



ISSN: 2230-9926

Available online at <http://www.journalijdr.com>

# IJDR

International Journal of Development Research

Vol. 12, Issue, 05, pp. 55986-55989, May, 2022

<https://doi.org/10.37118/ijdr.24561.05.2022>



RESEARCH ARTICLE

OPEN ACCESS

## CHANGING PROFILE OF THE SOUTH GUJARAT TRIBAL VILLAGES

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### ARTICLE INFO

#### Article History:

Received 10<sup>th</sup> February, 2022

Received in revised form

19<sup>th</sup> March, 2022

Accepted 20<sup>th</sup> April, 2022

Published online 20<sup>th</sup> May, 2022

#### Key Words:

Dangs, Dharampur,  
Agriculture Development,  
Tribal Development, SDG Goals.

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### ABSTRACT

This study takes off from the previous studies conducted in 1987 and 2005 by different Institutes, reporting the prevailing situation in the South Gujarat region, consisting of Vansada, Dharampur, and Kaprada. It finds that there has indeed been a sustaining change in the region – it has freed itself from many characteristics of a backward region like hunger, stress migration, illiteracy and such. The authors feel that most of the economic changes happened because of the development of some sources of irrigation that enabled the villagers to take two crops a year. Exposure to the outside world must have changed other mentalities like giving up alcoholism and stressing education for children.

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Citation: Raj Mahla, Yashang Patel and Alka Parikh. "Changing Profile of the South Gujarat Tribal Villages", *International Journal of Development Research*, 12, (05), 55986-55989.

## INTRODUCTION

The main purpose of this study is to revisit the tribal region of South Gujarat. In 1982-83, a study by IIM Ahmedabad (Bhatt, 1987) stated that the prevalence of poverty was as high as 56% for the region consisting of Vansada, Dharampur, and Kaprada. Incidences of starvation and chronic hunger were also recorded by the same study. They noted that almost 95% of the sample tribal population used to undergo poverty-induced migration for 60 to 240 days. From 1997-to 98, the Tribal Development Authority, with the help of NABARD implemented some agricultural programs including the Wadi project (a project that was originally developed by BAIF: The idea was to teach the tribals to grow horticultural crops on an acre of land or to start a kitchen garden), soil and water conservation and water harvesting. It is felt that these programs might have initiated the process of change. The program exceeded its targets of coverage and achieved its targets with a lesser budget. Crops like mango and cashew nuts were introduced into the region through this program. An evaluation of the project was undertaken in 2005 when it was reported that the poverty-induced migration had reduced to just 13-14%. 96% of the study's sample farmers had undertaken soil conservation measures and 69% had followed water harvesting techniques. Starvation was reported to have gone forever. Non-food consumption had increased. (Shah, 2005). It is not claimed that all these achievements - little evidence of hunger, considerably reduced migration, and increase in non-food consumption, together with the

increase in the number of crops taken – happened due to the government's development schemes. A major part must have been played by the farmers adopting irrigation and a different crop mixture. The winds of modernization also must have affected some attitudes. It is not the factors behind the change but the changes themselves reported by Shah (2005) that this study is interested in revisiting – the finding that the South Gujarat tribal region has become far less backward compared to before. This research tries to find out whether this change was temporary or long term. Whether the improvement in the food security situation continued over time and also whether the migration is still at a low level. Shah's report does not say that there is a marked improvement in agricultural productivity. We try to find out whether the agriculture production levels are enough to reduce the out-migration. We also look into different aspects of human development to assess the progress of the region - whether the Sustainable Development Goals of poverty eradication, zero hunger and education defined by UNDP have been achieved by the progress taking place in the region.

**Methodology and sample description:** Eleven villages were randomly selected, 7 from Dharampur and 4 from the Dangs. Total 62 household heads were interviewed.

**Sample selection:** The households for the survey were selected by two methods: Visual inspection was used in 7-8 villages. If the house looks prosperous (i.e., if it is a bungalow) or if there was a four-wheeler parked outside, that house was not taken. Only those houses

were taken which were either made of clay or which had just one storey. In 3 to 4 villages we tried tracking down BPL families from the list given in the rationshop. 50% of the sample from these villages was chosen from the BPL list. However, BPL members are not always very poor so we felt that visual inspection had to be relied on for selecting the households.

**Table 1. Selected villages and the size of sample from each**

Village	Number of people	BPL cardholder
Barumal	7	3
Sherimal	6	5
AambaTalat	4	4
Pati	6	2
Bhambha	8	3
Dhabalidod	5	4
Umberpada	7	2
Pangarbari	2	2
Gundiya	6	3
Rabda	6	6
Binvada	5	4
Total	62	38

As can be seen from table -1, about 6-7 households were interviewed from each village and 61% of the sample was BPL.

**Table 2. Age distribution of the respondents**

Age Group	Number of People
30-35	6
35-45	26
45-55	28
55-65	2

Table 2 shows that 87% of our respondents were from the middle age (35-55). We found the average family size to be 5.82 for our sample households.

## FINDINGS

**Occupation:** All of the sample households own land. People were very reluctant to reveal information about the size of their landholdings, so we had to drop that question. But the respondents did not mind telling us whether they owned land or not. We found that all our respondents have land and that except for 2 persons from Pangarbari village, rest 60 households had some source of irrigation to enable them to take at least 2 crops per year. Maybe because of this situation of security in food, none of our sample households reported migrating outside, looking for some work. The educated people do go outside for work but there is no stress migration. Thus our finding concurs with the finding of Shah (2005) that there is very little seasonal migration now. The situation in the villages has changed.

**Prevalence of Alcoholism:** About 10-15 years ago, this region was known to be a place where most people were addicted to alcohol. But from our survey, we found that in most villages, people have given up alcohol. There was some religious Guru who made the villagers take a pledge that they will not eat meat and won't drink alcohol. Only people from Pati village were found to be addicted to alcohol. Thus the prevalence of alcohol was nil in all but one village that we visited.

**Education:** Another noticeable change was education. Every child had or has been going to a Government school. Even small children go to Anganwadi. The school enrolment was 100% among the sample households. And midday meals are given regularly in schools. The school system is working well. This is in sharp contrast to the situation that existed 30 years ago; the region's literacy rate then was barely half of the literacy rate of the state. We found that many students could not manage the SSC board exams. So there are

students who drop studies after 9<sup>th</sup> standard. But it is becoming common to study at least upto the 9<sup>th</sup> standard.

**Agriculture:** Rice was cultivated as the major crop by all the sample farmers. It is almost as if rice is a compulsory crop there. We came across 5% of the sample who also grow pigeon pea, tomato, brinjal or sugarcane as a major crop. To understand the level of agriculture development of this region, compared to the state, some statistical calculations were done. Given that rice is the main crop of the region, the calculations were made with the data on rice. The data was collected from Directorate of Agriculture, Government of Gujarat (Area, Production and Yield | Statistics | Directorate of Agriculture (gujarat.gov.in)).

A semi-log regression was run to find out the growth rate (given by  $\beta$ ):

$$\text{Log } Y = \alpha + \beta x$$

Where y is area/production/yield  
x is year. The  $\beta$  directly gives the growth rate.

The results of the regression are as follows:

**Table 3. Regression results for area under rice**

	The Dangs	Gujarat
R square	0.6038	0.398737233
$\beta$	0.0602	0.016721984
T statistics	3.266	2.154568269

The regression result shows that area under rice has been increasing in both Dangs and Gujarat. However, the relationship with time is much stronger for Dangs, with R<sup>2</sup> being .60. The growth rate of area under rice is 6% p.a. for Dangs and 1.6% p.a. for Gujarat.

**Table 4. Regression results for rice production**

	The Dangs	Gujarat
R square	0.49207857	0.501169799
$\beta$	0.096478468	0.023008032
T statistics	2.604161879	2.651948562

The rice production has been increasing at the rate of 9.6% in Dangs but at 2.3% in Gujarat. Most of the increase in production seems to have come from the expansion in area under rice because the regression results for yields show lack of any trend for both Gujarat and Dangs. At present, as Table 5 shows, the rice yields in Dangs are lesser than the Gujarat average but our paired t-test shows that the two series on production are statistically very significantly different. The production is increasing at a much faster rate in Dangs. It is hoped that the region will catch up with the state, especially if proper technology dissemination is done. From our discussions with the farmers in the region, we get a feeling that the farmers are ready to take off – they just need guidance.

**Table 5. Comparison of rice yields (2019)**

Area	Yield (tonnes/hect)
Dang	1678.93
Gujarat	2192.33

**Backward region but it is not subsistence farming:** The rice cultivation is not just for subsistence. The farmers take out the amount of rice needed for home consumption from the grown crop and sell the remaining crop in the market. The produce from the kitchen gardens comes out daily or weekly. From that also, they sell some quantity in the market. 86% of our sample households use their produce for both home consumption and for selling in the market. 11% of people use those crops for only home consumption either because they don't grow much or they have a large family having high

food requirements. And the remaining 3% of people sell the entire produce in the market and do not keep anything for home consumption.

**Food security:** We found no mention of food shortage in 10 out of 11 of our sample villages. We met just one person (from the village Pangarbari) in our entire field visit, who talked about experiencing food shortage. He and his fellow villagers have food shortage in the summer months because they can take just kharif crop. Their land is on a slope so the rainwater runs off. There is only a little water left in the soil after the rains. Thus they do not have enough amount of water to continue farming in winter or summer. They store the kharif crop and try to survive with that for the whole year. But usually the food lasts only till March-April. Then they start facing severe food shortages. (We would like to report to the reader that this is the village where we were stopped by a group of 13-14 year old boys who tried to extort money from us). All other villages reported that they get enough supply from their fields to last for the whole year. This shows that anyone who has cultivable land, even with limited productivity, manages to get enough food to feed the family. Only those with no land or with land that is unproductive, seem to be facing food shortages. We found a similar result in Parikh and Burli (2007) which states, "Even if the land does not give enough to support the family for the entire year, it at least provides good backup for food security; at the very least, 200 kg grains are added to the family's stock". Another notable point is that when a region is able to grow grains and vegetables on its own, the need for food imports declines considerably. The level of food security, in contrast to the Parikh and Strokov's study of Tajikistan (2017), is not compromised.

**Kitchen garden:** The kitchen garden concept is well known here for 2-3 decades now, as mentioned in the introductory paragraphs. Kitchen garden crops are vegetables and beans like ladyfinger, cauliflower, brinjal, radish, green chilli, bottle gourd, lemon, pigeon pea, cucumber, udad, desi nagali, chora, chana, desi vatana, masoor, karela, methi, and papdi. We found 3 families that cultivate jawar (sorghum) also but usually grains are not grown in the kitchen gardens. 92% of our sample households have kitchen gardens for last 2-3 decades. Because of this, they eat vegetables everyday. It gives them an income also. Everyone who does kitchen gardening believes the kitchen garden helps a lot in getting food supply as well as nutrition and that everyone must do it. Just imagine, increasing prices of vegetables does not affect these households at all! In fact, they benefit from the high prices, when they go out to sell their vegetables in the market. Typically, kitchen garden vegetables are sold by the farmers themselves in their own or neighbouring villages. There is no middleman involved because the quantity involved is very less. For this reason, the growers get a price close to the final retail price of the market. This also turns out to be beneficial for them. Our sample households believe that they eat much more vegetables now than before the kitchen garden time. Vegetables are regular part of their meals. They also told us that they don't have to worry about the quality or quantity of the vegetables – this is their own produce and the plants give much more than they can consume.

**Marketing the produce:** 90% of our respondents sell their harvest to the middlemen who come to their village. Only 10% of the sample households directly sell it in the mandi (APMC). People who sell their crops to middlemen get 20-30% lower prices than the main market. That's why 90% of our sample farmers reported that they don't get fair prices. It is a puzzle then why they do not sell to the APMC. The farmers said that the transportation charges are high mainly because this region is a remote region. But more importantly, when farmers go to the APMC they find that there is a deal between the wholesalers and the middleman that the wholesaler will buy only from the middleman and not directly from farmers. This way the wholesaler gets a guaranteed amount of produce from the middleman and the middleman gets his commission. So if the farmer goes to the market, the wholesaler either does not buy from the farmer or gives much lesser rate than the market rate. (This claim of the farmers could not be verified but we heard this story from three different villages). If the infrastructure is improved and this nexus between traders is

broken, we feel that there would be even more progress in this region. The agriculture incomes can rise by 20-30% per year.

**Profitability:** Mango was introduced as a crop in the Dangs and Dharampur through the wadi program. People who have mango farms say that mango harvest is good only every alternate year. So profits do not flow in every year. Rice makes losses when there is very little rain during the season or the rains come during the harvesting time. Otherwise rice is considered a reliable crop that gives small but guaranteed returns. People who do kitchen gardening say vegetables are the most profitable crops. Apart from that 70-80% of people say that animal husbandry is more profitable than crop agriculture. They say their main income comes from animal husbandry. 39% of people want to continue farming even in future. They want more help from scientists about new techniques. They also want to grow more horticulture crops and would appreciate some tips on that. Some said that they want to shift towards organic farming. The remaining 61% don't have much plans for the future. Just as wadi gave new options to the farmers in this region 3 decades ago, we feel that imparting knowledge about some profitable horticulture/ animal husbandry/organic farming techniques can lead to more agriculture growth for the region and more hopes for future for the farmers.

**Impact of government schemes:** The introductory paragraphs state that there must be many reasons behind the progress of the South Gujarat region but the schemes of soil and water conservation and training the farmers about horticultural crops (wadi) could have played some part in the progress of the region. We tried to find out how many of our households feel that they are benefiting from some government schemes at present. 58% of our sample farmers do not know about any government agriculture schemes. There is no officer who visits the village and spreads awareness regarding any schemes. In AambaTalat village, people don't even know who is their talati (revenue officer). 29% of people know some schemes about fertilizers or some other types of equipment for farming. They want to know more but they do not know where to ask. When they talk to the Sarpanch, he also gives only evasive answers. An interesting case is that of Bhambha village. There we saw a lot of awareness about government schemes. We found that it happened because of their dynamic sarpanch. It seemed from the villagers' talk that the village was growing well with the help of government schemes. The sarpanch gets schemes for the village from the zilla parishad office. That kind of connections and push are not found everywhere. We talked with the sarpanch and he said that they are trying their best to raise awareness in the village about the schemes. He added, "We also try to arrange a meeting for farmers every month and try to resolve their issues. We organise workshops for helping them". No wonder, we found Bhambha to be one of the most developed villages that we visited. It has street lights, an advanced system of irrigation and good roads within the village. We also got to know that Bhambha is now under a 3-year project (PGS-India: A Participatory Organic Guarantee Programme) on organic farming with the help of the Department of Agriculture and Co-operation, Government of India. Thus the desire of farmers to be taught some good techniques of organic farming and also guarantee for marketing is already taken care of in Bhambha. The contrast to Bhambha was the village AambaTalat. The villagers do not even know who is their "talati". The Sarpanch is hardly ever found in the office. The implications of such governance was evident: Most of the houses in AambaTalat were kachcha. There was no source of drinking water in summer. When we talked to the villagers, they said that their lives have become more and more uncomfortable but they do not even know where to complain. Such contrast in two of our sample villages show that government schemes can make a difference in the village. But most of our sample villagers do not have any access to such government services. Other than that, only 2 villages - Rabda and Binwada- have experts who advise the farmers. But these are not government officials. These are the persons who have studied agriculture who can offer some technical help. It is not the same as getting advice from real experts.

In such a situation, it is difficult to imagine how the soil and water conservation as well as wadi project could have made a wide spread

impact. Our hypothesis is that the change came more from developing some irrigation source rather from the actions of the government.

## CONCLUSION

This study shows that the changes noticed by Shah in 2005 have sustained over next 17 years. There is no starvation, there is very little migration and heightened awareness about education. Given that the average size of the family was 5-6 members, a small piece of land also ensured food security. The agriculture productivity continues to be lesser (and there are no experts who visit the village to guide the farmers) but at least they have started taking two crops a year that ensures enough food for the year. 92% of the people had kitchen gardens. And they have been having them for at least 2-3 decades. Due to this, the nutritional security has been high. People report eating vegetables at least 3-4 days in a week. In short, the tribal South Gujarat region has changed its face over last 30 years. Life is not prosperous but it has become far more tolerable than before. And all this has been achieved with just a little better agricultural practices.

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