



Cover Page



DOI: <http://ijmer.in.doi./2024/13.4.08>

SUSTAINABLE DEVELOPMENT THROUGH GOVERNMENT POLICIES: A CASE STUDY OF BAKSA DISTRICT OF BTAD, ASSAM

Dr. Tarali Boro

Assistant Professor, Department of Assamese
Barama College, Barama

Introduction:

The sustainable development defined by the Brundtland Commission Report entitled “Our Common Future” as “development, which meets the needs of the present without compromising the ability of future generation to meet their own needs”.¹ It contains two concepts i.e., needs and limitations. The concept of needs means, the essential necessities of the rural poor. Further, the idea of limitations imposed by the state of technology and social organization on the environments that ability to meet present and future needs. The concept of sustainable development is not about choice between environmental protection and social progress but rather more about striving for economic and social development that would be compatible with environmental protection. The Earth Summit in Rio de Janeiro (1992) put the concept of sustainable development on national and international policy.² It is interpreted primarily in terms of environmental protection as well as management. In India, the movement in support of environmental protection and sustainable development started in the early 1980s, due to the devastating effects of the Bhopal gas tragedy as well as international development.³ Sustainable development has been embedded in the planning process during the 1990s. The Ninth Five-Year Plan (1997–2002) explicitly recognized the synergy between environment, health and development and identified as one of its core objectives the need for ensuring environmental sustainability of the development process through social mobilization and participation of people at all levels.

The Government of India has initiated many policies for the alleviation of poverty as well as sustainable development. Some of the programmes for achieving this goal were Community Development Programme (CDP), National Extension Service (NES) Integrated

1. World Commission on Environment and Development (WCED), Our common future. Oxford: Oxford University Press, 1987 p. 43
2. Sustainable development of India, Stocktaking in the run up to Rio+20: Ministry of Environment and Forests, New Delhi: Government of India, 2011
3. Sustainable Development: Emerging issues in India’s Mineral Sector, New Delhi: Institute for Studies in Industrial Development.

Agricultural, District Programme (IADP), High Yielding Varieties Programme etc. Further, Government of India also has been adopted some policies related to sustainable development which has given emphasized on economic and social development, for particular people with low standard of living as well as protecting the natural resource based on environment. Such as policies are Mahatma Gandhi National Rural Employment Guarantee Scheme (2005), National Urban Transport Policy (2006), National Environmental Policy (2006), National Urban Housing and Habitat Policy (2007), National Action Plan on Climate Change (2008), National Disaster Management Policy (2009), National Rural Livelihood Mission (2009) etc. This paper seeks to examine the extent to which government policies have infact sustainable development in Agriculture through a case study of Baksa district of BTAD, Assam.

Methodology:

The present study was conducted in the Baksa district, Assam. It was based on both primary and secondary sources. Besides for the primary data collection, the information gathered through the questionnaires and interview method and structured questionnaires is administrated to the respondents. It was included all 7 blocks, taking one village from each 8 blocks in the district. Samples of 105 respondents were drawn for the purpose of the study. Secondary data



Cover Page



was collected from books, published articles, newspapers, magazines and journals. The data collected from both sources formed the basis of analysis of the study.

Agriculture is the back bone of Baksa district, more than 70 percent of people in the district depends on agriculture for their livelihood. Most of the area in the district is located as plains adjacent to the foothills of Himalayas. The soil of the Baksa district is fertile and suitable for cultivation of different types of crops. Paddy is mostly cultivated by the farmers of the district. They grow mainly summer paddy and winter paddy. In addition to paddy, the farmers of the district grow some other major crops such as Mustard, Jute, Wheat, Potato, Lentil, Black gram and different types of vegetables like Cabbage, Knol-khol, Cauliflower, Brinjal, Radish, Tomato, Cucumber, Carrot, Onion, Garlic, Chilly, Zinger, Turmeric, Lady's finger etc. in different parts of the district. In spite of having some tremendous agricultural prospect in Baksa, agriculture sector is not well organized and developed. It has been seen that the economic condition of the rural people who are engaged in agricultural activities is not good. Therefore, this paper will try to analyze the present agricultural practices followed in the agricultural fields of the Baksa district and how well organized modern agricultural practices can help in changing the economic situation of the farmers and the district.

Agriculture has been a way of life and continues to be the single most important livelihood of the masses in India. It is the most important sector of Indian economy from the perspective of livelihood of the people and employment generation. The share of agriculture (excluding allied activity) in Gross Domestic Product of the country was 48.6 percent in 1950-51 which, due to growth of industrial and tertiary sectors, declined to 29.5 percent in 1990-91 and to 12.3 percent in 2010- 11 (Statistical Handbook of India, 2008-09, 2010-11, and Economic Survey of India, 2011- 12). Notwithstanding the declining trend in Agriculture's share in GDP, the importance of the sector to the economy is best understood with reference to the share in employment and in terms of its criticality for macro-economic stability. Employment in agriculture sector as percentage of the total workforce has exhibited only a marginal decline from 75.9 percent in 1961 to 59.9 percent in 1999-2000 and then to 58.2 percent in 2009-10. (Economic survey of India, 2011-12).

Agriculture and its allied activities have a paramount importance in the state of Assam as this sector is the major contributor to the state economy supporting more than 75 percent of the population of the state directly or indirectly providing employment to more than 53 percent of total work force. About 99 percent of total mass of the state is rural and almost 50 percent of the total area is utilized for cultivation. The net sown area is 28.10 lakh hectares (2009-10) and the per capita availability of net sown area comes to around 0.1 hectares. (Economic Survey Assam,2011-12). On the top of it, 23 percent of the net sown area is either flood or draught prone. The average operational holding is 1.47 hectare in 1970-71, and it was 1.27 hectare in 1990-91, 1.11 hectare in 2005-06 and then 1.10 hectare in 2010-11, only and more than 85 percent of the farmer family is small or marginal farmers with average land holding of only 0.63 hectare. (State Report in Agricultural Census, 2005-06 and Economic Survey of Assam 2017-18). The contribution of agriculture sector to the state's income was about 50 percent in the early 1980's and it was 35 percent in the end of 1990's and then it was 19.89 in the year 2011-12, 16.39 percent in the year 2017-18 and 15.76 percent at the end of 2018-19, showing a decline trend as compare to the other sectors. (Statistical Handbook of Assam 2018-19).

Agriculture is the back bone of Baksa district, more than 70 percent of people in the district depends on agriculture for their livelihood. Most of the area in the district is located as adjacent of hill Himalayas, so the soil is most fertile and suitable for cultivation of different types of crops and average yield per hectares of land is also very high as compared to other district of the state. Paddy is mostly cultivated by the people; they grow mainly summer paddy and winter paddy. The farmers of the district grow some other major crops such as Mustard, Jute, Wheat, Potato, Lentil, Black gram and other different types of vegetables like Cabbage, Knol-khol, Cauliflower, Brinjal, Radish, Tomato, Cucumber, Carrot, Onion, Garlic, Chilly, Zinger, Turmeric, Lady's finger etc. in different parts of the district for self-subsistence and commercial purpose. Likewise, some other minor crops are also grown in the district such as pea, sesame Niger, Cucurbits, Tapioca and plantation crops like banana, Coconut, areca nut, guava, mango, orange, lemon, bamboo etc. Kharif rice and Rabi rice are the major crops in the district, which covers about 62 percent in the kharif seasons and 38 percent in the Rabi seasons. The farmers in the district also produce a large variety of cereals, which are Maize, Wheat,



Cover Page



DOI: <http://ijmer.in.doi./2024/13.4.08>

Tur, Gram, Lentil pea, Rabi pulses, Linseed, Castor, Rape, Mustard etc. and some non-food crops such as Jute, Mesta etc. In the district there is a vast scope of crop intensification by way of increased cropping intensity and planned productivity, diversification and modernization of various subjects of agriculture to increase the cropping intensity. (Statistical Handbook of Baksa 2017-18).

It has been seen that area under different crops has decreased and for some other crops increased during the last years, but the average yield of the major crops has been increasing except 2016-17, which was due to bad weather conditions in that year. Similarly, the total production of all major crops has a rising trend except 2016-17 as shown in table-2. The increasing trends of production of all crops was caused by intensive methods used by the farmers in the field of agriculture and use of modern inputs. It has also been noticed that area under high yielding variety of Rice has increased in the recent past, which has been shown in the following table.

TABLE: 1: Area under high yielding variety of rice in Baksa District

Sl. No	Item	Area in Hectare			
		2008- 09	2011- 12	2014- 15	2017- 18
1	Autum Paddy	8680	17970	18680	3897
2	Winter Paddy	38,202	70013	90390	90875
3	Summer Paddy	10,196	2875	540	4732

Source: District Statistical Hand Book, Baksa, Published Annually by Deputy Director Economic & Statistics, Baksa.

TABLE: 2: Average yield of Major Crops in Baksa District (kg. /Hect.)

Sl. No	Item	Area in Hectare					
		201 1- 12	201 3- 14	201 5- 16	201 6- 17	201 7- 18	201 8- 19
1	Autumn Paddy	2434	2864	2086	1608	1578	1690
2	Winter Paddy	2799	2942	2124	1948	2357	2232
3	Summer Paddy	3581	3423	2162	1964	2187	2446

Source: District Statistical Hand Book, Baksa, Published Annually by Deputy Director Economic & Statistics, Baksa.

Table 3: Sub-division wise use of agricultural tools in the year 2017-18

Sl. No	Item	Sub-Division			Total
		Tamulpur / Mushalpur / Salbari			
1	Tractor	102	97	71	270
2	Power Tiller	25	36	26	87
3	Sprayer Machine	500	600	500	1600
4	Other Machinery	20	25	10	55

Source: Statistical Handbook of Baksa 2018- 19.



Objectives:

This study based on the following objectives-

1. To know the present status of agricultural practices in the district.
2. To access the problems associated in the agriculture sector in Baksa district.
3. To find out the prospect to developed the agriculture sector in Baksa district.

Methodology of the study:

This study is based on both primary and secondary data. Secondary data are collected for Government office, Books, handbooks etc. and Primary data are collected from field study by preparing a questionnaire and covering three revenue circle out of the six-revenue circle in the district. To collect primary data door to door field visit was conducted in the selected villages of the revenue circle. The villages and the households were selected through lottery method. Selected Revenue circle and Revenue villages are shown in tabular form in the following Table -4, in which 120 sample of farm families comprised of 36 from Goreswar, 56 from Baksa and 28 Jalah circle were taken.

Sl.no	Name of Revenue circle	Name of Revenue Village	Total population	Farm Family in the village	10% Selected farm family
1	Goreswar	Magurmari	591	100	10
		Nijihargaon	1388	270	26
2	Baksa	Belguri	3270	315	30
		Sripur	2420	267	26
3	Jalah	Ghogapar	554	100	10
		Dongpar	910	160	18

Source: District Statistical Handbook, Baksa

Field Study Location:

The study area of this study is Baksa District under Bodoland Territorial Area District (BTAD) now Bodoland territorial Region (BTR). The Baksa district is situated in between 25.50 ‘N and 27.00‘N Latitude and 90.15‘E and 96‘E Longitude. The district is surrounded by on the east Udalguri district and Darang district on the West Bongaigaon and Chirang district, on the north Bhutan and on the South Bongaigaon, Barpeta, Nalbari and Kamrup district. The district Baksa is created after 2001 census that isin 2003, along with other three districts of BTAD, Kokrajhar, Chirang and Udalguri after a long straggle of Bodos and different stages of movement of Bodos for their separate political, cultural and language entity as original tribe of the state. This newly formed BTAD cover existing seven district of the state such as Kokrajhar, Bongaigaon, Barpeta, Nalbari, Kamrup, Darrang and Sonitpur and created under sixth schedule of the Indian Constitution. The district Baksa is located in the North-Western part of Assam with the District Headquarter at Mushalpur which is 105 away from State Capital Guwahati and 20 kms away from 31 no National Highway towards north. The main mode of connectivity to the district is through Road. The district Baksa is provided irrigation facilities. The irrigation facilities provided to the total land area of the district is 17644 hectares in 2015-16 (District Statistical Handbook, Baksa- 2017-18). There is total three numbers of irrigation projects i.e. Sukla, Boralia and Pahumara. Among them Sukla irrigation project is the second largest irrigation project of the state.



Discussion:

In the district Baksa there are six revenue circle (i.e. Goreswar, Tamulpur, Baganpara, Baksa, Barama and Jalah). Problems associated with agriculture sector: - The major problems of agriculture sector in the district Baksa can be highlighted on the following heads as indicated by the farmers and the focus group in the district.

1. In Baksa District economic condition of most of the farmers are not good, so they are not able to purchase mechanized agro-machine, HYV seeds, chemical fertilizers, land development to increase the production and productivity. In this connection Government support to relief the farmers and financial help are not satisfactory as said by the farmers.
2. As per report of the farmers they have not got any government training and demonstration regarding the use of modern tools and implements and more than 50% farmers said that their AEA (Agriculture Extension Assistant) never visited the field
3. In the district Baksa there are three irrigation projects, but these projects cannot provide sufficient water supply as its intake capacity. Many of the Cannels are broken and needs to repair as said by the farmers at the time of field visited. Moreover, there are also a number of areas which are not yet covered by the irrigation projects nor have Shallow Tube Wells, Deep Tube Wells, Low Lift Pump and River Canal.
4. Marketing and communication facilities to purchase seeds, fertilizers, pesticides etc. are not well, distribution of these agricultural inputs are not adequate because of which the farmers are not able get these in actual price of the product.
5. There is vast communication gap between farmers and government officials. There exist bureaucratic complexities for which the farmers are unable to avail the advantages of government schemes - as reported by more than 80% of the farmers.
6. High rate of crop disease and attack of insect is another serious problem seen in the agriculture sector in the district.
7. Ignorance, lack of skill and low literacy level among the farmers are some other problems seen in the agriculture sector in the district.
8. Shortage of labour force and unwillingness to work due to easy earnings from different government schemes create problem in this sector.
9. Small size of land holding is another problem among the farmers, because in small size holdings use of modern agro-machinery becomes very costly as compare to big size holdings - argued by the farmers.

Findings:

From the study it has been found that the size of holdings in the study area are very small that is 50.83 percent below 1.0 ha., 35 percent between 1.0-2.0 ha., 12.5 percent in between 2.0-4.0 ha., 1.66 percent in between 4.0-10 ha. and above 10 ha. no holdings were found. Small size of holdings was the major drawbacks for the farmers to install and implements mechanized farm inputs, resulted low production. Yield difference of traditional crops during the period 2015-16 and 2019-20 was very negligible that is 0.68 quint. in 2015- 16 and 0.75 quint. in 2019-20 i.e. difference is only 0.7 quint. at Goreswar Revenue Circle, 0.75 quint. in 2015-16 and 0.82 quint. in 2019- 20 i.e. difference is only 0.7 quint. at Baksa Revenue Circle and 0.67 quint. in 2015-16 and 0.75 quint. i.e. difference is only 0.8 quint. at Jalah Revenue Circle. Similarly, in case of HYV crops the product difference 0.29 quint. at Goreswar Revenue Circle, 0.30 quint. at Baksa



Cover Page



DOI: <http://ijmer.in.doi./2024/13.4.08>

Revenue Circle and 0.22 quint. at Jalah Revenue Circle during same period. As well as profit margin during this period is maximum @400 at Baksa Revenue Circle and minimum @ 200 at Goreswar Revenue Circle for traditional crops and for HYV crops profit margin was maximum that is @1300 at

Baksa Revenue circle and minimum that is @500 at Jalah Revenue Circle. It has also been observed that farmers in the study area used only limited numbers of agro-machinery like tractor, power tiller and sprayer, but others machinery are not highly used. Moreover, that it has also been observed that fertilizer use pattern by the farmers of each revenue circle was not following the actual formula of agriculture department.

Prospects and Suggestions:

The soil in the district is most fertile and suitable for cultivation, due to foothills district of Himalayas and numbers of rivers flows from hill Himalayas to through the district, (they are- Puthimari, Nona, Pagaladia, Borolia, Pahumara, Baki, Kaldia etc.) so, the farmers can grow different types of crops in different sessions. In addition to that three important irrigation project Sukla, Boralia and Pahumara are located in the district, which create abundant scope to develop the sectors in the district. But to develop and to well organized the agriculture sector in the district some reforms and initiation should be needed, which are-

1. Agriculture department of the state shall take initiative to reconstruct the existing irrigation project and install new projects.
2. To help the marginal farmers, govt. and bank loan should be provided with less procedural and bureaucratic complexity.
3. District administration should conduct training and demonstration regarding the use of tools, fertilizers, pesticides etc. at least once in a year by covering two to four ADO circles. In this connection, for training of farmers, AEA and ADO level training is required.
4. Facilities should be developed such that farmers get their agricultural inputs in actual price of the product.
5. To control attack of insects and high rate of crop diseases, govt. should make some remedial measures by creating a task force with persons with expertise in agricultural pest control.
6. The problems of small size of holding can be solved through modifying the hereditary law. Due to hereditary law a person's property will be subdivided among his sons after his death, as a result size of holdings became small and small generation after generation. Therefore, to solve this problem the only way is reintroduce joint family system instead of single family. In addition to that the problems of fragmentation of holdings can also be solved by making cooperative society among the farmers at village or both levels.
7. Communication gap between the farmers and the govt. officials should be reduced through frequent field visits by officials.

Conclusion:

It has been concluded from the above discussion that the present scenario of agriculture sector in the district Baksa was not very encouraging, because of having some problems of this sector the sector was not well organized and developed. Size of holdings, Shortage of capital, crop disease, attack of insect, irrigation problem, agri-tools, lack of govt. initiations, unskilled labour force, Subdivision and fragmentation of holdings were creating the obstacles in the process of development and mechanization. As a result, earning of profit by the farmers only marginal one. Though one section of farmers partially uses the modern inputs in their fields and earn profit to some extent, which are not satisfactory.



Cover Page



DOI: <http://ijmer.in.doi./2024/13.4.08>

References:

1. Bandhudas, Sen. (1974), —The Green Revolution in India—A perspective| Wily Eastern New Delhi.
2. Gautam, H.R. & Kumar. (2013), —Technology Innovation to Increase Productivity in Agriculture|, Kurukshetra (A Journal of Rural Development), Vol. 61, No. 8, PP. 3-6.
3. Majumdar, R. et al. (2013), —Technical Efficiency & its Determinants in Backward Agriculture: The case of Paddy Farmers of Hailakandi District of Assam|, Journal of Regional Development and Planning. Vol. 2, No. 1, PP. 35-51.
4. Rao, D.M & R.S. Despanda. (1986), —Agricultural Growth in India; A Review of Experience and Prospects|, Eco. Political Weekly, Review of Agriculture, Sept. 20-27.
5. Singh, S. & Kaur, M. (2008), —Changing Agricultural Scenario and its Impact: A Study of Rural Punjab|, Man & Development, Vol. XXX, No. 2. PP. 123- 137
6. Statistical Handbook of Assam, published annually by Govt. of Assam,
7. Statistical Handbook of Baksa 2017-18.