

**A Study on Agricultural Sector and Sustainable Development in Maharashtra: A Critical Analysis****Somnath B. Gaikwad**

Assistant Professor, Department of Geography,  
Smt. Akkatai Ramgonda Patil Kanya Mahavidyalaya, Ichalkaranji  
Email: [somnaathgaikwad@gmail.com](mailto:somnaathgaikwad@gmail.com)

**Dipak Uddhav Gurav**

Assistant Professor  
Department of Geography  
Arts and Commerce College, Nagthane  
Affiliated to Shivaji University, Kolhapur  
Email: [accngeography@gmail.com](mailto:accngeography@gmail.com)

**Abstract**

Capital is considered to be a very important factor in the production process. Any type of business requires capital so capital is that part of wealth that is used in the production process to increase output. A common concept of capital is that part of man-made wealth that is used in the production process to increase output. In the process of economic development of any country, along with natural and man-made factors, capital is also required in large quantities. In countries like India with developing and agricultural economies, capital has a very important place and sustainable development in these countries is very important. Capital is that part of production that is used for producing more than for consumption. The part of production which is used for consumption is not included in capital and if the part of production which remains after deducting the proportion of consumption goods from the total production is used for the production of capital goods, then the capital stock increases. With the sustainable development of the country, capital formation has become very important, at the same time capital formation increases investment to a great extent. Agriculture sector plays an important role in the Indian economy.

**Key words:** agricultural development, sustainable development, capital income expenditure, Indian economy etc.

**Introduction:**

India is an agricultural country and 70 % of the population in India is engaged in agriculture. As the maximum population of India is employed in the agricultural sector, agriculture has assumed a distinct importance in the Indian economy. Government of India should focus on the agriculture sector and try to maximize the expenditure in the Five Year Plan and also give priority to the agricultural economy for its sustainable development. As the Indian economy is predominantly agricultural, agriculture is a major part of India's industrial economic development. On the basis of two factors, industrialization and economic development, efforts should be made to achieve sustainable development of the country and its implementation. Since India is a country of villages, most of the population in India lives in the rural areas, so they use this sector to a large extent to meet their daily needs or earn a living by setting up industrial businesses in the agricultural sector. Since agriculture is a rural business, grain processing industry is also considered a rural industry. Green production in rural areas is known as a rural industry due to the availability of labor, rural means of communication and local demand for the product. Water is a very important factor for farmers to do agriculture and the need for water for agriculture is considered to be one of the important needs of farmers. It is necessary to provide water and communication facilities in the entire state of India with priority given to agricultural sector. Even today, the agriculture sector has a higher proportion of the country's gross domestic product when compared to other developed countries. If there is a change in the natural conditions, technological change or total investment etc. in the agricultural sector, it affects the entire country's economy. A change in the agricultural sector affects aggregate domestic savings and investment. In India, changes in the agricultural sector have a large impact on total capital formation and the cost of production of non-agricultural goods has a large impact on the price of agricultural commodities in the form of raw materials as well as food.

**Problems of the Study:**

Small and fragmented landholdings, shortage of seeds, fertilizers, manures and biocides, irrigation, lack of mechanization, soil erosion, agricultural marketing and lack of capital are major problems facing Indian agriculture. Sustainable agriculture is the balanced management of land, crops, forests, livestock, wildlife, fish, environment etc. to provide food, clothing and shelter for present and future generations without depleting the quality of renewable resources. These should include humidity, rainfall and temperature index, pest infestation, variety used, date of planting, soil characteristics, fertilizer use, labor use, irrigation details and other such factors. Due to excessive rainfall, floods, insufficient vegetation cover etc. soil erosion reduces agricultural productivity. Inadequate irrigation facilities and poor management of water resources have led to a major decline in agricultural productivity. Due to excessive rainfall, floods, insufficient vegetation cover etc. soil erosion reduces agricultural

productivity. Inadequate irrigation facilities and poor management of water resources have led to a major decline in agricultural productivity.

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

The main objective of this research is to study the development of agricultural sector in Maharashtra and the concept of sustainable development in Maharashtra and some specific objectives have been given by the researcher as follows.

1. To Study the agricultural sector in Maharashtra.
2. To Study the sustainable development and agricultural sector.
3. To Study the role of agricultural sector and environment.

#### **Significance of the Study:**

Some of the key challenges facing Indian agriculture today include: Small and fragmented land : The average farm size in India is small, with about 85 percent of farms less than 2 hectares, which can make it difficult for farmers to make a profit. When early humans started farming, they were able to produce enough food that they had to migrate further to their food source. This means they can build permanent structures and develop villages, towns and eventually cities too. Closely related to the growth of settled society is population growth. Agriculture supplies raw materials to various agro-based industries such as sugar, jute, cotton textiles and botanicals. Agriculture is also important for the food processing industry. Therefore, the growth of these industries is completely dependent on agriculture.

#### **Scope of the Study:**

Agriculture provides most of the world's food and textiles. Cotton, wool and leather are all agricultural products. The farm also provides wood for construction and paper products. These products, as well as the agricultural methods used, can vary from one part of the world to another. Agricultural production requires inputs from industries. Industrial production requires raw materials produced by the agricultural sector. Hence there is a clear interdependence between agriculture and industry. What is the importance of food production? Food production is a major source of income for the population. The food industry also employs a large portion of the population. Increase the country's exports which help to maintain foreign relations and increase earnings.

#### **Period of the Study:**

While studying the concept of agriculture sector in Maharashtra and sustainable development of Maharashtra based on agriculture sector, the researcher has included many factors in this. While studying the Indian economy along with means of production and expenditure methods, the researcher has reviewed the information from the year 2017-18 to 2021-22.

#### **Limitation of the Study:**

It provides employment opportunities to rural agricultural as well as non-agricultural labour. It is a source of food and fodder. It also plays an important role in international business in import and export activities. When agricultural operations are managed sustainably, they can protect and restore critical habitats, help protect watersheds, and improve soil health and water quality. Reduces the use of non-conventional energy by reducing chemical requirements. Organic farming contributes to reducing the greenhouse effect and global warming through its ability to sequester carbon in the soil. The rate of growth in global demand for agricultural products has slowed, as population growth has slowed and many countries have reached high levels of food consumption. Demand growth will slow further in the future. There is production capacity all over the world to cope with the demand.

#### **Research Methodology:**

While studying the agricultural sector of Maharashtra, the researcher has used several secondary researches while studying the sustainable development and the impact of the Indian economy on the environment of Maharashtra. These include research papers articles journals newspapers magazines images audio videos reference books serial books annual reports annual issues.

#### **Research Method:**

While studying the agricultural sector and sustainable development, the researcher has used descriptive analysis method to include the statistical data of five years.

#### **Results and Discussion:**

It helps in maintaining the health of the environment by reducing the level of pollution. This reduces the risk to human and animal health by reducing the level of residues in the product. It helps in keeping agricultural production at a sustainable level. This reduces agricultural production costs and improves soil health. Shifting agriculture, known as slash and burn agriculture, is bad for the environment because it accelerates deforestation, burning forests to make way for farmland. Additionally, by burning forests, shifting cultivation has robbed the soil of its nutrients and rendered it infertile in the process.

Table No. 1

Agricultural Income and Development (in thousands)

Year	Expenditure	Revenue Accumulation	Std. dev.	Trends
2017-18	4167.09	1,30,000	3.40	0.21
2018-19	4402.49	1,80,000	3.52	0.36
2019-20	4973.67	1,60,700	4.10	-0.27
2020-21	4296.62	1,80,000	3.52	0.45
2021-22	4360.29	2,27,311	6.13	0.65

Source: Maharashtra Agriculture Animal Husbandry Dairy Development and Fisheries Department Page No. 5.

**Sustainable Development and Agricultural:**

Development means development, growth, progress. The meaning of the word development is growth. So development seems to be linked to increase in production. The dominant concept today is that productivity growth means development. It is very important to realize the concept of development in real sense and to develop the country holistically. The more one tries to develop the infinite eternal, the more it shrinks. While determining the factors of development, efforts must be made to bring about sustainable change in them. One of the meanings of the process of moving from review of development to development path today is to awaken new optimism among the people of Maharashtra. It is therefore necessary to find spaces of awareness struggle and intervention and open them up for people to organize and act. If the new optimism in man is a vital and a sustainable option for the development of the country to find places of sustainable intervention and to bring the people to the organized curve. The concept of sustainable development means continuous change, so it is important that Chiras Tai or continuous change is expected and accepted by all. It helped to solve the problems of the people of development and present time and also raised some questions. The nature of the questions that have arisen is so dire that the destruction of future generations is certain. One of the outcomes of sustainable development is the efforts made for the dual purpose of ensuring that our future generations are safe and that the present generation can reap or benefit from development. In the book Rural Development in India, many people have tried to give an important place to the term sustainable development. It balances the principle of use of natural resources environment for investment in technological development. The concept of sustainable development has come out of the awareness of environmental protection so the huge environmental damage done in the name of development defines the concept of sustainable development.

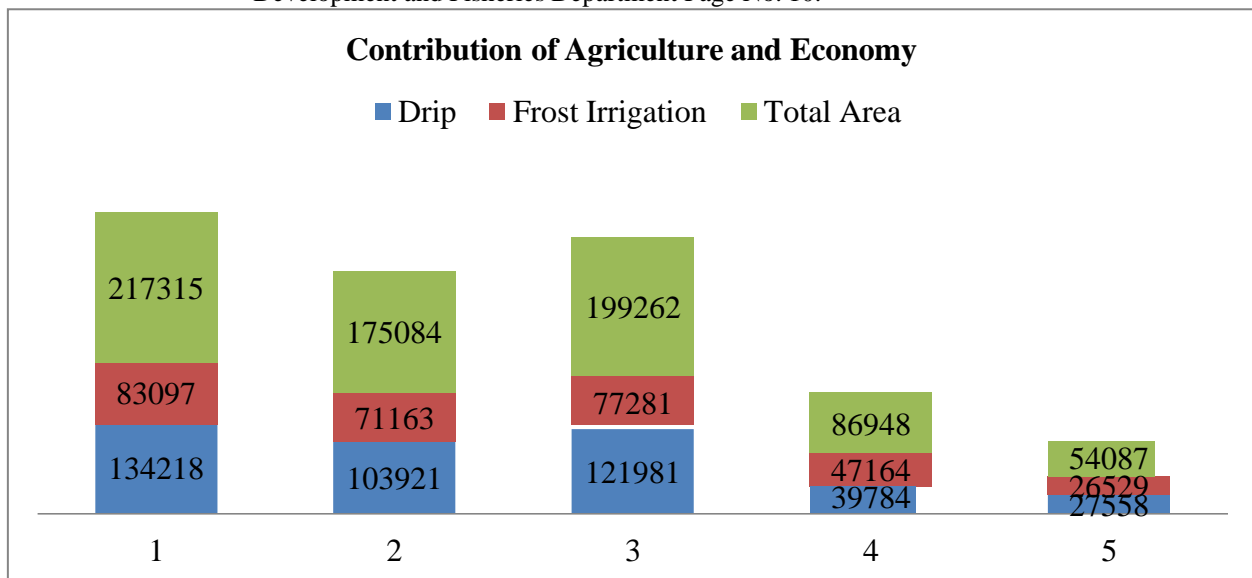
Table No. 2

Contribution of Agriculture and Economy (in coror)

Year	Drip	Frost Irrigation	Total Area
2017-18	134218	83097	217315
2018-19	103921	71163	175084
2019-20	121981	77281	199262
2020-21	39784	47164	86948
2021-22	27558	26529	54087

Source: Maharashtra Agriculture Animal Husbandry Dairy

Development and Fisheries Department Page No. 10.



**Agriculture Income and Government:**

In India, the constitution has given the power to levy tax on agricultural income to the constituent states. At present, although Maharashtra does not levy agricultural income, other states collect income through agricultural income tax. The central government gets revenue by levying indirect taxes on seeds, fertilizers, pesticides, various agricultural implements and weapons used in agriculture. Also, the local self-government bodies also get a large amount of tax through the animal market of agricultural goods. Where it is collected in the form of land rent and income is derived from it Central Government State Government Local Self-Government directly and indirectly from the agricultural sector.

**International Importance of Agriculture Sector:**

At the international level, the position of India's agricultural sector is very important. India plays an important role in the production of many agricultural commodities. India ranks first in the world in groundnut and tea production, second in rice cotton, sugarcane buttermilk production, third in tobacco production and fifth in natural rubber production. India has achieved global monopoly in many products. As a large part of India's population depends on the agricultural sector, instability in the agricultural sector affects the social and political spheres. If there is a large fluctuation in the price of agricultural produce, the social peace and political stability is reduced. In India, the price of agricultural produce has a major impact on the general price level. If the volume of agricultural produce falls short of domestic demand due to natural adversities, the prices of agricultural commodities rise substantially and this in turn increases the cost of raw materials for agro-based industries.

**Role of Agriculture Sector and Economic Planning in India:**

The importance of the agriculture sector in the Indian economy is increasing. Due to the growing importance of transport of agricultural commodities in the total transport in India, their production has started to increase significantly. During good rains and good weather in the country, the income of farmer's increases to a large extent and thus the demand for industrial goods and services increases to a large extent.

**Agricultural Development and Environment:**

Agriculture contributes too many major environmental problems that lead to environmental degradation: climate change, deforestation, loss of biodiversity, dead zones, genetic engineering, irrigation problems, pollutants, soil degradation and waste. One cubic foot of soil contains billions of bacteria, fungi and bacteria. This is what makes the land alive and fertile. Chemical fertilizers do not make the soil fertile, but help to pick up nutrients from the fertile soil. As more nutrients are removed from the soil in this way, the soil becomes sterile and lifeless. Agricultural chemicals seep into surrounding soil and water bodies, enter the food chain and bio accumulate. Regarding effects on crops, overuse of such chemicals produces large amounts of residues. These residues lead to nutrient imbalance and reduced quality of agricultural produce.

**Conclusion:**

Through sustainable action agricultural development, it should involve the farmers who are actually working on the farm as well as every sector dependent on the farm. It is very important to use mass media to promote local agricultural research. It is also very important to use all kinds of resources in the country to develop sustainable agriculture and make efforts to sustain it forever. Special efforts must be made for the development of agricultural journalism and for sustainable economic development of the country. It is important for the practitioners of agricultural technology and science to have a thorough understanding and guidance from specialized experts and effective communication through the media is needed to link agriculture to sustainable development. There should be a change in the presentation of agricultural information in the mass media and lectures by special experts should be organized in the field of agricultural knowledge. Reference should be made to the reviews of agricultural information.

**References:**

1. Ahmad (2013), Sustainable Agriculture Development in India: A Case Study of Uttar Pradesh, pp. 14-16.
2. Baksh (2002), Sustainable Development in Agriculture, pp.16-23.
3. DR. Ashok M Kamble, Prof. Dadasaheb A. Kokate & Santosh P. Mane (2020), "Wrestling & Judo Best Practices of Physical Education In Sameer Gandhi Kala Mahavidyalaya, Malshiras (MS)", OUR HERITAGE (UGC Care Journal), Vol-68, Special Issue-50, ISSN-0474-9030.
4. Dr. Banduke D. K. & Santosh P. Mane (2019) "Rice Productivity in Satara District: A Geographical Analysis." Research Journey Impact Factor - (SJIF) – 6.261, (CIF) - 3.452(2015),(GIF)–0.676 (2013) Special Issue 144, Pp-159-165.
5. Dr. Carolline David & Santosh P. Mane (2020), "COVID 19 and students," Aayushi International Interdisciplinary Research Journal, ISSN 2349-638x Impact Factor 6.293, Special Issue No.80

6. Dr. D. C. Kamble and Mr. Santosh P. Mane (2018) "A Study of Irrigation Intensity of Different Sources in Malshiras Tahsil." Research Journey, Research Journey, ISSN: 2348-7143 Impact Factor - (SJIF) – 6.261, (CIF) - 3.452(2015), (GIF)–0.676 (2013) Special Issue 144, Pp-28-36.
7. Dr. D. C. Kamble and Mr. Santosh P. Mane (2018) "Irrigation Pattern In Malshiras Tahsil Of Solapur District: A Geographical Analysis." Review of Research ISSN2249-894X, impact factor: 5.2331(UIF), Volume, Issue-9 Pp-74-77.
8. Dr. D. C. Kamble and Mr. Santosh P. Mane (2018), "Agriculture Productivity in Malshiras: A Geographical Analysis," Aayushi International Interdisciplinary Research Journal (ISSN 2349-638x) Impact Factor 4.574, Volume 2, Issue-9 Pp-658-662.
9. Dr. D. H. Bhojane, Santosh P. Mane (2020), "Satisfaction Of Irrigated And Non-Irrigated Farmers", Research Journey, Impact Factor - (SJIF) – 6.261, (CIF) - 3.452(2015), (GIF)–0.676 (2013) Special Issue 236(C), Pp-142-147
10. Dr. Dhanesh N. Ligade & Santosh P. Mane (2020), "Transformation of Food Crops Into Cash Crops: A Case Of Solapur District., Aayushi International Interdisciplinary Research Journal, ISSN 2349-638x Impact Factor 6.293, Special Issue No.80
11. Dr. Hajare R. V., Shinde A. S. and Mane S. P. (2014) "A Geographical Analysis of Problem Associated With Low Nutrition Level in Solapur District Maharashtra, (India)". Journal of Golden Research Thoughts, Volume IV, Sept. 2014, ISSN 2231-5063, DOI Prefix 10.9780/2215063, Journal with Impact Factor 2.2052. Pp-1-6.
12. Dr. Harish Tipe, (2016), Agricultural Transformation in Landuse Efficiency in Ahmadnagar District in Maharashtra: A Geographical Analysis, Indo Asian Research Reporter, Volume-5, Issue-3, Pages-165-169
13. Dr. Londe C. B, Mane S. P. (2015), " Environmental Distributional Analysis of Indian Forestry" Manas Publication and Distribution Jaipur, ISBN 978-93-83231-31-7.Pp.26-29
14. Dr. Rajaram Patil & Santosh P. Mane (2020), "Geographical Analysis of Agricultural Land Use Pattern of Kankavli Tahsil", Research Journey Pp-50-54, ISSN 2348-7143
15. Dr. Sukamal Maity & Santosh P. Mane (2020), "Assessment of Tasseled Cap transformation of Mumbai Urban Agglomeration, India," Aayushi International Interdisciplinary Research Journal, ISSN 2349-638x Impact Factor 6.293, Special Issue No.80
16. Dr. Sukamal Maity, Dr. Girijesh Lal Srivastava & Santosh P Mane (2020), "Comprehensive analysis of Land Surface Temperature with different indices using Landsat – 8 (OLI / TIRS) data in Kanpur Metropolis, India" "Akshar Wangmay" Special Issue, Volume-I "Multidisciplinary Perspectives on Health, Society, Environment & Sustainable Development" ISSN: 2229-4929, Pp-144-151
17. Dr. Vivekanand A. Ughade & Santosh P Mane (2020), "Digital Marketing - Social Media Surges Economic Growth: A Perspective", Aayushi International Interdisciplinary Research Journal, ISSN 2349-638x Impact Factor 6.293, Special Issue No.80
18. Gautam (2011), Better practices for Sustainable agricultural production and better Environment, p. 26.
19. Government of Maharashtra (2018), District Socioeconomic review, Satara, Department of Planning, pp. 4-9.
20. Harron and Shahzad (2014), Assessing spatiotemporal variation in Agricultural Sustainability Using Sustainable Livelihood Security, pp. 410-413.
21. Hatai and Sen (2008), An economic analysis of agricultural sustainability in Orissa, pp.10-16.
22. Krishna B. Patre, Dr. Sambhaji Shinde, Santosh P Mane (2020), "Spatial-Temporal Variation of Biogas in Kolhapur Distract," 'Akshar Wangmay' UGC Care Listed, International Research Journal, ISSN: 2229-4929, Special Issue, Volume-II "Multidisciplinary Perspectives on Health, Society, Environment & Sustainable Development" Pp-133-135.
23. Mane S. P, Shinde A. S., (2014), "A Study Changing Pattern of Rain Water Harvesting Management An Ancient To Modern Age In India- Geographical Analysis" Review of Research Vol. 3/Issue. 10, ISSN: 2249-894X.
24. Mane Santosh P. (2020) "Impact of Irrigation on Agriculture in Malshiras Tahsil of Solapur District (Ms): A Geographical Analysis" unpublished M.Phil. Dissertation submitted to Shivaji University, Kolhapur.
25. NABARD (2016-17), All India survey of financial inclusion, National Bank for Agriculture and Rural Development, pp. 156-162.
26. Nago (2012), Regional Disparities in Agriculture Development of Maharashtra, pp. 890-896.
27. Prin. Dr. B.M. Bhanje, Dr. Dede Deepak Kashinath & Santosh P Mane (2020), "Women's Role in Indian Agriculture ", 'Akshar Wangmay' UGC Approved & Peer Reviewed International Research Journal. ISSN 2229-4929,Pp-28-31
28. Saleth and Swaminathan (1993), Sustainable livelihood security at the household level: Concept and evaluation methodology. In Proceedings of an interdisciplinary dialogue on eco-technology and rural employment, pp. 452-456.

29. Santosh P mane and Somnath B. Gaikwad (2019) "Agriculture Productivity Calculate Based on MG Kendall's Method in Malshiras Tahsil." Research Journey, ISSN: 2348-7143 impact factor: 3.261 (SJIF), Issue-114, Pp-145-151.
30. Sitanshu Sekhar Patra, P. Suneetha, Sandeep Rout, and Santosh P Mane (2020), "Assessment of Soil fertility Status during Kharif Rice in Visakhapatnam, Andhra Pradesh, India, "Akshar Wangmay' UGC Care Listed, International Research Journal, ISSN: 2229-4929, Special Issue, Volume-III "Multidisciplinary Perspectives on Health, Society, Environment & Sustainable Development" Pp-4-8
31. Somnath B Gaikwad, Santosh P Mane & Dashrath K Banduke (2019) "Crop Combination Calculate on Weaver's Method in Malshiras Tahsil." Research Journey, ISSN: 2348-7143, Impact Factor- (SJIF) 6.261, Special Issue 144 (A) Pp-145-151
32. Veeraswamy (2015), Inclusive Growth in Agriculture Sector: Case Study of Nalgonda District in Andhra Pradesh State, pp. 43-52.