालखंडात खताच्या उपयोगात खपात उत्तरोत्तर वाढ होत आहे. भारतात २०११-१२ ला खताचे उत्पादन ३८,८५८.३०० टन एवढे होते. यात २०१४-१५ पर्यंत उत्पादनात घट झाली. परंतु त्यानंतर २०२०-२१ पर्यंत सतत वाढ होत आहे. शेवटी २०२१-२२ या वित्तीय वर्षात उत्पादनात सर्वोच्च वाढ आहे. एकूणच या दशकात खताच्या उत्पादनात सतत वाढ होत आहे.

खताच्या खपाचा विचार करता २०११-१२ ते २०२१-२२ या कालखंडात खताच्या खपात वाढच होत आहे. २०११-१२ ला खताचा खप हा २७,७९०.२०० टन होता. २०१४-१५ पर्यंत त्यात घट झाली. परंतु त्यानंतर सतत २०२०-२१ पर्यंत वाढ झाली तर २०२१-२२

या वित्तीय वर्षात यात घट ही २९,७९६३०० टनापर्यंत झाली. खताच्या वापराच्या किंवा खपाच्या बाबतीत या दशकात साधारणतः वाढच होत आहे.

खताचा क्षेत्रवार उत्पादन

तक्ता क्र. ४

(लक्ष मेट्रीक टन)

अ. क्र.	क्षेत्र	२०१९-२०			२०२०-२१		
		युरीया	DAP	मिश्र खत	युरीया	DAP	मिश्र खत
१	सार्वजनिक क्षेत्र	६५.७५	-	१४.८१	७१.२८	-	१४.२९
२	सहकारी क्षेत्र	७२.०५	२०.९३	२१.६५	७२.१५	२०.०४	२२.८३
३	खाजगी क्षेत्र	१०६.७५	२४.७५	५०.१५	११९.१८	१९.६५	५६.६२
	एकूण	२४४.५५	४५.५०	८६.६१	२६२.६१	३९.६९	९३.७४

स्रोत : वार्षिक अहवाल, 2020-21, Ministry of Chemical and Fertilizer.

वरील तक्ता क्र. ४ मध्ये सार्वजनिक क्षेत्र, सहकारी क्षेत्र आणि खाजगी क्षेत्रातील २०१९-२० ते २०२०-२१ या कालखंडातील युरीया, DAP आणि मिश्र खताच्या उत्पादनाचे क्षेत्रवार आकडे दिलेले आहेत. यात २०१९-२० च्या तुलनेत २०२०-२१ या कालावधित युरीया, DAP आणि मिश्र खतांच्या बाबतीत उत्पादनाच्या प्रमाणात वाढ झालेली आहे.

संशोधन पद्धती :

हा शोधनिबंध पूर्णतः द्वितीयक माहितीवर आधारित आहे. यातील माहिती/आकडेवारी विभिन्न शासकीय अहवाल, अन्य शोधनिबंध, वेबसाईट जे सार्वजनिक उपयोगासाठी उपलब्ध आहेत. त्याचा आधार घेण्यात आला आहे. खताचे उत्पादन आणि वापर किंवा खप याची माहिती खत व्यवस्थापन प्रणालीच्या संकेत स्थळावर उपलब्ध आहे. यात तक्ते आणि आलेख, माहिती/आकडेवारी स्पष्ट करण्यासाठी वापरण्यात आली आहेत. यात सरळ, पूर्ण आणि मिश्रअशा खताच्या तीन श्रेणी आहेत. यात सरळ श्रेणी खतामध्ये एक मुख्य पोषक तत्व असते, पूर्ण श्रेणी खतात दोन पोषक तत्व असतात तर मिश्र श्रेणी खतात तीन किंवा त्यापेक्षा अधिक वनस्पती पोषक तत्व असतात. यात वनस्पतीच्या वाढीसाठी तीन मुख्य पोषक तत्वाची आवश्यकता असते. ते तीन पोषक तत्व नत्र (नायट्रोजन), स्फुरद (फॉस्फरस) आणि पोटॅशियम हे आहेत. नत्र हा पोषक तत्व युरीयात अधिक असतो आणि याचा वापर भारतातील शेतकरी मोठ्या प्रमाणात करतात.

परिणाम आणि परीक्षण :

उच्च दर्जाच्या खताच्या उत्पादकांची शिफारस असते की, खतामधील गुणवत्तेच्या वैशिष्ट्यामुळे शेतकऱ्यांच्या मनात विश्वासाहर्तेची भावना निर्माण व्हावी. उच्च दर्जाच्या खताच्या किंमती ह्या अधिक असल्याचा अनुभव बहुतांश शेतकऱ्यांना जाणवतो. त्यामुळे दीर्घकाळपर्यंत किंमती जास्त असल्यास शेतकरी असमाधानी असतात. म्हणून उच्च दर्जाच्या खताचे उत्पादक बाजार

व्यवस्थेनुसार किंमत निर्धारणाचे धोरण आखतात. कोणत्याही खतासाठी योग्य जाहीरातसुद्धा आवश्यक आहे. ही जाहीरात फक्त जागरूकताच वाढवत नाही तर शेतकऱ्यांना खते खरेदी करण्यासाठीसुद्धा प्रभावित करित असते.

कंपन्या बाजार यंत्रणेचे विश्लेषण करतात. जेणेकरून त्यांच्या कंपनीच्या खताचा पुरवठा अधिक असेल आणि बाजारात ते प्रबळ असतील. कंपनी कृषी प्रदर्शनी आणि जत्रा, जागृकता अभियान, विशिष्ट स्पर्धेचे प्रयोजन शेतकऱ्यांसाठी करतात. त्या माध्यमातून शेतकऱ्यांना समोरासमोर गुणवत्ता, वस्तूची किंमत इत्यादीचे अनुभव घेण्याची संधी कंपनी देत असतात.

निष्कर्ष :

खताच्या वाढत्या वापरामुळे पिक उत्पादकतेत वाढ होते. कारण ते जमिनीला महत्त्वाच्या पोषक तत्त्वाचा पुरवठा करित असतात. वनस्पतींच्या वाढीसाठी नत्र (नायट्रोजन), स्फुरद (फॉस्फरस) आणि पोटॅशियम हे तीन मुलभूत वनस्पती पोषक तत्त्व आहेत. युरीया खताच्या बाबतीत मात्र भारत आत्मनिर्भर झाला आहे.

सर्व सामान्यपणे शेतकरी युरीया खताचा अधिक वापर करतात. यातून आदर्श खताच्या वापराच्या प्रमाणात असंतुलन निर्माण होते. नत्र (नायट्रोजन), स्फुरद (फॉस्फरस) आणि पोटॅशियमसाठी हे आदर्श प्रमाण ४:२:१ आहे. सर्व NPK खतांच्या किंमतीत युरीयाच्या तुलनेत भिन्नता दिसून येते. युरीयाचा सर्वात जास्त खप आहे. DAP आणि MOP खताच्या बाबतीत पश्चिम क्षेत्राचे अनुकरण उत्तर क्षेत्रात होतांना दिसून येते. NPK, मिश्र खताच्या वापरासंदर्भात पश्चिम क्षेत्राचे अनुकरण उत्तर-दक्षिण क्षेत्रात होतांना दिसून येते. पुरवठा करणाराची सौदाशक्ती अधिक आहे परंतु खरेदीदार अर्थात शेतकरी यांची सौदाशक्ती ही अत्यंत कमी आहे. पर्यायी पुरवठ्याच्याबाबतीत कंपन्यांमध्ये शतृत्वयुक्त जोखिम आहे.

नविन तंत्राचा विकास आणि त्या तंत्राचा कार्यक्षम उपयोग त्याचबरोबर योग्य आदानांची लागवड हे भारतात अन्न सुरक्षेसाठी महत्त्वपूर्ण आहे. भारत सरकार खताची योग्य उपलब्धता आणि वापर/खप यासाठी धोरण निर्धारण करून त्याला प्रसारीत करित असते. मागील चार-साडेचार दशकात खताच्या खपात आणि वापरात भरीव वाढझाल्याचे आकडेवारीवरून दिसून येते. भारत जवळपास N आणि P च्या बाबतीत आत्मनिर्भर झालेला आहे. K च्या व्यतिरिक्त इतर खताची आयात ही अत्यंत नगण्य आहे.

तथापि मागील पाच वर्षात N आणि P ची आयात ही लक्षणीय वाढलेली आहे. याचे कारण पर्यावरण धोरणाच्या अनिश्चिततेमुळे मोठी कमतरता निर्माण होत असते. विकसित देशांच्या तुलनेत भारतात राष्ट्रीय स्तरावर खताच्या उद्योगाचे उत्पादन सरासरी कमी आहे. क्षेत्रवार खत उपयोगात फार मोठी तफावत आहे. खताचा वापर उत्तरेकडील क्षेत्रात (सरासरी ९१.५ कि.गॅ. प्रती हेक्टर) उच्च आहे. याचेच अनुकरण दक्षिणेकडील (सरासरी ८३.३ कि.गॅ. प्रती हेक्टर) क्षेत्र, पुर्वोत्तर क्षेत्र (४४.७ कि.गॅ. प्रती हेक्टर) आणि पश्चिम क्षेत्र (४०.७ कि.गॅ. प्रती हेक्टर) करतात. यामध्ये विचारात घेण्याजोगी बाब ही की, मागणीवर किंमती व्यतिरिक्त इतर घटकांचाही मोठा प्रभाव पडत असतो.

खताच्या वापरातील वाढीकरीता किंमती व्यतिरिक्त चांगले बियाणे, सिंचन आणि कर्जाच्या उपलब्धतेत सरकारला सुधारणा कराव्या लागतील. खताच्या किंमती अधिक असल्याने शेतकऱ्यांना खऱ्या अर्थाने खत खरेदीकरीता आर्थिक अनुदान सरकारकडून प्राप्त होणे अपेक्षित आहे न की उद्योगांना. म्हणून अधिक सक्षमपणे शेतकऱ्यांसाठी अनुदान धोरणाची अंमलबजावणी अधिक प्रभावीपणे होणे तितकेच गरजेचे आहे.

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मराठी संत साहित्यातील सामाजिक प्रेरणा

प्रा. रोशन शंकर भोवते

स्व. निर्धन पाटील वाघाये कला व विज्ञान महाविद्यालय

मुरमाडी/तुपकर ता. लाखनी जिल्हा. भंडारा

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सारांश:

मराठी ही महाराष्ट्राची राजभाषा झाली तरी पुरातन काळापासून आजतागायत महाराष्ट्राची गौरवशाली परंपरा जोपासून समाजातील अज्ञान - अंधकार दूर करण्याचे काम मराठी साहित्याद्वारे तयार होत आले. याला जवळपास तेराव्या शतकापासून म्हणजे सुमारे सातशे वर्षांपासून आजपर्यंत ज्ञानेश्वराची अमृतवाणी मराठी मनाला रिझवीत आहे. आजही वारकऱ्यांच्या घोरोघरी ज्ञानेश्वरीचे पारायण केले जाते. यातून “ज्ञानेश्वर माऊलीचा जयजयकार” समाजमनात गुंजताना दिसते. म्हणून ज्ञानेश्वरी म्हणजे शारदेच्या गळ्यातील “देशीकार” लेणे होय असे मराठी साहित्यकांचे मत आहे.

प्रस्तावना:

महाराष्ट्र ही संतांची खाण आहे. ते महाराष्ट्रातील सांस्कृतिक चळवळीला उजाळा देण्याचे काम तेराव्या शतकातील अखेरीस संत ज्ञानेश्वर ते संत नामदेव यांनी केले व संत तुकारामांनी या चळवळीला कळसाचे रूप दिले संतांनी आपल्या अभंगाद्वारे समाजमनातील घाण काढण्याचे महत्त्वपूर्ण काम केले. म्हणून आज सुद्धा अभंगाला अक्षरवाङ्मयाचा दर्जा प्राप्त झाला. प्राप्त परिस्थितीला अनुसरून त्यांनी समाजाला नवीन विचार दिले. शूद्र देव-देवतेचे पूजन, वर्ण विषमता, कर्मकांड यावर कडाडून टीका केली व समाजाला निष्काम कर्मयोग शिकविले.

हरि-हरा भेद नाही, देव दगडात नाही, तो सज्जनाच्या मनात आहे अशा विचारांची भर घातली. स्वोधारासाठी ‘नाममंत्र सहज सुलभ सोपारे’ असे सांगितले. त्यांनी ‘जाती, कुळ, वर्ण हे आघवेची रूप ! गाऊ कारण’ !! असे मानले. त्यांनी आपले विचार, तत्त्वज्ञान वैदिक परंपराच्या आधाराने जनसामान्यात घडविले. संत ज्ञानदेव, संत नामदेव, संत गोरा कुंभार, संत सावतामाळी, नरहरी सोनार, व संत तुकाराम अशा अठरापगड जातीतील जातीविषयक विचार याला दूर सारून मानवी कल्याणाचा जाहीरनामा दिला. त्यामुळे अध्यात्माच्या क्षेत्रात भावनिक आणि धार्मिक लोकशाहीचा जन्म झाला. यातून सामाजिक व सांस्कृतिक लोकशाहीला सुरुवात झाली.

अभंगाच्या मर्मभेदातील समरूपता:

संत ज्ञानेश्वरांनी मराठी भाषेचा महिमा शके १२१२ मध्ये ज्ञानेश्वरीची रचना करताना महाराष्ट्राला मराठी वाङ्मयीन ऐश्वर्य प्राप्त करून दिले. ते म्हणतात-

“माझा मराठीचा बोल कौतुके।
परी अमृता तेही पैजा जिंके।
ऐसी अक्षरे रसिके !
मिळविण ॥”

तत्त्वज्ञान व काव्याचा दुधशर्करा योग म्हणजे ज्ञानेश्वरी यांच्या कवित्वाला रसिकत्वाचा स्पर्श झालेला आहे. ते म्हणतात-

“साहित्य सोनियाच्या खाणी।
उघडावी देशिचीयाओक्षौणी।
विवेक वेलीची लावणी ।
हो दे सैंध॥”

परमेश्वर भेटीची ओढ संत गोरोबांनी परमार्थ सुखासाठी अनुभवाच्या आनंदासोबतच ईश्वर भक्ती व्यक्त केली.

“जन्मा घेऊनिया काय केले करणी ।
व्यर्थ शिनविली जननी।
नऊ महिने ओझे वागवून।
नाही गेला तिचा क्षीण।
ऐसा झालो अपराधी।
क्षमा करा कृपा निधी॥”

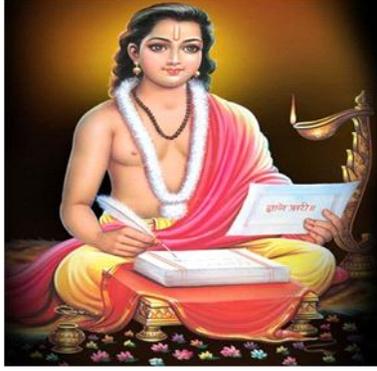
संत सावतामाळी यांनी आपल्या अभंगातून परमेश्वराचे गुणगान करताना ते म्हणतात-

“कांदा मुळा भाजी।
अवघी विठाबाई माझी।
लसुन मिरची कोथिंबीर।
अवघा झाला माझा हरी॥”

सराफीचा व्यवसाय करणारे नरहरी सोनार विठ्ठल भक्तीत गुंग होऊन ते म्हणतात “देवा तुझा मी सोनार” असा जप करित आपल्या कार्याला सुरुवात करतांना- “नाम फुकाचे फुकाचे। देवा पंढरीरायाचे॥। असे नाम महात्म्य सांगतात.

संत चोखोबा आपल्या अभंगात म्हणतात-

“चोखामने एका घासाची चाकरी।
करितो मी द्वारी तुमचिया॥”



संत तुकारामांनी “राम कृष्ण हरी” हा मंत्र केशव चैतन्य यांच्याकडून घेतला. व “कळेल हे तैसे गाईन मी तुझा। जनासवे काज काय माझे ।” असे उद्गार काढले. संत ज्ञानेश्वरांनी रचलेल्या भागवत संप्रदायाच्या इमारतीचा कळस करण्याचे श्रेय तुकारामांना लाभले. तुकारामांनी व्यापक सहानुभूती आणि स्वानुभाव याच्या बळावर देहूला पारमार्थिक विद्यापीठाची स्थापना केली. ते सुरुवातीला म्हणतात-

“बरे देवा कुणबी केलो।
नाहीतर दंभेचि असतो मेलो॥
भेटी लागी जीवा।
लागलीसे आसा।
पाहे रात्रंदिवस।
वाट तुझी॥”

संत तुकाराम आपल्या अभंगात म्हणतात-

“आम्हा घरी धन। शब्दांचीच रत्ने।
शब्दांचीच शस्त्रे। यत्न करू ॥”

संत साहित्यातील अध्यात्म विचार:

संतांनी आपल्या अभंगातून तेराव्या शतकाच्या उत्तरार्धापासून तत्कालीन समाज व्यवस्थेवर अध्यात्माचा पगडा निर्माण करून जीव व शिव अशी अद्वैत्वाची विचारसरणी लोकांसमोर मांडली. काम, क्रोध, मोह, लोभ यांच्या आधीन झालेला सामान्य माणूस सत्य, शांती, विवेक व आध्यात्मिक समाधान या गुणापासून पारखा होत चालला आहे. हे ज्ञानेश्वरापासून तर संत तुकारामापर्यंत सर्वांनी पटवून दिले. त्यातून समाजाला आध्यात्मिक विचारसरणीची जडणघडण देण्यासाठी अहोरात्र प्रयत्न करून अभंग हे जनसामान्यांच्या मनातील भाव घेणारे असावे असे विचार मांडले.

“म्हणोनी साधकातून माऊली।
पिके सारस्वत तुझ्या पाऊली॥

या कारणे मी सावली।
न संडी तुझी॥”

तर संत नामदेवांनी समाजातील कर्मठपणा, व्रतवैकल्य व संन्यास या गोष्टीला थारा न देता सर्व संग्रहकता, डोळसवृत्ती सहश्रद्धाभक्ती आणि सामाजिक नीतिची शिकवण समाजाला दिली. ते म्हणतात-

“कासावीस प्राण मन तळमळी।
जैशिका मासोळी जिवाविना॥
दाही दिशा ओस।
वाटते उदास॥
करिताती सोस ।
मना माजी॥”

संत नामदेव एकरूपतेचे दर्शन घडवताना म्हणतात.

“तू चांद मी चांदणी ।
तू नाग मी पद्मिनी।
तू कृष्णमी रुक्मिणी। स्वये दोन्ही॥
नामा म्हणे पुरुषोत्तमा।
स्वये जडलो तुझ्या प्रेमा॥
मी कुडी तू आत्मा।
स्वयं दोन्ही॥”

तर संत गोरोबांनी तत्वज्ञानाचा अनुभव आपल्या अभंगातून मांडला.

“अंतरीचे गुज। बोलू असे काही।
वर्ण धिःकारती ती जन । सर्व मज ।

संत एकनाथांनी आपल्या भारुडातून तत्वज्ञानाची संकल्पना मांडली. मांडताना ते म्हणतात “विंचू चावला, विंचू चावला हो।” काम क्रोधाधी विकार कसे नष्ट होतात ते आपल्या भारुडात म्हणतात.

“मनुष्य इंगळी अति दारुण।
मज नागा मारीला तिन।
सर्वांगी वेदना जाणं।
त्या इंगळीची॥”

त्यावर उतारा म्हणून शोधताना नामदेव विंचवाला उतारा करण्यासाठी तमोगुनाची शिकवण देतात

“तमोगुण मागे सारा।
तत्त्वगुण लावा अंगारा।
विंचू उत्तरे झरझरा॥”

संत तुकारामाने अभंगातून आपला आत्मा जेव्हा विश्वाकार अनुभव घेतो तेव्हा ते म्हणतात-

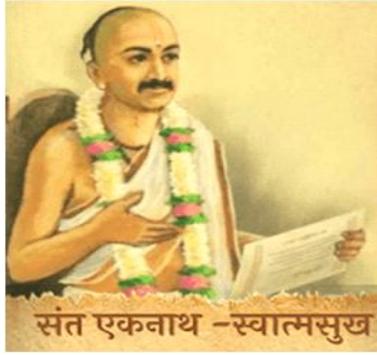
“अणुरेणू या थोकटा । तुका आकाशाएवढा ॥”

तुका म्हणे आता । उरलो उपकारापुरता॥

संत तुकाराम सकळ अनुभव मांडताना म्हणतात-

“तरुवर बिजापोटी। बीज तरुवर शेवटी ॥

तैसे तुम्हा आम्हा जाले। एकी एक सामावले ॥”



उदकावरीलतरंग। तरंग उदकाचे अंग॥

तुका म्हणे निंबच्छाया। ठाई पावली विलया॥

अशा श्रेष्ठ अनुभवाची प्रचीती होती.

अभंगातील भविष्यकालीन दिशा:

मराठी संत साहित्य अधिक बळकट करण्यासाठी खालील उपाय महत्वाचे ठरतील.

- १) मराठी साहित्याला भारदस्तपणा निर्माण करण्यासाठी अभंगाद्वारे मोलाची भर पडेल.
- २) नवीन पिढीमध्ये अक्षर वाङ्मयाची जागरूकता वाढेल. मराठी साहित्याला शृंगार चढवण्याचे काम अभंगाद्वारे होईल.
- ३) वाचन क्षमता विकसित होण्यास मदत होईल. कारण पौराणिक विचार हा प्रसिद्धीकडे नेणारा असतो.
- ४) संशोधन वृत्तीला वाव मिळवून देण्यासाठी अभंग हे महत्वाचे ठरतील.

५) शासनाचे शालेय स्तरावर प्रयत्न:

- मराठी भाषेतील गौरवशाली परंपरा मराठी भाषेतून निर्माण करताना आशय अभिव्यक्ती व ज्ञान या मूल्याची जोपासना शासनाद्वारे करण्यात यावी.
- शालेय स्तरावर मराठी भाषेचा अभ्यासक्रम बंधनकारक करण्यात यावा.
- मराठी भाषा विकसित होण्यासाठी प्राथमिक स्तरावर धोरणात्मक पाऊले उचलण्यात यावी.
- तांत्रिक शिक्षणाची सुविधा प्राथमिक स्तरापासून तर उच्च शिक्षणापर्यंत निर्माण करण्यात यावी.

निष्कर्ष:

मराठी संत साहित्य एक भाषा नसून आपल्या सांस्कृतिक विचारसरणीचा व परंपरेचा गाभा आहे. अभंगातून मराठीला मानाचा तुरा रोवण्याचे कार्य होत असते. त्यामुळे मराठी भाषेचे वैभव हे चिरकाल टिकणारे म्हणजे अक्षर वाङ्मयाचे रूप प्राप्त करते. संतांचे अभंग हे लेखी व मौखिक अशा दोन्ही पद्धतीने स्थलकाल सापेक्षाचे भान ठेवून एका पिढीकडून दुसऱ्या पिढीकडे हस्तांतरित होत असते. त्यामुळे ते अमरज्ञान होते. मराठी भाषा आणि भाषिक वाङ्मय जेवढे टिकेल तेवढे महाराष्ट्रीयन संस्कृती टिकण्यासाठी मदत होईल.

संदर्भ :

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क्रांतीज्योती सावित्रीबाई फुले : व्यक्ती आणि वाङ्मय

प्रा. डॉ. प्रकाश प. वट्टी.

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9403302682

कोणत्याही साहित्य कृतीचा विचार करतांना किंवा एखाद्या व्यक्तीवाङ्मयाचा विचार होत असतांना तो कालखंड लक्षात घ्यावा लागतो. क्रांतीज्योती सावित्रीबाई फुले यांचा कालखंड पेशवाई कालखंड होते. यावेळी सामाजिक, सांस्कृतिक व राजकिय परिस्थिती अतिशय वाईट होती. समाजात प्रचंड स्वरूपात अंधश्रद्धा, अज्ञान व दारिद्र्यता असल्यामुळे समाज गुलामिचे जिवन जगत होता. अशा समाजामध्ये प्रबोधनाचे साधन म्हणून महात्मा फुले व सावित्रीबाई फुले यांनी साहित्यातून प्रबोधन करण्याचे ठरविले. त्यावेळी महात्मा फुले यांनी शेतकऱ्यांचा आसुड ही तृतीय रत्न नाटक लिहून समाजात अज्ञान, अंधश्रद्धा याविषयी प्रबोधन केले. त्याच प्रमाणे त्यांचा बरोबरीने क्रांतीज्योती सावित्रीबाई फुले यांनी प्रबोधनाचा साधन म्हणून कवितेचा मार्ग स्विकारून आपल्या काव्यफुले या ग्रंथातून समाज प्रबोधनासाठी पुढे आल्या. कारण सावित्रीबाई फुले यांना समाजातील दारिद्र्यता आणि अंधश्रद्धा नष्ट करायची होती. तेव्हा दुसरा कोणताही मार्ग नसल्यामुळे साहित्याचे साधन म्हणून काव्यातून प्रबोधन करण्याचे ठरविले आणि वाङ्मय निर्मिती मराठी साहित्यात सर्व प्रथम क्रांतीज्योती सावित्रीबाई फुले यांनी केले. त्यामुळे क्रांतीज्योती सावित्रीबाई फुले यांचे व्यक्ती आणि वाङ्मय या अंगाने अभ्यास करणे महत्वाचे वाटते. क्रांतीज्योती सावित्रीबाई फुले यांचा जन्म ३ जानेवारी १८३१ साली सातारा जिल्ह्यातील खंडाळा तालुक्यातील नायगाव येथे झाला. वयाच्या नवव्या वर्षी म्हणजेच तत्कालीन काळी समाजात अत्यंत वाईट प्रथेचे प्रस्थ असल्यामुळे लहानपणीच त्यांचा जोतीरावाशी बालविवाह झाला. त्याच्या शिक्षणाला आरंभ होऊन. १८४७ साली त्या उच्च प्राथमिक परीक्षा उत्तीर्ण झाल्या जोतीरावांचा पिंड मूलतः क्रांतीकारकारी विचारांचा असल्यामुळे सावित्रीबाई वर त्या विचारांचा प्रभाव निश्चितच पडला. त्यातल्या त्यात ती एकमेकांच्या ध्येय धोरणाला परस्पर पूरक होती. जगाच्या इतिहासात अशी अलौकिक व्यक्तिमत्त्व दुर्मिळ आढळतात. जोतीराव व सावित्रीबाई हे महाराष्ट्रात नव्हे तर भारतीय सांस्कृतिक इतिहासात आपल्या अपूर्व कर्तृत्वाने उमटून दिसावे असे अनन्य साधारण व्यक्तिमत्त्व होते.

क्रांतीज्योती सावित्रीबाई फुले यांच्या कार्याचा मागोवा घेतला तर, ज्योतीरावांच्या प्रत्येक कार्यात सावित्रीबाईंचे सहकार्य असल्याचे स्पष्ट दिसून येते. शैक्षणिक, सामाजिक, धार्मिक सांस्कृतिक व साहित्यिक या क्षेत्रात त्यांनी अतुलनिय अशी मोलाची कामगिरी केली. क्रांतीज्योती

सावित्रीबाई यांच्या साहित्य क्षेत्रातील कामगिरी संदर्भात आपण थोडक्यात ऐतिहासिक दृष्टीकोनातून विचार करणार आहोत.

क्रांतीज्योती सावित्रीबाई फुले भारतातील विसाव्या शतकातील आद्य शिक्षिका, समाजसेविका स्त्रीमुक्ती चळवळीच्या नेत्या व सत्यसोधक समाजाच्या निष्ठावंत कार्यकर्त्या म्हणून पुढे येतात. त्या सोबतच साहित्यातील त्या अर्वाचिन मराठीतील आद्य मराठी कवयित्री आहेत, ही गोष्ट अनेकांना माहित नाही. सावित्रीच्या नावे चार काव्यसंग्रह आज उपलब्ध आहेत. पहिला काव्यसंग्रह काव्यफुले (१८५४) दुसरा बावनकशी सुबोध रत्नाकार (१८९२), तिसरा पितरपुराण व शिवमहिम्नस्रोत (संस्कृतकवी पुस्पंदत यांच्या काव्याचे ४२ श्लोक) भाषांतर. सावित्रीबाईंचा प्रथम काव्यसंग्रह शिळा प्रेसवर पुण्यात १८५४ साली प्रकाशित झाला. हा काळ आधुनिक मराठी काव्याचे जनक म्हणून ज्यांना आपण ओळखतो ते कवी केशवसुतापूर्वीच्या तीस वर्षापूर्वीचा आहे. या काळात आंग्लसंस्कृतिचा नव्याने परिचय झाल्यामुळे व्यक्तिस्वातंत्र्य व बुद्धिवादी भूमिकेचे वारे वेगाने वाहू लागले होते.

याच काळात मराठी काव्यात संत, पंडिती व शाहिरी परंपरा अस्तगत होण्याच्या मार्गावर होत्या. यावेळी संस्कृत व इंग्रजी साहित्याची प्रचंड प्रमाणात भाषांतरे होत होती. इ. स. १८५० ते १८९५ या काळात नवे नवे विज्ञान तंत्रज्ञानाची नवी पुरोगामी मूल्ये आलीत. डार्विनच्या उत्क्रांतीवादाने व्यक्ती स्वातंत्र्यवाद आला नवे प्रबोधनाचा युग सुरू झाले. याच काळात अनेक नामवंत व्यक्तीचे पुस्तके प्रकाशित झालीत राजा शिवाजी या कुंटे यांच्या महाकाव्यासदृश्य काव्याची निर्मितीही याच काळातील आहे. याचवेळी क्रांतीज्योतीचा काव्यफुले हा काव्यसंग्रह १८५४ साली प्रकाशित झाला, यात सावित्रीबाईंच्या एकूण बेचाळीस कविता आहेत. पितरपुराणे हे काव्यसंग्रह अजून उपलब्ध नसल्याचं कळते शिवमहिम्नस्रोत हे सुभाश सावरकरांनी अक्षरवैदर्भीच्या जुलै ९६ च्या अंकात प्रकाशित केलेले आहे. बावनकशी सुबोध रत्नाकर या दिर्घकाव्यात पेशवाईतील गुलामी जनांच्या अगतिक स्थितीचे चित्रण असून जोतीबांच्या कार्याचा गुणगौरव केलेला आहे. काव्यफुले या काव्यसंग्रहात सावित्रीबाईंनी काव्यातील अक्षर गणवृत्त, छंद व जातिरचना इ. काव्यप्रकारातील नियमाला जपत सुयोग्य ज्ञानाच्या आधारावर कविता केल्याचे दिसून येते.

“सत्य सुंदर शिवथाट ! शिरी शोभे जरा जपकर
वाहती गंगाधर उत्कट ! तुर्दश विद्येच्या
त्रिलोचन त्रितीक्षुसलाट ! त्रिपुरांतक त्रिभुवन त्रिपट
स्कंधी सर्पनृत्याच्या थयथयाट ! चाले कर्ताकर्म कि येचा !”

या काव्यफुले या काव्यसंग्रहातील पहिल्याच कवितेत शिव हे सत्य आहे हे अनार्य द्रविडीयन संस्कृतीचे आद्यदैवत. आपली शंकरावरील अनन्य भक्ती त्यांनी पुष्पदंताच्या भक्तीचे स्त्रीत्राचे भाषांतर करून जशी व्यक्ती केली तशीच शिवप्रार्थना या पहिल्याच आरंभीच्या कवितेत व्यक्त झालेली आहे. त्याच प्रमाणे जोतीबांच्या निर्मिक या शब्दाचे उपयोजन ही येथे मोठया चातूर्याने केलेले आहे. शिवापूढे आपले अज्ञान नष्ट होऊन सर्व विश्वात चैतन्याचा प्रकाश पसरू

दे, अशी विनवणी करीत आहे. तर शिवस्त्रोत या कवितेत क्रांतीज्योती सावित्रीबाई म्हणतात की,

“छत्रपती शिवाजीत ! प्रातः स्मरण करावे
 शुद्रादि अतिशुद्रांचा ! प्रभू वंदू मनोभावे
 नलराजा युधिष्ठिर ! द्रौपदी ही जनार्दन
 पुण्यश्लोक पुराणात ! इतिहासी शिवानन”

या ओळीतून क्रांतीज्योती सावित्रीबाई फुले शिवाजी महाराज जोतिबाचे श्रद्धास्थान, शुद्र व अतिशुद्राचा कैवारी म्हणून कवयित्री कष्टकरी जनतेचे प्रतीक म्हणून शिवाजी महाराजांना वंदन करतात.

याप्रमाणे या काव्यफुले या काव्यसंग्रहात अनेक महत्वाचा घटनाचा उल्लेख आलेला आहे. ताराबाईच्या पराक्रमाचा गौरव, बळीराजा हे शेतकऱ्यांचे संकटमोचन त्यांच्या कृषक संस्कृतीचे दर्शन याचे वर्णन या काव्यसंग्रहात आहे. तसेच युद्ध विषयक परिस्थितीचा आलेख समाविष्ट आहे.

सावित्रीबाईची काव्यविषयक कविता :

काव्यविषयक कविता हा त्यांचा काव्याच्या विशेष भाग असून ही त्यांची काव्यादृष्टी नव्या विवेकवादी युगात आलेल्या इहवादी भूमिकेतून आलेली आहे. पारलौकिक जीवनातील स्वप्न रम्य वास्तवापेक्षा समकालीन अर्थपूर्ण वास्तवाचे कलात्मक चित्रण करणे त्यांना अधिक महत्वाचे वाटते. त्यांच्या खुळे काव्य या कवितेतील भावानुभव पहा.

“कल्पित रचतो कवी काव्य
 सुखदुःखे तो कधी भव्य
 अनुभव घेतो स्वर्गाचा
 भोग भोगतो नरकाचा.”

अशी तीव्र व उत्कट भावानुभूतीतून अस्सल काव्य उदयाला येत असते. येथे मर्दकराच्या लेखन पूर्व व लेखन गर्भ या दोन्ही आत्मनिष्ठाचे स्मरण होते. तर याशिवाय निसर्ग व मानव यांच्यातील सुसंवादत्व तर कधी संघर्ष हा विशेष त्यांच्या फुलेप्रणीत इहवादी दृष्टिकोणातून आलेला आहे. सृष्टीमध्ये सौंदर्य व दिव्यत्व आहे. मानवी जीवनात तसे दिव्यत्व मात्र दिसून येत नाही म्हणून त्या तळमळताना दिसतात.

“दिव्य शक्तीने स्फुरे गंध पुष्पी
 रंग खुलतीही तिने इंद्रचापी
 सृष्टीमाजी जो रम्य असे काही
 तीच कारण या शक्ती असे पाही.”

हीच भावना सावित्रीबाईंनी आपल्या निसर्गविषयक कवितेत वेगळ्या शब्दात व्यक्त केली आहे. उदा जाईचे फुल, पिवळा चाफा, फुलपाखरू, फुलाची कळी, मातीची ओवी, मानव सृष्टी व सावित्री जोतीबा संवाद इ. कविता पिवळा चाफा रतीचा मदना सारख्या खेळवितो तसेच कविचे मन चेतविल्या जाते.

“जैसे रतीला मदन खेळवी
तैसे कवीचे मन चेतविती
गूढपणे तो मनात शिरूनी
काव्य कराया उन्मुख करतो”

या शिवाय केशवसुतांची पुष्पाप्रत कविता लिहीली आहे. सावित्रीबाईनीही फुलपाखरांच्या हालचालीचे सुक्ष्म चित्रण करून रंगसंवेदनेने प्रतिमा व्यक्त केली आहे.

“सतेज उघडे पिवळे रंगी
बोलके होते हंसे त्यांचे
पंख रेशमी त्यावर गोल
लहान मोठे पित रंगाचे”

बालकवी निसर्गात आपले दुःख विसरतात तर केशवसुतांना मात्र निसर्गाच्या सानिध्यात आपल्या दुःखद अनुभवाचा विसर पडत नाही. निसर्गातील सौंदर्याबद्दल हळहळ व्यक्त करून क्रांतीज्योती सावित्रीबाई निसर्गात मानवी व्यवहार शोधतात. ‘गरज सरो वैद्य मरो’ हा जगाचा अनुभव आहे. ही अनुभवाची कळीला फुलपाखराचा असाच अनुभव येणार !

म्हणुन

“कोण कोठली कळ फुलाची
जुनी विसर नवीन पाही
रीत जगाची उत्संरवल ही
पाहुनिया मी स्तिमीत होई.”

सृष्टीमध्ये सौंदर्य व चैतन्य आहे. सृष्टीतील व निसर्गातील चैतन्य व सौंदर्य मानवी जीवनात पृथ्वीवर अवतरले तर मानवी जीवनाचा सतत विकास होत जाईल, हा आशावाद. इंसुंदर सृष्टी सुंदर मानव सुंदर जीवन सारे

“सद्दावांच्या पर्जन्याने बहरून टाकू वारे !
मानव जीवन हे विकस या
भय चिंता सारे सोडूनिया
इतरा जगवू, स्वतः जगू या !”

या ओळीतून सावित्रीबाईंचा मानवी जडण घडणाची पायाभरणी व सामाजिक बांधिलकीची मूल्ये त्यांच्या काव्यात रूजलेली दिसतात. तत्कालीन समाज जीवनातील वास्तवाचे क्रूर ताण - तणावे दिसून येतात. व्यक्तिची धर्म व सामाजिक रूढीनी कशी कोंडी केली यांचे प्रत्यक्ष प्रतिबिंब या कवितात पडलेले आहे. तर १८७६- ७७ साली महाराष्ट्रात भीषण दुष्काळ पडला. या दृष्काळाचे कारण रूढीग्रस्त कर्मठाणी पाप वाढल्यामुळे देवाचा कोप झाला असे सांगितले, त्यावेळी सावित्रीबाईंनी मात्र अशा दांभिक प्रवृत्तीवर आपले टिकास्त्र उगारले.

“नाही पाऊस पडला कोठेही !
म्हणुनी पीकपाणी काही नाही

यांनी होती दुष्काळ लाही !
 कोप नसे देवाचा
 धर्म कर्माची भयचित्रे !
 सर्वामुळे करूनिया याला कंटाळून जनजाती !
 वैतागून ख्रिस्ती होती मुसलमान धर्म स्वीकारती !
 हे पाप कुणाचे ?”

अशा प्रकारे धर्मांतराबाबत त्याकाळी काढलेले सावित्रीबाईंचे उद्गार आजही पूर्णपणे खरे आणि तंतोतंत उपयोगी पडतात, तर बहुजन समाजाचे कल्याण शिक्षणात आहे. शिक्षणामुळे अज्ञान नाहिसे होते या गोष्टीची प्रखरतेने जाणीव असल्यामुळे क्रांतीज्योती सावित्रीबाईंना त्यावेळी स्त्री शुद्रांना शिक्षण घेता यावे शिक्षण घेऊन सुसंस्कृत व्हावे याची त्यांना तळमळ आहे.

“शुद्रांना सांगण्याजोगा आहे शिक्षण मार्ग हा
 शिक्षणाने मनुष्यत्व पशुत्व हटते पहा
 विद्येचीन गेले वाया गेले पशु
 स्वस्थ नका बसु विद्या घेणे
 शुद्र अतिशुद्र दुःख निवारा या
 इंग्रजी शिकाया संधी आली
 इंग्रजी शिकून जातिभेद मोडा
 भटजी भारूडा
 फेकूनिया
 इंग्रजी माऊली देईल सत्यज्ञान
 शुद्राला जीवन देते प्रेम
 इंग्रजी माऊली तोडूनिया पशुत्व
 देते मनुष्यत्व शुद्र लोका”

या प्रमाणे स्त्री - शुद्रांकरिता कवितारूपी उपदेश केला. सावित्रीबाईंनी त्या काळी कवीत्वाचे दुरदृष्टीकोन ठेवून विचार करित होत्या, हे त्यांच्या साहित्यावरून आपणास कळल्याशिवाय राहात नाही. त्याच प्रमाणे आपल्या जीवनात आमूलाग्र परिवर्तन झाले, हे सांगताना एका उपमेतून त्या सर्वकाही सांगतात !

“माझ्या जीवनात जोतिबा स्वानंद
 जैसा मकरंद कळीतला”

या जोतीरावांच्या विचाराचा आदर भाव करित माझ्यात बदल झाला तो केवळ जोतीरावांचा विचाराचा प्रभाव त्यांच्या कार्याचा सर्व काही म्हणजेच जोतीराव होत. जोतिबा हे शुद्रांच्या क्षितिजी तेजस्वी सूर्य म्हणून उगवला. कोंबडयाला घरात कितीही कोंडले तरी तो पहाटे बाग देणारच जोतिबामुळे नव्या युगाची समतेची पहाट उगवली.

“याशिवाय सावित्रीबाई म्हणतात
चंद्रमावळला
उगवला सूर्य
जाऊ चला गाळू मानवता केंद्र
मनुष्यत्व इंद्रपदी आणू”

या ओळीतून इहलोक निष्ठा, आत्मनिष्ठा निसर्ग काव्य व समाज इ. मूल्यांचे प्रथम दर्शन सावित्रीबाईंच्या काव्यात झालेले दिसून येते. याचा अर्थ केशवसुतापेक्षा त्यांचे काव्य श्रेष्ठ आहे असे नाही.

केशवसुत हे कवी सर्जनशील प्रतिभाशाली होते, तर सावित्रीबाई हया जातिवंत समाजसेविका. सावित्रीबाईंच्या काव्याचा प्रमुख विशेष म्हणजे तिची इहलोकनिष्ठा, तत्कालीन समाज जीवनाचे प्रतिबिंब तिच्यात पडलेले आहे. मानवी जीवनाच्या प्रगतीच्या आलेखात कलेचे महत्त्वपूर्ण स्थान आहे. अनुस्वार काढावा हा विचार त्यांच्या कवितेत सिध्द केला. या शिवाय काव्य हे मनोरंजनाचे साधन नसून सामाजिक परिवर्तनाचे एक प्रभावी माध्यम आहे. अशी काव्यनिर्मिती विषयी त्यांची भूमिका होती.

आदिमानवाच्या पुरातन काळापासून तर सरंजाम भांडवलशाही पर्यंतचा कलेचा प्रवास मानवी अस्तित्वाच्या संदर्भात होत आला. अस्सल कलाकृतीत केवळ भावनांचे व जाणीवांचे आकार नसतात तर तिथे व्यक्त झालेला माणूसकीचा गहिरा अर्थ हे माणूसकीचे मूल्यच कलेला महान करतात. या संघर्षातून मानवी स्वातंत्र्य व व्यक्तीस्वातंत्र्याची बीजे आविष्कृत होत असतात. व्यक्ती व समाज या दोन घटकात कर्मठ व धर्माध रूढीमूळे फार मोठी दरी निर्माण झालेली होती, ही दरी पिटवून टाकण्याचा प्रयत्न क्रांतीज्योती सावित्रीबाईंनी केला आहे. म्हणूनच सुप्रसिध्द समीक्षक डॉ. कृ. पा. देशपांडे यांनी सावित्रीबाईंना अग्रिफुले या समीक्षा ग्रंथात अर्वाचीन मराठीतील आद्य कवयित्री व अर्वाचिन मराठी काव्याची जननी असे संबोधले आहे, हा क्रांतीज्योतीच्या काव्याचा विजय नव्हे काय !

संदर्भ :

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- ३) सार्वजनिक सत्यधर्म : म. ज्योतीबा फुले.
- ४) ‘काव्यफुले’ काव्यसंग्रह : क्रांतीज्योती सावित्रीबाई फुले



वित्तीय समावेशन और डिजिटल अर्थव्यवस्था : भारत की अर्थव्यवस्था पर प्रभाव

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वित्तीय समावेशन और डिजिटल अर्थव्यवस्था आधुनिक अर्थव्यवस्थाओं को आकार देने वाली दो परिवर्तनकारी ताकतें हैं। भारत में, ये तत्व आर्थिक विकास को गति देने, गरीबी को कम करने और सामाजिक समानता को बढ़ावा देने में महत्वपूर्ण रहे हैं। वित्तीय समावेशन, जिसे समाज के वंचित और कम आय वाले वर्गों को सस्ती लागत पर वित्तीय सेवाएँ प्रदान करने के रूप में परिभाषित किया गया है, ने नीति निर्माताओं का काफी ध्यान आकर्षित किया है। इस बीच, डिजिटल अर्थव्यवस्था, जिसकी विशेषता आर्थिक प्रक्रियाओं में डिजिटल तकनीकों का व्यापक उपयोग है, स्मार्टफोन, इंटरनेट कनेक्टिविटी और डिजिटल इंडिया जैसी सरकारी पहलों के आगमन के साथ तेजी से विस्तारित हुई है।

यह पेपर वित्तीय समावेशन और डिजिटल अर्थव्यवस्था के बीच परस्पर क्रिया का पता लगाता है, भारत के आर्थिक परिदृश्य पर उनके सामूहिक प्रभाव को उजागर करता है। यह इन एजेंडों को बढ़ावा देने वाली नीतियों, उनके परिणामों और शेष चुनौतियों की जांच करता है।

कुट शब्द : वित्त, विकास, डिजिटल अर्थव्यवस्था, भारतीय अर्थव्यवस्था

साहित्य की समीक्षा:

वित्तीय समावेशन :

कई अध्ययनों ने आर्थिक विकास को बढ़ावा देने और गरीबी को कम करने में वित्तीय समावेशन की महत्वपूर्ण भूमिका को रेखांकित किया है। बेक, डेमिगुक-कुंट और लेविन (२००७) ने वित्तीय विकास और आर्थिक विकास के बीच सकारात्मक संबंध पाया, वित्तीय सेवाओं तक पहुँच के महत्व पर जोर दिया। बर्गेस और पांडे (२००५) ने भारत में गरीबी को कम करने में ग्रामीण बैंक शाखा विस्तार की भूमिका पर प्रकाश डाला। सरमा (२०१२) ने देशों में समावेशन की सीमा को मापने के लिए एक वित्तीय समावेशन सूचकांक विकसित किया, जिसमें पहुँच बढ़ाने के लिए लक्षित हस्तक्षेप की आवश्यकता की पहचान की गई। एलन एट अल. (२०१६) द्वारा किए गए अध्ययनों ने डिजिटल वित्तीय सेवाओं के प्रभाव का पता लगाया, जिसमें दिखाया गया कि मोबाइल मनी ने वंचित आबादी के लिए पहुँच में काफी सुधार किया है।

डिजिटल अर्थव्यवस्था :

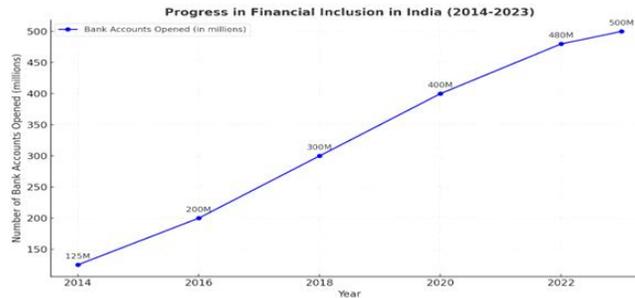
व्यवसायों और समाजों पर इसके परिवर्तनकारी प्रभाव के लिए डिजिटल अर्थव्यवस्था का व्यापक अध्ययन किया गया है। ब्रिनजॉल्फसन और मैकेफी (२०१४)ने उत्पादकता और नवाचार को बढ़ावा देने में डिजिटल प्रौद्योगिकियों की भूमिका पर जोर दिया। भारतीय संदर्भ में, भटनागर (२०१९)ने डिजिटल इंडिया पहल का विश्लेषण किया, और निष्कर्ष निकाला कि इसने इंटरनेट की पहुंच और डिजिटल साक्षरता को काफी बढ़ावा दिया है।यूपीआईजैसी डिजिटल भुगतान प्रणालियों का उदय शोध का केंद्र बिंदु रहा है। गुप्ता (२०२१)ने भारत में यूपीआईको अपनाने का अध्ययन किया, जिसमें पाया गया कि इसने लेनदेन की लागत को काफी कम कर दिया है और वित्तीय समावेशन को बढ़ाया है। इसी तरह, सिंह और राणा (२०२०)के अध्ययनों ने एसएमई के लिए ऋण पहुंच में अंतराल को पाटने में फिनटेक की भूमिका का पता लगाया।

भारत में वित्तीय समावेशन: प्रगति और चुनौतियाँ:

वित्तीय समावेशन में प्रगति :

भारत ने पिछले एक दशक में वित्तीय समावेशन में महत्वपूर्ण प्रगति की है। २०१४ में शुरू की गई प्रधानमंत्री जन धन योजना (PMJDY) वित्तीय पहुंच का विस्तार करने में सहायक रही है। २०२३ तक, इस योजना के तहत ५०० मिलियन से अधिक बैंक खाते खोले जा चुके हैं, जिनमें से अधिकांश महिलाओं और ग्रामीण आबादी के हैं। भारत की बायोमेट्रिक पहचान प्रणाली आधार द्वारा वित्तीय सेवाओं की पहुंच को और बढ़ावा मिला है, जिसने अपने ग्राहक को जानें (KYC) प्रक्रिया को सुव्यवस्थित किया है।

माइक्रो यूनित्स डेवलपमेंट एंड रिफाइनंस एजेंसी (MUDRA) योजना जैसी अन्य पहलों ने सूक्ष्म और लघु उद्यमों को संपार्श्विक-मुक्त ऋण प्रदान किया है, जिससे उद्यमशीलता और रोजगार सृजन को बढ़ावा मिला है। इसके अतिरिक्त, स्वयं सहायता समूहों (SHG) और मोबाइल बैंकिंग सेवाओं के विस्तार ने हाशिए पर पड़े समुदायों को औपचारिक वित्तीय प्रणाली में लाने में महत्वपूर्ण भूमिका निभाई है।



Ref-RBI

यहां भारत में वित्तीय समावेशन की प्रगति का एक ग्राफिकल चित्रण है, जिसमें २०१४ से २०२३ तक खोले गए बैंक खातों की संख्या दर्शाई गई है।

वित्तीय समावेशन में चुनौतियाँ :

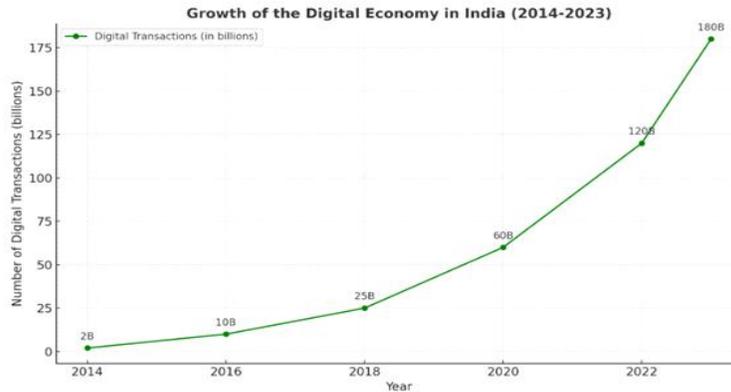
इन उपलब्धियों के बावजूद, चुनौतियाँ बनी हुई हैं। वित्तीय साक्षरता में कमी, संस्थाओं में विश्वास की कमी और दूरदराज के इलाकों में भौतिक बैंकिंग बुनियादी ढांचे तक सीमित पहुंच के कारण आबादी का एक बड़ा हिस्सा औपचारिक वित्तीय प्रणालियों से बाहर रहता है। इसके अलावा, लैंगिक असमानताएं और सामाजिक-सांस्कृतिक बाधाएं महिलाओं की वित्तीय भागीदारी में बाधा डालती रहती हैं। वित्तीय उत्पादों और सेवाओं की उच्च लागत कम आय वाले परिवारों के लिए एक और बाधा है।

भारत में डिजिटल अर्थव्यवस्था: एक अवलोकन :

डिजिटल अर्थव्यवस्था का विकास :

स्मार्टफोन और किफ़ायती इंटरनेट सेवाओं के प्रसार से भारत की डिजिटल अर्थव्यवस्था में तेज़ी से वृद्धि हुई है। २०१६ में लॉन्च किए गए यूनिफ़ाइड पेमेंट्स इंटरफ़ेस (UPI) ने डिजिटल लेन-देन में क्रांति ला दी है, जिसकी मासिक मात्रा २०२३ में १५ बिलियन से अधिक हो जाएगी। पेटीएम, फोनपे और गूगल पे जैसे डिजिटल वॉलेट ने पीयर-टू-पीयर और मर्चेन्ट भुगतान को और भी सरल बना दिया है।

ई-कॉमर्स प्लेटफ़ॉर्म, डिजिटल लेंडिंग और ऑनलाइन मार्केटप्लेस के उदय ने पारंपरिक व्यवसाय मॉडल को बदल दिया है, जिससे छोटे और मध्यम उद्यमों (SME) को व्यापक बाज़ारों तक पहुंच बनाने में मदद मिली है। डिजिटल इंडिया और भारतनेट जैसी सरकारी पहलों का उद्देश्य सार्वभौमिक इंटरनेट पहुंच, डिजिटल साक्षरता और सरकारी सेवाओं का डिजिटलीकरण प्रदान करना है।



Ref-RBI

यहां भारत में डिजिटल अर्थव्यवस्था के विकास को दर्शाने वाला एक ग्राफ दिया गया है, जिसे २०१४ से २०२३ तक डिजिटल लेनदेन में वृद्धि द्वारा दर्शाया गया है।

डिजिटल अर्थव्यवस्था में चुनौतियाँ :

जबकि डिजिटल अर्थव्यवस्था ने नए अवसर पैदा किए हैं, लेकिन इसके सामने चुनौतियाँ भी हैं। एक महत्वपूर्ण डिजिटल विभाजन बना हुआ है, जहाँ ग्रामीण क्षेत्र इंटरनेट पहुँच और डिजिटल साक्षरता के मामले में शहरी केंद्रों से पीछे हैं। साइबर सुरक्षा खतरे, डेटा गोपनीयता चिंताएँ और दूरदराज के क्षेत्रों में अपर्याप्त डिजिटल बुनियादी ढाँचा महत्वपूर्ण जोखिम पैदा करता है। इसके अतिरिक्त, अनौपचारिक क्षेत्र, जो भारत की अर्थव्यवस्था का एक बड़ा हिस्सा है, डिजिटल पारिस्थितिकी तंत्र में अपर्याप्त रूप से एकीकृत है। वित्तीय समावेशन और डिजिटल अर्थव्यवस्था के बीच तालमेल वित्तीय समावेशन और डिजिटल अर्थव्यवस्था के अभिसरण ने एक सहक्रियात्मक संबंध बनाया है जो उनके व्यक्तिगत लाभों को बढ़ाता है। डिजिटल प्रौद्योगिकियों ने पहुँच, सामर्थ्य और बुनियादी ढाँचे की पारंपरिक बाधाओं को दूर करते हुए वित्तीय सेवाओं की लागत-प्रभावी और कुशल डिलीवरी को सक्षम किया है।

डिजिटल भुगतान प्रणाली :

यूपीआई, आधार-सक्षम भुगतान प्रणाली (AePS) और मोबाइल बैंकिंग ने लेन-देन की लागत और समय को काफी कम कर दिया है, जिससे वित्तीय सेवाएँ बिना बैंक वाले लोगों के लिए अधिक सुलभ हो गई हैं। इन प्रणालियों ने सरकार-से-व्यक्ति (G2P) भुगतान, जैसे सब्सिडी और कल्याण लाभ, पारदर्शिता सुनिश्चित करने और लीकेज को कम करने की सुविधा भी प्रदान की है।

डिजिटल ऋण और ऋण पहुँच : फिनटेक प्लेटफॉर्म ने वंचित क्षेत्रों को ऋण प्रदान करने के लिए बड़े डेटा और कृत्रिम बुद्धिमत्ता का लाभ उठाया है। मोबाइल उपयोग पैटर्न और ई-कॉमर्स लेनदेन जैसे गैर-पारंपरिक डेटा स्रोतों पर आधारित वैकल्पिक क्रेडिट स्कोरिंग मॉडल ने तेजी से और अधिक समावेशी ऋण निर्णय लेने में सक्षम बनाया है। यह विशेष रूप से एसएमई और पहली बार ऋण लेने वालों के लिए फायदेमंद रहा है।

डिजिटल साक्षरता : डिजिटल साक्षरता के माध्यम से सशक्तिकरण प्रधानमंत्री ग्रामीण डिजिटल साक्षरता अभियान (PMGDISHA) जैसी डिजिटल साक्षरता पहलों ने लाखों लोगों को बुनियादी डिजिटल कौशल से लैस किया है। यह सशक्तिकरण व्यक्तियों को डिजिटल अर्थव्यवस्था में भाग लेने, वित्तीय सेवाओं तक पहुँचने और सूचित वित्तीय निर्णय लेने में सक्षम बनाता है।

भारत की अर्थव्यवस्था पर प्रभाव:

आर्थिक विकास : वित्तीय समावेशन और डिजिटल अर्थव्यवस्था के एकीकरण ने उपभोक्ता आधार का विस्तार करके और आर्थिक गतिविधि को बढ़ाकर आर्थिक विकास को गति दी है। डिजिटल भुगतान प्रणालियों ने लेन-देन की दक्षता को बढ़ाया है, जबकि डिजिटल ऋण ने उद्यमशीलता और रोजगार सृजन का समर्थन किया है।

गरीबी में कमी और सामाजिक समानता : वित्तीय समावेशन बचत, ऋण और बीमा तक पहुँच प्रदान करके गरीबी को कम करने में एक प्रमुख चालक रहा है। डिजिटल अर्थव्यवस्था के साथ मिलकर, इसने हाशिए पर पड़े समुदायों को अवसरों तक पहुँचने, सामाजिक-आर्थिक अंतर को पाटने और सामाजिक समानता को बढ़ावा देने में सक्षम बनाया है।

अर्थव्यवस्था का औपचारिककरण : डिजिटल प्लेटफॉर्म ने अनौपचारिक अर्थव्यवस्था को औपचारिक बनाने में महत्वपूर्ण भूमिका निभाई है, जो भारत के लगभग ८०% कार्यबल के लिए जिम्मेदार है। डिजिटल भुगतान और जीएसटी अनुपालन ने छोटे व्यवसायों को औपचारिक दायरे में ला दिया है, जिससे कर राजस्व और नियामक निगरानी में वृद्धि हुई है।

संकट के दौरान लचीलापन : कोविड-१९ महामारी के दौरान वित्तीय समावेशन और डिजिटल अर्थव्यवस्था के बीच तालमेल महत्वपूर्ण साबित हुआ। डिजिटल भुगतान प्रणालियों ने संपर्क रहित लेन-देन की सुविधा प्रदान की, जबकि प्रत्यक्ष लाभ हस्तांतरण ने कमज़ोर आबादी को समय पर सहायता सुनिश्चित की। डिजिटल ऋण देने वाले प्लेटफॉर्म ने आर्थिक मंदी के दौरान एसएमई को बहुत ज़रूरी तरलता प्रदान की।

वित्तीय समावेशन और डिजिटल अर्थव्यवस्था के लाभों को अधिकतम करने के लिए, निम्नलिखित नीतिगत उपायों की अनुशंसा की जाती है।

डिजिटल अवसंरचना को बढ़ाएँ: डिजिटल विभाजन को पाटने के लिए ग्रामीण और दूरदराज के क्षेत्रों में इंटरनेट कनेक्टिविटी और डिजिटल अवसंरचना का विस्तार करें।

वित्तीय साक्षरता को बढ़ावा दें: वित्तीय सेवाओं के बारे में जागरूकता और उपयोग में सुधार करने के लिए महिलाओं और वंचित समुदायों पर ध्यान केंद्रित करते हुए लक्षित वित्तीय साक्षरता कार्यक्रम लागू करें।

साइबर सुरक्षा को मज़बूत करें: डिजिटल लेनदेन की सुरक्षा सुनिश्चित करने और भरोसा बनाने के लिए मज़बूत साइबर सुरक्षा ढाँचे और डेटा सुरक्षा नियम विकसित करें।

फ़िनटेक इनोवेशन का समर्थन करें: डिजिटल वित्तीय सेवाओं में नवाचार को बढ़ावा देने के लिए फ़िनटेक स्टार्टअप के लिए एक सहायक विनियामक वातावरण को बढ़ावा दें।

अनौपचारिक क्षेत्र को एकीकृत करें: औपचारिक अर्थव्यवस्था में उनके समावेश को सुविधाजनक बनाने के लिए अनौपचारिक क्षेत्र के लिए अनुरूप डिजिटल समाधान डिज़ाइन करें।

सार्वजनिक-निजी भागीदारी को प्रोत्साहित करें: वित्तीय और डिजिटल पहलों की पहुँच और प्रभाव को बढ़ाने के लिए सार्वजनिक-निजी भागीदारी का लाभ उठाएँ।

निष्कर्ष:

वित्तीय समावेशन और डिजिटल अर्थव्यवस्था परिवर्तनकारी ताकतें हैं, जिनमें भारत के आर्थिक परिदृश्य को नया आकार देने की क्षमता है। उनके सहक्रियात्मक संबंध ने विकास को गति दी है, गरीबी को कम किया है और सामाजिक समानता को बढ़ावा दिया है। हालाँकि, महत्वपूर्ण चुनौतियाँ बनी हुई हैं, जिसके लिए नीति निर्माताओं, वित्तीय संस्थानों और प्रौद्योगिकी प्रदाताओं से निरंतर प्रयास की आवश्यकता है।

जैसे-जैसे भारत ५ ट्रिलियन डॉलर की अर्थव्यवस्था बनने की दिशा में आगे बढ़ रहा है, वित्तीय समावेशन और डिजिटल अर्थव्यवस्था का एकीकरण समावेशी और सतत विकास को प्राप्त करने में महत्वपूर्ण भूमिका निभाएगा। मौजूदा चुनौतियों का समाधान करके और डिजिटल

प्रौद्योगिकियों द्वारा प्रस्तुत अवसरों का लाभ उठाकर, भारत यह सुनिश्चित कर सकता है कि उसकी आर्थिक प्रगति में कोई भी पीछे न छूटे।

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भारत में रोजगार और आजीविका : २०१४ से एक ऐतिहासिक अध्ययन**डॉ. विजय क्षिरसागर बन्सोड**

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संक्षेप:

२०१४ के बाद से भारत में रोजगार और आजीविका का अध्ययन महत्वपूर्ण नीति सुधारों, तकनीकी प्रगति और सामाजिक-आर्थिक परिवर्तनों की अवधि को दर्शाता है। यह शोध पत्र “मेक इन इंडिया,” “स्किल इंडिया,” और “डिजिटल इंडिया” जैसी पहलों के संदर्भ में उभरते रोजगार परिदृश्य की पड़ताल करता है। वैश्विक आर्थिक रुझानों के साथ-साथ इन कार्यक्रमों के प्रभाव का विश्लेषण करके, शोध यह जानकारी प्रदान करता है कि भारत ने बेरोजगारी, श्रम बाजार में व्यवधान और कोविड-१९ महामारी जैसी चुनौतियों का सामना कैसे किया है। अनौपचारिक क्षेत्र, गिग अर्थव्यवस्था और हरित नौकरियों पर जोर दिया जाता है और सतत विकास के लिए उनके निहितार्थ की जांच की जाती है।

परिचय:

२०१४ के बाद भारत में रोजगार को व्यापक सरकारी नीतियों, तकनीकी व्यवधानों और वैश्विक आर्थिक परिवर्तनों के संगम द्वारा आकार दिया गया है। इस अवधि में नवाचार और उद्यमिता को बढ़ावा देते हुए बेरोजगारी और अल्परोजगार जैसी पुरानी समस्याओं पर ध्यान केंद्रित करने के सरकारी प्रयास देखे गए हैं। यह पेपर २०१४ के बाद से भारत में रोजगार और आजीविका में प्रमुख विकासों पर नज़र रखता है, प्रमुख नीतिगत हस्तक्षेपों और उनके प्रभावों पर प्रकाश डालता है। यह अध्ययन डिजिटलीकरण, स्वचालन और कोविड-१९ महामारी से उत्पन्न चुनौतियों और अवसरों का भी पता लगाता है, जो २१वीं सदी में भारत के श्रम बाजार की गतिशीलता में एक व्यापक अंतर्दृष्टि प्रदान करता है।

कुट शब्द : रोजगार, आजीविका, सरकारी नीती, भारतीय अर्थव्यवस्था**साहित्य की समीक्षा:**

मौजूदा साहित्य भारत में उभरते रोजगार परिदृश्य को समझने के लिए एक आधार प्रदान करता है। इस क्षेत्र में प्रमुख योगदानों में शामिल हैं।

नीति आयोग (२०२१) और श्रम एवं रोजगार मंत्रालय (२०१४-२०२३) द्वारा किए गए अध्ययनों ने “मेक इन इंडिया” और “स्किल इंडिया” जैसे सरकारी कार्यक्रमों की प्रभावशीलता का विश्लेषण किया है। इन पहलों को विनिर्माण नौकरियों को बढ़ावा देने और कौशल अंतर को दूर करने का श्रेय दिया जाता है, लेकिन कार्यान्वयन में चुनौतियाँ बनी हुई हैं।

अंतर्राष्ट्रीय श्रम संगठन (ILO) द्वारा किए गए शोध में अनौपचारिक क्षेत्र के प्रभुत्व पर प्रकाश डाला गया है, जो भारत के ८०% से अधिक कार्यबल को रोजगार देता है। अकादमिक कार्य इस क्षेत्र के उत्थान के लिए औपचारिकता और बेहतर सामाजिक सुरक्षा तंत्र की आवश्यकता पर जोर देते हैं।

बल भागीदारी में लैंगिक असमानताओं पर शोध सांस्कृतिक मानदंडों, देखभाल की ज़िम्मेदारियों और कार्यस्थल भेदभाव को बाधाओं के रूप में पहचानता है। मातृत्व लाभ और उद्यमिता कार्यक्रमों में वृद्धि जैसी पहलों का महिलाओं के आर्थिक सशक्तीकरण पर उनके प्रभाव के लिए मूल्यांकन किया गया है।

गिग इकॉनमी: उबर, ओला और ज़ोमैटो जैसे प्लेटफ़ॉर्म के उदय का व्यापक अध्ययन किया गया है। ORF (ऑब्ज़र्वर रिसर्च फ़ाउंडेशन) जैसे थिंक टैंक की रिपोर्ट गिग वर्क से जुड़े अवसरों और कमज़ोरियों दोनों को उजागर करती है।

कोविड-१९ महामारी: CMIE (सेंटर फ़ॉर मॉनिटरिंग इंडियन इकॉनमी) और मैकिन्से जैसे संगठनों की रिपोर्टों में महामारी के रोजगार पर पड़ने वाले प्रभाव का विश्लेषण किया गया है। ये अध्ययन लॉकडाउन के दौरान बड़े पैमाने पर नौकरी के नुकसान और विभिन्न क्षेत्रों में असमान रिकवरी का दस्तावेजीकरण करते हैं। हरित नौकरियाँ और स्थिरता: सतत विकास पर साहित्य भारत के नवीकरणीय ऊर्जा क्षेत्र और अंतर्राष्ट्रीय सौर गठबंधन (ISA) जैसी पहलों का पता लगाता है। विश्व बैंक और UNEP के अध्ययन जलवायु चुनौतियों का समाधान करते हुए आर्थिक विकास में योगदान देने के लिए हरित नौकरियों की क्षमता पर जोर देते हैं।

साहित्य की यह समीक्षा भारत की रोजगार चुनौतियों और अवसरों की बहुमुखी प्रकृति को रेखांकित करती है, तथा इस पत्र में प्रस्तुत विश्लेषण के लिए प्रासंगिक आधार प्रदान करती है।

रणनीतिक पहल और रोजगार कार्यक्रम: भारत सरकार ने रोजगार को बढ़ावा देने और आजीविका बढ़ाने के लिए २०१४ से कई प्रमुख कार्यक्रम शुरू किए हैं। प्रमुख गतिविधियों में निम्नलिखित शामिल है।

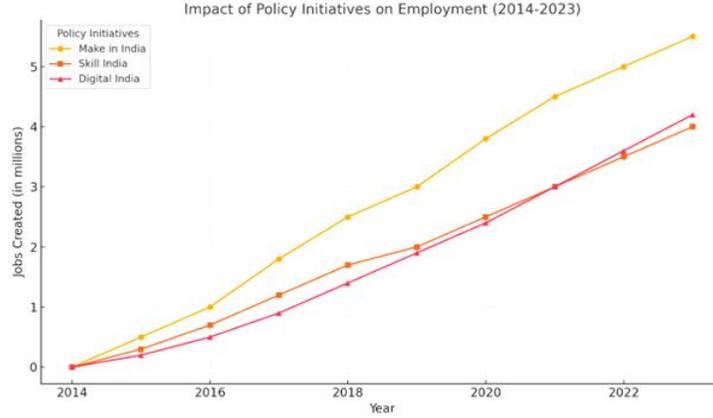
मेक इन इंडिया: इसका मुख्य उद्देश्य प्रत्यक्ष विदेशी निवेश (एफडीआई) को आकर्षित करके विनिर्माण को बढ़ावा देना और रोजगार पैदा करना है।

कौशल भारत मिशन: व्यावसायिक प्रशिक्षण और प्रमाणन कार्यक्रमों के माध्यम से कार्यबल के बीच कौशल अंतर को पाटने के लिए शुरू की गई एक पहल है।

डिजिटल इंडिया: विशेषकर ग्रामीण क्षेत्रों में नौकरियाँ पैदा करने और सेवा वितरण में सुधार के लिए प्रौद्योगिकी का लाभ उठाने पर जोर दिया जा रहा है।

स्टार्टअप इंडिया: नवीन स्टार्टअप को वित्तीय और नियामक सहायता प्रदान करके उद्यमिता को बढ़ावा देने पर ध्यान केंद्रित करता है।

प्रधान मंत्री रोजगार सृजन कार्यक्रम (पीएमईजीपी): क्रेडिट-लिंकड सब्सिडी के माध्यम से स्व-रोजगार के अवसरों को बढ़ावा देने पर जोर दिया जा रहा है।



Ref-GOI

यहां २०१४ से २०२३ तक भारत में रोजगार पर प्रमुख नीतिगत पहलों के प्रभाव को दर्शाने वाला एक ग्राफ दिया गया है। प्रत्येक पंक्ति एक विशिष्ट कार्यक्रम के लिए अनुमानित रोजगार सृजन को दर्शाती है: “मेक इन इंडिया,” “स्किल इंडिया,” और “डिजिटल इंडिया।”

२०१४ तक रोजगार के रुझान: २०१४ के बाद से भारत में रोजगार के रुझान प्रगति और निरंतर चुनौतियों दोनों को दर्शाते हैं। इसमें निम्नलिखित बिंदु शामिल हैं।

कार्यबल का औपचारिककरण: वस्तु एवं सेवा कर (जीएसटी) और वित्तीय लेनदेन के डिजिटलीकरण जैसे प्रयासों ने अधिक श्रमिकों को औपचारिक अर्थव्यवस्था में स्थानांतरित होते देखा है।

गिग इकोनॉमी का उदय: उबर, ओला, स्विगी और ज़ोमैटो जैसे प्लेटफार्मों ने लचीले नौकरी के अवसर पैदा किए हैं।

शहरीकरण और प्रवासन: तीव्र शहरी विकास ने निर्माण और सेवाओं में रोजगार में वृद्धि की है, जबकि ग्रामीण से शहरी प्रवास में भी वृद्धि हुई है।

वैश्विक रुझान प्रभाव: वैश्विक आर्थिक रुझानों ने भारत की रोजगार क्षमता को काफी प्रभावित किया है।

ऑटोमेशन और आर्टिफिशियल इंटेलिजेंस: ऑटोमेशन और आर्टिफिशियल इंटेलिजेंस के उदय ने कम-कुशल नौकरियों को विस्थापित करते हुए तकनीक-प्रेमी पेशेवरों की मांग पैदा की है।

घर से काम करें: कोविड-१९ महामारी ने कर्मचारियों को घर से काम करने की आदत को तेज कर दिया है, खासकर सूचना प्रौद्योगिकी और ज्ञान-आधारित उद्योगों में।

आपूर्ति श्रृंखला पुनर्गठन: भू-राजनीतिक कारकों और वैश्विक व्यापार में बदलाव ने भारत के लिए विनिर्माण केंद्र बनने के अवसर पैदा किए हैं।

अनौपचारिक क्षेत्र और सामाजिक सुरक्षा: नीतिगत प्रयासों के बावजूद, अनौपचारिक क्षेत्र भारत की अर्थव्यवस्था में एक प्रमुख शक्ति बना हुआ है, जो ८०% से अधिक कार्यबल को रोजगार देता है। प्रमुख चुनौतियों में निम्नलिखित शामिल हैं।

सामाजिक सुरक्षा का अभाव: अधिकांश अनौपचारिक श्रमिकों को पेंशन, स्वास्थ्य देखभाल और बेरोजगारी लाभ नहीं मिलते हैं।

अनिश्चित कार्य परिस्थितियाँ: कम वेतन, नौकरी की असुरक्षा और खराब कार्य परिस्थितियाँ बनी रहती हैं।

हालिया घटनाक्रम: ई-श्रम पोर्टल जैसी पहल का उद्देश्य अनौपचारिक श्रमिकों को पंजीकृत करना और सामाजिक सुरक्षा प्रदान करना है।

श्रम बल में महिलाएँ: शिक्षा और कौशल विकास कार्यक्रमों में सुधार के बावजूद, भारत की श्रम शक्ति में महिलाओं की भागीदारी चिंताजनक रूप से कम है। इसके मुख्य घटकों में निम्नलिखित शामिल हैं।

सामाजिक मानदंड और देखभाल की जिम्मेदारियाँ: पारंपरिक लिंग भूमिकाएँ महिलाओं के औपचारिक रोजगार को सीमित करती हैं।

उभरते रुझान: अधिक महिलाएं उद्यमिता और प्रौद्योगिकी-आधारित क्षेत्रों में प्रवेश कर रही हैं, हालांकि उद्योग में प्रवेश की चुनौतियाँ बनी हुई हैं।

हरित नौकरियाँ और सतत विकास: सतत विकास के प्रति भारत की प्रतिबद्धता ने नवीकरणीय ऊर्जा, टिकाऊ कृषि और अपशिष्ट प्रबंधन में हरित रोजगार के अवसर पैदा किए हैं। मुख्य विकासों में निम्नलिखित शामिल हैं।

नवीकरणीय ऊर्जा परियोजनाएं: अंतर्राष्ट्रीय सौर गठबंधन (आईएसए) जैसी पहल ने सौर और पवन ऊर्जा क्षेत्रों में नौकरियाँ पैदा की हैं।

सतत कृषि पद्धतियाँ: जैविक खेती और कृषि वानिकी पर्यावरण-अनुकूल आजीविका विकल्पों के रूप में लोकप्रियता हासिल कर रहे हैं।

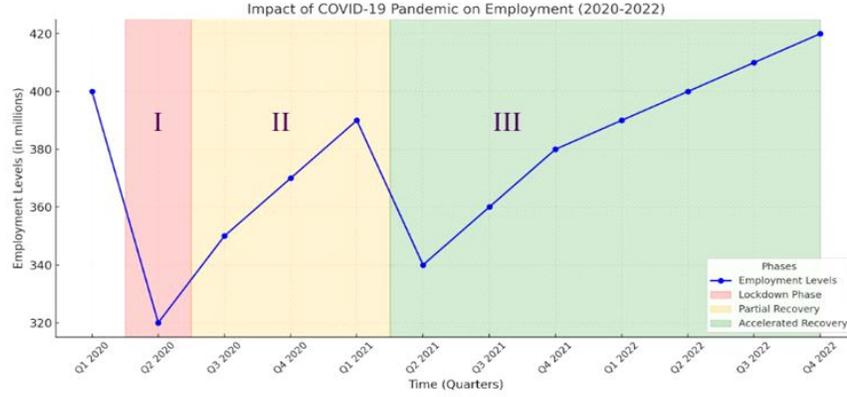
सर्कुलर इकोनॉमी: रीसाइक्लिंग और अपशिष्ट प्रबंधन को बढ़ावा देने के प्रयासों ने रोजगार के नए रास्ते खोले हैं।

कोविड-१९ महामारी: व्यवधान और पुनर्प्राप्ति: कोविड-१९ महामारी का भारत के रोजगार क्षेत्र पर गहरा प्रभाव पड़ा है। इस में

नौकरी का नुकसान: राष्ट्रव्यापी लॉकडाउन के कारण बड़े पैमाने पर छंटनी और रिवर्स माइग्रेशन हुआ है, जिससे विशेष रूप से अनौपचारिक श्रमिक प्रभावित हुए हैं।

डिजिटल त्वरण: संकट ने डिजिटल उपकरणों को अपनाने, ई-कॉमर्स, टेलीमेडिसिन और ऑनलाइन शिक्षा में नौकरियाँ पैदा करने को प्रेरित किया।

सरकार की प्रतिक्रिया: पीएम गरीब कल्याण रोजगार अभियान जैसे उपायों से प्रभावित श्रमिकों को तत्काल राहत मिली।



Ref-GOI

यहाँ Q1 २०२० से Q4 २०२२ तक भारत में रोजगार के स्तर पर COVID-19 महामारी के प्रभाव को दर्शाने वाला ग्राफ है।

I लाल छायांकित क्षेत्र: लॉकडाउन चरण (महत्वपूर्ण नौकरी हानि)।

II नारंगी छायांकित क्षेत्र: प्रतिबंधों में ढील के साथ आंशिक रिकवरी चरण।

III हरा छायांकित क्षेत्र: डिजिटल और स्वास्थ्य सेवा क्षेत्रों द्वारा संचालित त्वरित रिकवरी।

चुनौतियाँ: रोजगार सृजन में उल्लेखनीय प्रगति के बावजूद, भारत के रोजगार क्षेत्र को चुनौतियों का सामना करना पड़ रहा है।

बेरोज़गारी और अल्प-रोज़गार: रोज़गार सृजन जनसंख्या वृद्धि और श्रम बल की भागीदारी के साथ तालमेल नहीं बिठा पाया है।

कौशल बेमेल: तीव्र तकनीकी परिवर्तनों ने उद्योग की जरूरतों और श्रम कौशल के बीच एक अंतर पैदा कर दिया है।

क्षेत्रीय असमानता: राज्यों में रोजगार दर और अवसरों की गुणवत्ता में व्यापक भिन्नता है।

जलवायु परिवर्तन: पर्यावरणीय गिरावट से कृषि और मत्स्य पालन में पारंपरिक आजीविका को खतरा है।

परिवर्तन के अवसर: इन चुनौतियों से निपटने और स्थायी आजीविका का निर्माण करने के लिए, भारत को उभरते अवसरों का लाभ उठाना चाहिए। जिसमें

शिक्षा और प्रशिक्षण में निवेश: डिजिटल और हरित कौशल को शामिल करने के लिए पाठ्यक्रम का आधुनिकीकरण करना।

नवाचार को प्रोत्साहित करना: अग्रणी प्रौद्योगिकियों में नए स्टार्ट-अप और अनुसंधान को प्रोत्साहित करना।

सामाजिक सुरक्षा को मजबूत करना: स्वास्थ्य देखभाल, पेंशन और बेरोजगारी बीमा तक पहुंच का विस्तार करना।

सार्वजनिक-निजी भागीदारी बढ़ाना: रोजगार-उन्मुख प्रशिक्षण कार्यक्रम बनाने के लिए उद्योग के साथ सहयोग करना।

निष्कर्ष:

२०१४ के बाद से भारत में रोजगार और आजीविका का विकास अनुकूली और समावेशी नीतियों की आवश्यकता पर प्रकाश डालता है। जबकि बेरोजगारी, कौशल अंतर और सामाजिक असमानता जैसी चुनौतियाँ बनी हुई हैं, सक्रिय समाधान भारत के विविध और गतिशील कार्यबल की क्षमता को अनलॉक कर सकते हैं। नवाचार, स्थिरता और समानता को बढ़ावा देकर, भारत एक लचीले और समृद्ध श्रम बाजार का मार्ग प्रशस्त कर सकता है।

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- To disseminate research findings in new frontiers of knowledge to readers on wide scale

Call for Research Paper:

- A full text of the research paper having maximum words limit 3000 should contain author's brief introduction.
- The first page should consist of title of the paper name(s) of author (s) with full address, e-mail ID and contact no. Abstract should be *italic not exceeding 250 words*. *Keywords Three to five keywords representing the complete subject content of the paper should be given*
- Manuscript should be computed in MS-WORD, Times New Roman font 12, single space in English Marathi/Hindi Unicode / Krutidev 10, Size 14pt. and Bold for Title of the Paper, 12pt and Bold for heading in the paper, 12pt. for text. Line Space in 1.5, margin 1 inch on all sides, layout Use a single column layout with both left and right margins Justified
- Table, Graphs in the text, the references for table should be mentioned as Table-and Charts 1 and so on, same should be followed in case of graphs and charts. References should be in APA Style..

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ISSN 2249-2089

Exploration

Indian Journal of Multidiscipline

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Biannual Research Journal
For Multidisciplinary Studies
in Arts, Commerce,
Management,
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E-IJM
June 2025
Volume - VIII Issue - I

