



SUSTAINABLE DEVELOPMENT AND IMPACT OF GLOBALIZATION ON TRIBAL AGRICULTURAL ENVIRONMENT OF EAST SINGHBHUM DISTRICT IN JHARKHAND

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Introduction

Agricultural environment of tribes have own tradition and characteristics. They have own genetically land ownership, sheds, pesticides, fertilizer, agricultural processes, agricultural instruments, agricultural byproducts and irrigation etc. Population growth and impact of globalization have changed the whole agriculture system of tribes during 1951-2011. Byproduct of farmer like indigenous fishes, herbs, sheds (paddy), fertilizer are eroded and whole agricultural land of this TD Blocks are converted as unfertile and fellow land due to miss use of chemical pesticide and fertilizer. Marginal farmers have sold their bullock cart, bullocks and their landed property.

Above genus agricultural and land use system before the development of industry in the study area:

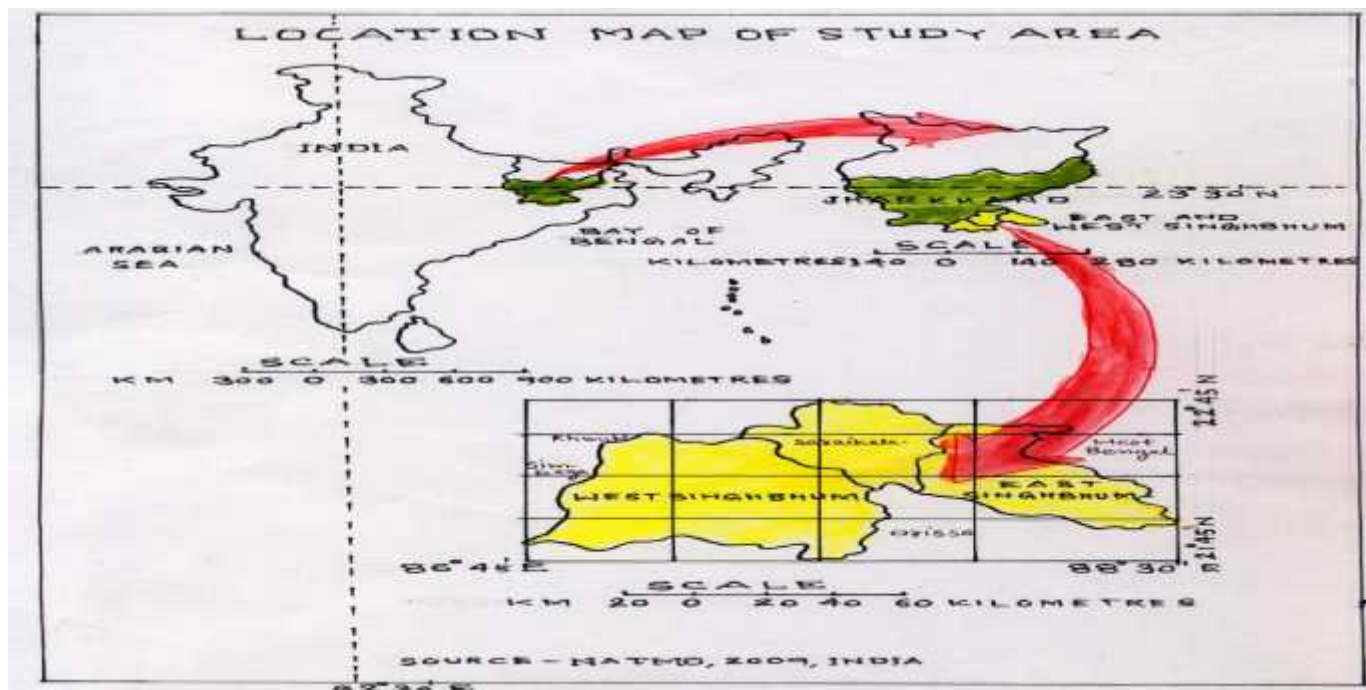
FOREST → / CULTIVATED LAND → SETTLEMENT AREA → CULTURAL ACTIVITIES AREA → RELIGIOUS LAND (Parle, 1992, p-408).

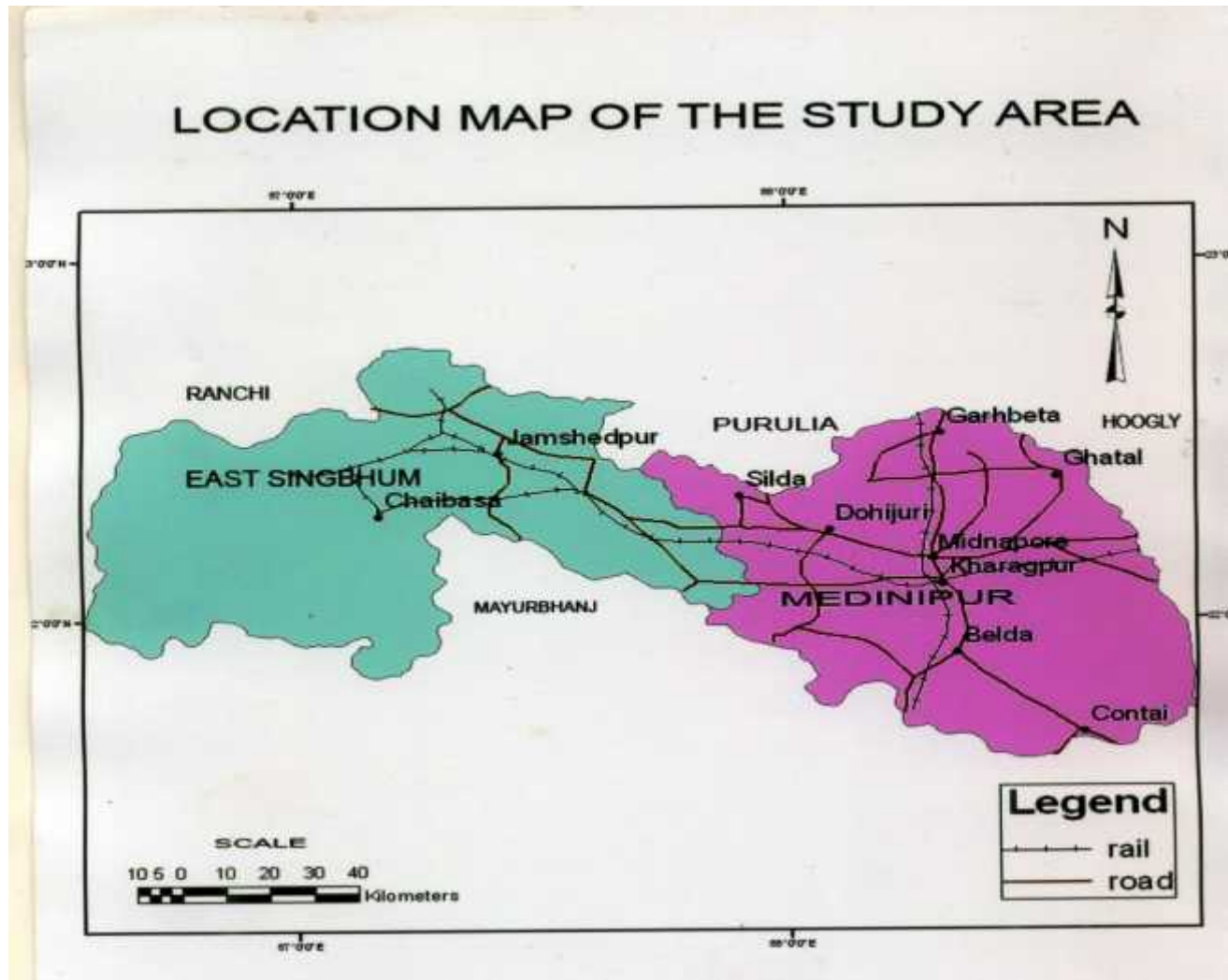
Above genus land use and agricultural system after the development of industry or impact of globalization in the study area:

FOREST → MINES / CULTIVATED LAND → INDUSTRIAL AREA → SETTLEMENT AREA → CULTURAL ACTIVITIES AREA → RELIGIOUS LAND → URBAN AREA (Parle, 1992, p-408).

Process of rapid population growth started from the establishment of Tata Iron and Steel Company in 1907 as well as copper mines at Mosaboni and Ghatshila in 1927. This development changed the land use and agriculture system of tribes. Though their Living standard, Educational and Economic condition had changed, they stand developed in all aspects but as a trade-off lost their socio-cultural composition land use a great deal. They must continue their positive traditional cultures and social traits and may do away with the negative sides like less productivity and traditional brew etc. to avoid the extinction in the long run from the memory of the future generations. It is possible only by the awareness to them. Tribal agriculture has many important things, which need to be preserved and have to continue pollution free environment (land use system, Indian seeds) in the context of sustaining beautiful diversity of Indian cultural landscape.

Location of Study Area





Genetically land ownership of tribes

Genetically male generation hold the land ownership of paternal properties. Female generation has no right on land properties. They are nominally holding the properties at the house of father's in-law, if she takes birth male child. In case of unmarried girl, she may only use her landed properties till her death.

Above genus people are used following instruments during cultivation:

Wooden tiller, bullock cart, Aranh, Nagleh, Barahi, Katu, Katri, wash, Agar, Ruka, Sulak, Phal, Arngam and Wooden Karah. New generation do not have any ideas about the traditional equipments. Because after the impact of globalization many recent equipments are introduced for tilling and harvesting in the field of agriculture..

Erosion of traditional/indigenous crops

Rice "Oriza Sativa", Wheat "Tritium Aestivum Linn", Tea "Thea Sinerinis", Corn, "Zea mays", Maize, Gram, Mustard, "Brassica campestris", Ground nut, Sugar cane, Mango, "Mangifera indica" Mahua and Jamun etc were the indigenous crops but after green revolution new high yielding variety seeds are introduced. Lakshman sal, Sita Sal, Basmati, Dudheshwar, Bhutiya etc paddy seeds are about to abolish from the country.

Tulsi, "Ocimum Sanctum", Cow dung, Compost, Nimleaf, "Azaadirachta indica" and Trifala fruits and leaf.

To control the soil pH they use Ash, Cow dung, Mud and Herbs etc.



Traditionally their agricultural production was less than present time but it has no side effect for the human beings and other animals also.

After independence and industrialization, subsistence agriculture is gradually changed into commercial farming; dairy farming, vegetable farming, Fisheries developed. Agricultural production, equipment, fertilizer, pesticide irrigation pattern are also changed. They use tractor, power tiller, fertilizer and pesticide etc. Now they lose their traditional medicine for paddy plants. Those are Neem leaf, Kargale leaf, Lupung leaf, Mohua, Manure and compost use has also decreased. Fixations of kargale (tree) branch in the paddy field are also abolishing. (Whittlesey, D, 1936:89-119).

Materials and Methods

Regarding the subject matter of the article various books of scholars, research scholars and Journals have been consulted. Materials and data has also been collected from the concerning institute and offices like D.M Office Jamshedpur, BDO, Dumuria, Forest Department of Ghatshila and Musaboni and NGOs of locality's of the information has also been collected from local old people and extreme care has been taken to be objective in approach.

Result and Discussions

The following changes are seen after impact of globalization in the study area:

- Origin of new agricultural system
- Emigration of tribal people
- Origin of new land use pattern
- Vanishing traditional/Indian paddy seeds from the country
- Hues agricultural land is unused in the area
- Higher Dependency rate
- Using less quality of food
- Increasing rate of soil erosion, water pollution and air pollution are challenging issue of the area

Globalization eroded traditional land use and agriculture in the study area:

Data shows the changing land use and agriculture (in %) pattern of study area

Years	Forest	Agriculture	Settlement	Mines	Market	Water reservoir	Road and transport
1920	90	09	01	-	-	-	-
1930	85	10	02	1.5	01	-	0.5
1940	79	11	04	02	02	-	02
1950	75	10	4.5	2.5	04	1.5	2.5
1960	73	11	4.5	03	4.5	1.5	2.5
1970	66.5	10	10	3.5	05	1.5	03
1980	57	6.5	18	3.5	10	1.5	3.5
1990	51	6.5	24	3.5	10	1.5	3.5
2000	48	13	24	Closed	10	1.5	3.5
2010	48	12	24	03	08	1.5	3.5

Source: B.D.O, Mosaboni (East Singhbhum District), 2011

On the basis of this data it can be said that after the establishment of copper mines at mosaboni, local people have lost their traditional and forest environment. During 1920 about 90% area was covered by forest area but in 2010 it is only 48%. Market and settlement is increased. This activity accelerates the urbanization in the area.

During 1970-1990 following Caste wise workers are involved in the copper mines.

Years	Nepali	Madrasi	Telegu	Bengali	Local S.T	Muslim	Punjabi	Bihari	Others (including Engle-Indian)
1970	1400	1260	980	1190	1100	800	760	1268	586
1980	1200	1165	700	845	860	580	480	700	400
1990	1180	1080	680	750	540	480	340	680	380



Data shows that many types of people were residing at the town. They are pulled not only from India but also from abroad. Their culture was different from local people. So this peculiar gathering of workers developed the mixed culture. This culture impacts the local Tribal culture as well as agricultural system. They are forgetting their agriculture system and less interested on environment.

Conclusion

Development work of Government i.e. construction of Copper mines, TISCO in Jamshedpur, settlement development at study area, impact of human being on biodiversity are seen. Area should be developed with eco-friendly or sustainably. So that the verity of Indian seeds/plant and animal life in the area or in the habitat should be reach.

Abolition of Tribal agricultural activities is major challenge for the Indian urban society. Abolition of Traditional land use pattern, Use of traditional pesticide and fertilizer, Communal (Paternal) Land Ownership and their traditional worshipping place of above genus people etc are decaying from the society. Local NGOs and their society are experimenting with numerous methods to check the erosion but still it is continued. So Government should implement such types of plan/ project to continue the traditional pollution free environment in Scheduled area as well as Tribal area in India.

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