Naveen Shodh Sansar (An International Refereed / Peer Review Research Journal)
RNI No.- MPHIN/2013/60638, ISSN 2320-8767, E- ISSN 2394-3793, Scientific Journal Impact Factor (SJIF)- 7.671
January to March 2024, E-Journal, Vol. I, Issue XLV

Impact of Sustainable Agriculture and Farming Practices

Dr. Kajal Moitra* Dr. Ratnesh Kumar Khanna Mahtab Alam*****

*Professor and Head (Social Science) Dr. C.V.Raman University, Bilaspur (C.G.) INDIA
** Assistant Professor (Social Science) Dr. C.V.Raman University, Bilaspur (C.G.) INDIA
*** Ph.D. Scholar (Geography) Dr. C.V. Raman University, Bilaspur (C.G.) INDIA

Abstract - Chhattisgarh is divided into three agro-climatic zones, each with distinct characteristics regarding area, soil, irrigation, and cropping systems. The state government's efforts to promote agricultural development and improve farmers' economic conditions have been recognized nationally, with Chhattisgarh receiving the "Krishi Karman" award multiple times. These awards, given for achievements in paddy and pulses production and overall food grain output, highlight the state's commitment to agricultural excellence.

Include paddy, soybean, urad, and arhar, while gram and tivda dominate the Rabi season. Additionally, some districts in the state are conducive to sugarcane cultivation, and currently, four cooperative sugar mills are operating successfully. Other crops include maize, small grains, moong, wheat, and groundnut, with the central plains of Chhattisgarh often referred to as the "rice bowl of Central India."

Keywords : Rice bowl, commitment.

Introduction - Agriculture is the most extensive industry globally, employing over a billion people and producing food worth more than $1.3 trillion annually. Pastures and croplands cover nearly 50% of the Earth's habitable land, providing habitats and sustenance for countless species.

Sustainable management of agricultural practices can protect vital ecosystems, enhance soil and water quality, and preserve watersheds. However, unsustainable methods can harm people and the environment. With the growing global population driving increased demand for agricultural products, sustainable resource management is now more critical than ever. The sector's deep ties to the global economy, biodiversity, and human livelihoods highlight its significance in achieving sustainable development.

Literature of review: Adelman and Morris (2006) analysed 25 social and political indicators across 74 developing countries to assess socio-economic conditions. Drewnowski (1974) further expanded this by evaluating indicators such as nutrition, clothing, housing, health, education, recreation, security, and the social and natural environment. Morris and McAlpin (1982) employed the Physical Quality of Life Index, focusing on infant mortality, life expectancy, and adult literacy. Krishnamurthy and Dhruvasan (2007) emphasized the critical role of selecting appropriate indicators for measuring socio-economic development in India. Schwartzberg (1961) utilized six groups of indicators to gauge regional development in India, while Kundu and Raza (1982) examined 109 indicators related to agriculture, rural and urban economic bases, economic infrastructure, and social facilities. Sundaram (1982) used a slightly broader set, consisting of 104 indicators.

Singh and Dubey (2007) analyzed demographic development in Uttar Pradesh, which provided valuable insights into developing economies. Smith's (1977, 1982, 1973) work in human geography and social well-being was also significant, as was Sopher's (1980) research on gender disparities in Indian literacy. Srivastava (1982) applied a taxonomic method to measure development levels across Uttar Pradesh's districts, and Sundaram (1982) focused on regional and local-level development analysis. Tiwari (1985, 1977) contributed to understanding inter-state and district-level disparities in development in Uttar Pradesh, and Tripathi and Tiwari (1993) addressed regional disparities in development across India. Uday Shankar (1982) delved into inter-state disparities in industrial development.

Internationally, the United Nations (2008) provided key definitions and measurements of living standards, while the UN Development Plan expanded this to human development. Verma (2009, 1992) contributed to understanding population patterns and regional disparities. Williams (1965) and Wood (1977) offered geographical perspectives on regional disparities in India's development.

Jacobs (1982) developed a comprehensive set of 118 indicators, grouped into categories like nutrition, clothing, housing, education, and health, to assess physical development. Srivastava (1982) utilized 32 indicators for Uttar Pradesh, while Dubey (1992) used 60 indicators to measure agricultural, industrial, and social infrastructure development.

Rai (2008) measured human development in West Bengal's Purulia district using health, education, and living standard indices, akin to the UN's Human Development Index (HDI). Forman's work on the social sciences and development issues, along with Gosal and Krishan's (1984) research on socio-economic disparities in Punjab, provided further regional insights. Mishra (1983) focused on local-level planning and development, while Dalton (1972) explored economic anthropology in traditional and modernizing communities. Singh (1992) discussed the foundations of geographical thinking, and Singh (1985) examined rural development concepts. Eisenstadt (1961, 1966) provided a social perspective on political and economic development, while Kim (1973) offered a structural perspective on development. David (1978) and Everest (1962) provided foundational insights into policy analysis and social change, respectively. Raman and Sharma (1979) studied block-level disparities in Telangana, contributing to the understanding of regional development.

Research on economic growth and fairness by Adelman and Morris, Amin (2009) on unequal development, and Anuradha and Rao's (2010) analysis of inter-state disparities in India added to the discourse on socio-economic inequalities. Bhagat (2007) explored access to basic amenities in urban India and its implications for health and well-being. Bhatut (1982) and Bose (1988) focused on geographical perspectives and population issues. Browett (1981) addressed geography's role in development, while Kantwala and Rao (1992) examined regional development and inter-state analysis in India. Bhuiyan and Banerjee (1991) focused on disparities in education levels in Bangladesh, and Nair (1983) provided insights into regional experiences in developing economies. Krishna and Mahajan (1993) studied inter-state disparities within Indian states, while Singh (1985) analyzed variations in income growth rates across Indian states.

Rao (1985) discussed inter-state development disparities, and Tiwari (1985) examined inter-state disparities in development levels. Sampat (1977) focused on income inequalities in India from 1951 to 1971, and Dholakia (1985) analyzed regional disparities in economic growth. Mathur (1978) provided an analysis of regional disparities and Indian policy planning, while Nair (1979) explored income disparities across Indian states. Suri (1982) discussed widening disparities both inter- and intra-state, and Rao (1979) presented a method for measuring economic distances between Indian regions. Nath (1980) contributed to understanding regional development in Indian planning, while Prakash and Rajan (1979) focused on rural development disparities in Madhya Pradesh.

Objectives of the study: This present study has certain research objective. The are:

1. To study the concept of sustainable development . .
2. To analysed the Impact of Sustainable Agriculture and Farming Practices

Research Methodology : This study based on secondary data.The secondary data is collected from the secondary sources mainly form District rural development agency, official record, economic and political weekly and other sources.

Disscussion:

Sustainable Agriculture: Sustainable agriculture aims to balance the needs of farmers, businesses, communities, and the environment. This approach promotes farming techniques that are socially responsible, environmentally friendly, and economically viable. Its primary goal is to meet current food and textile demands without endangering future generations' ability to do the same.

Understanding Sustainability: The concept of sustainability is best described in the 1987 Brundtland Commission report: "meeting the needs of the present without compromising the ability of future generations to meet their own needs." This principle emphasizes the need to adopt sustainable practices to address pressing environmental challenges such as climate change, air pollution, and resource depletion.

The Urgency of Sustainable Practices: Over 10 million people die annually due to air pollution, while global warming continues to cause heatwaves, unpredictable monsoons, melting ice sheets, and flash floods. Many of these impacts are irreversible, making it imperative to act swiftly to restore the planet's health. Adopting sustainable practices ensures the judicious use of resources, creating a livable environment for future generations.

Steps Toward Sustainability: Each individual can contribute to a more sustainable world by making small lifestyle changes. Actions such as conserving energy, reducing meat consumption, using reusable materials, switching to renewable energy, growing one's own food, recycling, and conserving water all help reduce environmental footprints. A critical component of this movement is sustainable agriculture.

The Role of Agriculture in Sustainability: Sustainable agriculture encompasses various practices designed to enhance resource use efficiency, maintain soil and water health, and support biodiversity. It integrates ecological, economic, and social pillars to create a balanced system. This approach involves farmers, food processors, distributors, retailers, consumers, and waste managers, emphasizing resource optimization and technology use without compromising soil quality or safety.

Practices and Benefits of Sustainable Agriculture: Sustainable farming employs diverse techniques such as

permaculture, crop rotation, hydroponics, agroforestry, natural pest control, and manual weed management. These methods collectively ensure the effective use of resources, protection of public health, environmental preservation, and economic profitability.

Key Advantages of Sustainable Farming:

1. Efficient utilization of non-renewable resources.
2. Enhanced public health through environmentally safe practices.
3. Promotion of social equity and economic development.
4. Long-term profitability for farmers and businesses.
5. Preservation of ecosystems and biodiversity.

By adopting sustainable farming practices, societies can ensure economic growth, environmental conservation, and a healthier future for the planet.

Chhattisgarh's economy and its development across various sectors form the foundation for generating financial resources, which the state government can then mobilize and allocate towards socio-economic development. Given the critical role of the state's economy, it's essential to periodically review its performance, identify growth opportunities, and address constraints that hinder progress. The State Finance Commission is responsible for recommending financial devolution from the state government to local bodies, taking into account the state's economic performance and potential growth areas. This review helps prioritize development initiatives for the state. Agricultural growth is vital for the overall economic development of Chhattisgarh. Despite some areas experiencing progress, agriculture in the state remains relatively underdeveloped. A significant portion of the workforce, about 80%, relies on agriculture for their livelihood. The total cultivable area constitutes 35.5% of the state's geographical area, with paddy being the predominant crop, covering 80% of the total cropped area. However, only 21% of the state's agricultural land has access to assured irrigation, leaving the majority dependent on monsoon rains.

Agriculture in Chhattisgarh is characterized by instability in growth rates, largely due to weather-induced fluctuations. The Green Revolution, which began in the mid-1960s, largely

Conclusion: The total geographical area of the state is approximately 13,790 thousand hectares. The largest portion of this land is covered by forests, accounting for 45.95%, followed by the net sown area at 34.06%. Other categories include land not available for cultivation (7.39%), other cultivated land excluding wasteland (2.57%), current fallow land (1.83%), and land other than current fallow (1.99%). Permanent pastures and grazing lands cover 6.20%, while miscellaneous tree crops and groves make up a mere 0.01%. The area sown more than once accounts for 7.07%, and land under culturable fallow and unculturable uses stands at 8.78%.

Between 2000-01 and 2010-11, the gross cropped area increased by 41.13%. The most significant changes were seen in current fallow land, which grew by 15.06%, followed by gross cropped area (6.48%), land not available for cultivation (0.59%), forest area (0.52%), and permanent pastures and grazing land (0.23%). Conversely, land under miscellaneous tree crops and cultivable wasteland decreased dramatically by 99.70%, while land under current fallow declined by 9.64%, and the net sown area shrank by 1.39%. The cropping intensity in Chhattisgarh increased by 9% in 2010-11, mainly due to the 72.87% rise in double-cropped areas.

References :-

1. Khan, M.F. (1996), "Sustainability of modern agro-ecosystem: A case study of the upper Ganga-Yamuna Doab", The Geographer, Vol. XLIII, No. 1.
2. Kindleberger, P. Charles and Herrick Bmce (1977), Economic Development, London: McGraw Hill, Kogakusha Ltd.
3. Krishan G. (1993), Development: Concept and Approaches, Commonwealth Secretariat, Chandigarh.
4. Krishan, G. (1980), "Development Social Development and Geography", R.B. Mandal and V.N.P. Sinha eds. Recent Trends and Concepts in Geography, Concept, New Delhi: 159-166.
5. Krishan, G. (1980), in Noor Mohammad (ed.) "The Concept of Agricultural Development", Perspectives in Agricultural Geography, Concept, New Delhi, 4: 77-85. 183
6. Krishan, G. (1986), "On Incongruity Between Economic and Social Development : A Case Study of the Indian Punjab", Asian Profile, 14: 149-153.
7. Krishan, G. (1988), "The World Pattern of Administrative Area Reform", The Geographical Journal, 154 : 93-99.
8. Krishan, G. (1989), "Trend in Regional Disparities in India", Asian Profile, 17: 243-261.
9. Krishan, G. (1989), "Trends in regional disparities in India", Asian Profde, 17, 3,243-261.
10. Krishan, G. (1992), in Noor Mohamad (ed.) "Dynamics of Agricultural Development", Concepts International Series in Geography, Vol. 7, pp. 29-36.
11. Krishan, Gopal (1993), Issues Influencing Development Commonwealth Secretariat, Chandigarh.

✻✻✻✻✻✻✻✻✻✻✻✻