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1

IRON ORE MINING AND THE STATE ECONOMY OF GOA

Dnyandev C Talule¹ and Guruprasad R Naik²

Abstract:

Mainly the present paper had intended to find out the impacts of indiscriminate mining and its transportation which have exposed the people Goa to multifaceted problems of economic, social and cultural nature. The mining also has had its impacts on the overall state economy of Goa. Hence the study had depended on authentic and relative Primary and Secondary Data from various sources. The secondary data for over a period of ten years comprising the period between 2004-05 and 2013-14 are obtained from the state economic surveys of Goa for years. The study has attempted to locate among other sectors the relative significance of iron ore mining in the state economy of Goa. Through these data we attempted to locate the exact place of the mining sector in the state economy through its contribution to the GSDP and NSDP both at the current and constant prices. This exercise could help us in segregating the role of the mining sector in to two time periods i. e. the period comprising of pre and post Shah Commission mining ban in Goa effective from Sep. 2012. All other data comprising of agricultural production and yield levels at the state macro level were also segregated in to the two periods mentioned above. This has helped us to locate the exact yield and production differentials between the two time periods i.e. the period of full swing mining before the ban and the post Shah Commission mining ban period after Sep. 2012 respectively. Even though the present paper is based on the secondary data obtained from different issues of the State Economic surveys of Goa for years the main study on the part of which the present paper is based has depended on the collection, tabulation, analysis and interpretation of the authentic and relative Primary data that have been obtained from the village farming households respectively from each one Taluk of the North and South Goa namely Bicholim and Sanguem Taluks. Areas with different proximity in mining sites in order to ascertain the proximity specific impacts were selected for this purpose. Goa minerals are located in the four areas viz; 1) Bicholim (*Surla, Velguem, Shirgaon, Asnoda and Advalpal*) from North Goa and, 2) Sanguem (*Rivona*) from South Goa. These five villages respectively three from Bicholim of North Goa and two from Sanguem taluk of South Goa being in

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the close proximity of the mining areas with a concentration of the Iron Ore were selected for the collection of the primary data for the purpose of the present Keywords : mining study.

Keywords : Iron – Mining -GSDP .

1. Introduction:

Goa, the beautiful state of India lies on the West coast of India and is endowed with beaches and silvery sand that often attracts the admirer of nature to this place. It has area of 3702 sq. kms. with density of population to be 394 number of people living per square kilometer. Situated between the States of Maharashtra and Karnataka, Goa is the smallest state of India with a coastline of 105km with varied geographical characteristics and also comprising of coastal belts, plateaus and also home to the Western Ghats hill range which is situated in far interior regions of the state of Goa. The total area of the Western Ghats comes up to around 600 sq. km. in the State of Goa that in proportion to its entire area of 1,60,000 sq. km. coming up to almost 16.20 per cent of its entire geographical area. Harboursing rich tropical forests and a varied biodiversity, the Western Ghats has been internationally accepted as biodiversity hotspots of the world. Goa consists of 7 wildlife sanctuaries and 1 national park that houses large flora and fauna in the state of Goa. But, due to rise of mining in the state of Goa in last few decades increase in strip mining has been massively affecting the people residing nearby the mining sites. Goa has 1424.46 sq. kms. Of area under the forests which is 38.47 per cent of the entire state area. Hence, we can say that of the total forest area of Goa 48.95 per cent of it comes under Western Ghats that speaks about the varied diversity of rich biodiversity endowed to the state of Goa considered to be small geographically but big in terms of natural resources such as forests and rivers that allow navigation to be used historically for trade and commerce as well as the domestic occupation of fishing that is the another advantage Goa has thanks to its coastal proximity. But it is noticed that tropical forests that had grown over a long period of time have been cut down leading to deforestation and there has been creation of huge deep craters filled with toxic waters.

The soils of Goa are of lateritic nature, which manifests the underlying geology of the area that is. The climate is pleasant and warm almost throughout the year and no significant changes in temperature take place. The monsoon runs from the month of June till September with an average annual rainfall of over 3000 mm thereby supplying ample amount of water to the different parts of the state of Goa. Agriculture is being practiced by the people of the state along with other occupations such as fisheries and tourism are some of the contributors to the state economy of Goa. Population of Goa at the onset of twentieth century that is in the year 1900 was 475513 almost touching quarter to five lakhs. As opposed to this in the midst of twentieth century in the year 1950 the population of Goa reached 547448 just nearing five and half lakh and at the end of the twentieth

century the population of Goa reached 1347668. Hence, over the twentieth century the population increased by difference of 872155 number of people. In the year 2011 the total population of Goa was 1458545. According to the Census of India conducted in the year 2011 the state of Goa ranks twenty sixth in terms of population among all the states of India. Goa is not only famous all over the world for its beautiful beaches along the coastline but also has presence of various rivers and lakes, hills and plateaus, natural forests, fields, etc. All packed by nature into one of India's smallest States.

2. Illegal Mining in Goa:

Since the segregation of taluks we now have altogether 5 mining taluks namely Bicholim, Sattari, Dharbandora, Sanguem and Quepem spread in North and South Goa respectively. Mining activity has been on upswing in last few years thanks to the increased iron ore prices in the international market in 2008.

Deforestation, removal of the topsoil below which there are mineral deposits and finally digging out the ore body from the earth bed is the mining method followed in the state of Goa often termed as open cast. Goa has the mineral deposits of iron, manganese and bauxite. The mining area of Goa roughly comprises of 700 sq.km and is spread in five taluks namely Bicholim, Sattari and Dharbandora of North Goa district and Sanguem and Quepem taluks of South Goa district. Mining and the other associated activities present have largely affected the nature around the mining area region by digging out huge pits and the final dumping of waste rejects created lot of problems to the people living near mining sites. These mining wastes are washed by heavy rains into the rivers thus affecting the marine organisms such as fish, sea plants, etc. thereby endangering their life too. After having extracted the expensive and high value ore only the low-grade ones remains which is also extracted and transported via barges because of the existence of good navigable inland river network that Goa has that helps in exporting the low grades iron ore. History shows that the first ever export of 100 tonnes of iron ore took place in the year 1947. The exports touched 1 million tonnes by 1954, 10 million tonnes by 1971, and 13-15 million tonnes in 1980s followed by the further increase in production to 33 million tonnes as a result of Asian neighbours demand for iron ore specifically from China.

Goa has a unique mining industry which has high overburden to ore ratio that necessitates large volume material handling because of its sheer size and need of sufficient space to dump the excavated or mined overburden. It is very interesting to note that the excavation ratio in Goa is 3:1 that means when every tonne of ore is mined with it three tonnes of soil is also extracted leading to large waste accumulation per tonne of ore mined. Earlier, the ratio of mud/overburden to ore was 3:1, now it is 4: 1 that shows the increasing amount of generation of overburden that eventually results into environmental problems. This puts the issue of environment destruction at top position as the compilation of this ratio would

put annual excavation of ore from all Goa mining sites and multiply by three giving lot of soil excavation that is simply piled up at mining sites in the form of large amounts of overburden. The size of the mining pits is really dangerous. This overburden carrying low grade ore is stocked up on mining sites and sometimes even this is also exported when demand shoots up.

3. Mining in Portuguese Era:

The Portuguese ruled Goa from 1510 to 1961 (450 years) and during the same time for undertaking the mining activity in the Goa they subsequently gave almost or more than 700 mining concessions (now given by the state Government of Goa and is called as Mining Leases) to undertake mining of minerals found at the near surface soils of Goa. These concessions were granted in perpetuity which means that the concession owner can continue mining forever or mining may be undertaken for prolonged period of time. Since mining was done manually the mining concessions were granted by not giving due consideration to the operations and its lone run effect on the environment. It was hardly assumed that the industrialization process would also be so aggressive that it would also result in mechanizing the process of mining, affect the ground water table and eventually deforestation in the Western Ghats and lead to large scale destruction of productive agriculture in the state of Goa. This later on was followed by the implementation of The Goa, Daman and Diu Mining Concessions (Abolition and Declaration as Mining Leases) Act 1987. These events occurred in the twentieth century but since India got liberated from British colonial rule in 1947 and also with the framing of Constitution of India the laws changed in the independent India later on Goa also got liberated from the Portuguese rule in 1961 following the successful implementation of military strategy of Operation Vijay by the Government of India. In the year 1987 Parliament of India passed a special law abolishing the mining concessions of Goa given by the erstwhile Portuguese government and thereby converted these mining concessions into mining leases that were further regulated by Indian government laws related to mining but no changes were witnessed in the techniques of production of mining in Goa. It should be noted that the provisions of the Water Pollution Control Act (1974), the Air Pollution Control Act (1981), the Forest Conservation Act (1980) and the Environment Protection Act (1986) were not strictly administered by the competent authorities post notification of the 1987 Act and the subsequent approach of mines for first time that only kept the law on the paper but was never strictly enforced. In 1994, the Ministry of Environment issued its Environment Impact Assessment (EIA) notification for environment clearance but did not apply or make it compulsory for the mining activity in Goa. In the year 2004 the state Government of Goa made a rule called as "The Goa (Prevention of Illegal Mining, Transportation and Storage) Rules 2004. Due to the continuation of unrestrained mining that went on for years and the illegalities that occurred in the mining business resulted

in filing of lot of complaints by the people of Goa to both the central government as well as the state government. Following these allegations and complaints in November, 2010 the Central Government of India led by UPA (United Progressive Alliance) appointed a commission under the chairmanship of Justice M.B. Shah for undertaking the inquiry of illegal mining of iron ore and manganese. In the same year 2012 the state government of Goa updated “The Goa (Prevention of Illegal Mining, Transportation and Storage) Rules 2004 that now came to be known as “The Goa (Prevention of Illegal Mining, Transportation and Storage) Rules, 2012.

Post the submission of the Justice M.B. Shah Commission report in the parliament of India on 7th September, 2012 a non-governmental organization Goa Foundation subsequently filed a Public Interest Litigation (PIL) in the Supreme Court of India asserting that the natural resources of nation are the most valuable property and the government is just a caretaker. In October, 2012 the Supreme Court of India suspended all mining operations.

The state Government of Goa on 10th September, 2012 vide an order had suspended all mining operations in the state including excavation and transport. Followed by this on 14th September, 2012 the Suspension of 139 environmental clearances was done by the Environment and Forests ministry of mining leases in Goa making it stricter for the mining activity to be put on a total halt.

Following the Justice M.B Shah Commissions report in order to find out the extent to which illegal mining was going on in Goa the central government also appointed a Central Empowered Committee (CEC) to look into the matter which visited the state of Goa in October 2012. Having visited the various mining sites and after undertaking deliberate efforts to analyze the situation of mining in the state of Goa the CEC in December, 2012 filed its preliminary report and in the next month of January, 2013 a supplementary report was also filed by the CEC with respect to the buffer zones of Goa. Keeping in view the actions taken by the various committee(s) / commission(s) in the month of May, 2013 the Forest Department of Goa sent out letters to conduct a survey to find out the distance of Wildlife sanctuaries and National Parks from the nearby mining sites. Since, environmental destruction was one of the major ill effects of unrestrained mining activity in the state of Goa the Ministry of Environment and Forest (MoEF) constituted an expert appraisal committee to verify the environmental clearance of various iron ore mining lease cases in the state of Goa. In September, 2013 the state government of Goa having analyzed all the 3 surveys of various mining leases in Goa indicated renewal of 27 mining leases. Government of Goa framed a policy for regulating the dumping of overburden on the land of both private as well as public properties through the Department of Revenue. Followed by this Goa Mineral Policy was also announced by the Department of Mines and Geology.

Iron ore mining brings with it inevitable natural consequences, through deforestation, climate change, erosion, air and water pollution and health hazards. The most noticeable impacts on the ecosystem are degradation of land, deforestation, displacement of wildlife, etc. Forest Department and the Department of Mines and Geology conducted a survey to assess the distances of mining leases from Wildlife Sanctuaries and national parks were carried out in four phases.

‘The State had proposed an Eco-Sensitive Zone (buffer zone) of up to 1 km from the boundary of Wildlife Sanctuaries and National Parks in Goa. The state submitted an ESZ proposal and the Union government accepted it. That means three leases within 1 km and 5 adjacent touching the boundary of Netravali Wildlife Sanctuary too should not operate.’ Also, the Supreme Court in the Judgment in Goa Foundation versus Union of India had observed that to conserve forest, environment and wildlife, all activities falling within 10 km of the protected areas to be brought to the notice Standing Committee of the National Board of Wildlife (NBWL).

Table 1: Survey showing the distance of Mining Leases from Wildlife Sanctuaries and National Parks

Sr. No.	Category	1 st Survey	2 nd Survey	3 rd Survey	4 th Survey	Total
1	Within confines of a WLS	1	12 (non-working)	0	0	13
2	Partly in a Sanctuary	0	4	0	2	6
3	Adjacent to WLS/NP	0	5 (working)	0	0	5
4	Within 1km of WLS/NP	0	3	17 (working)	6	26
5	Within 10 km of WLS/NP	49	12	35	24	120
6	Beyond 10 km of WLS/NP	4	1	2	2	9
-	Total	54	37	54	34	179

Source: Jorge, Terence, Hagen De Sa, Pushp Jain, (2013) Survey of Environmental and Socio- Economic Impacts of Interim Ban on Mining in Goa, EIA Resource and Response Centre (ERC), Goa, India.

Perusal of the data depicts the survey data which shows the distance of mining leases from wildlife sanctuaries and national parks that proves to be quite useful in assessing the proximity of these protected areas to the different mining sites.

The first phase had undertaken survey of 54 mining leases of which 1 was within the confines of a wildlife sanctuary and 49 others are within 10 km of the Wildlife Sanctuaries and National Parks, with only 4 beyond the 10 km mark.

In the second phase, of 37 surveyed mining leases, 12 non-working mines were within confines of a Wildlife Sanctuary, 4 were partly within the Wildlife Sanctuary, 5 working mines were adjacent to the Wildlife Sanctuary/ National Park and 3 mines were within 1 km of Wildlife Sanctuaries/ National Parks, while 12 were within 10 km of a Wildlife Sanctuary or National Park. Single mine was located beyond area of 10 kilometers.

Of 54 mining leases no lease was found to be within Wildlife Sanctuaries (WLS) and National Parks (NP), but 17 working mining leases were within 1km of WLS, two beyond 10 km of WLS and 35 within 10 km of WLS.

In the fourth phase, out of 34 surveyed mines, 2 mines were partly in the Sanctuary, 6 were within 1 km of Wildlife Sanctuary/ National Park while 24 mines were within 10 km of Wildlife Sanctuary/ National Park and only 2 were beyond 10 km of Wildlife Sanctuary/ National Park.

4. Data and Sources:

Even though the present paper is based on the secondary data obtained from different issues of the State Economic surveys of Goa for years the main study on the part of which the present paper is based has depended on the collection, tabulation, analysis and interpretation of the authentic and relative Primary data that have been obtained from the village farming households respectively from each one Taluk of the North and South Goa namely Bicholim and Sanguem Taluks. Areas with different proximity in mining sites in order to ascertain the proximity specific impacts were selected for this purpose. Goa minerals are located in the four areas viz; 1) Bicholim (*Surla, Velguem, Shirgaon, Asnoda and Advalpal*) from North Goa and, 2) Sanguem (*Rivona*) from South Goa. These five villages respectively three from Bicholim of North Goa and two from Sanguem taluk of South Goa being in the close proximity of the mining areas with a concentration of the Iron Ore were selected for the collection of the primary data for the purpose of the present study.

5. Results and Discussion:

Mining has resulted in generation of different types of pollution that has stopped production of agricultural crops along with trees now bearing the fruits.

Villages in Bicholim Taluk have been subject to field laying of no use which is clogged up with overburden and destruction of fodder of animals has also adversely affected the dairy farming.

Agricultural lands and other vegetations that flourished in abundance prior to full swing mining are struggling now to grow since the onset of full swing mining activities in the state of Goa.

With the amount of dust reduced, farmers have begun cultivating their fields growing

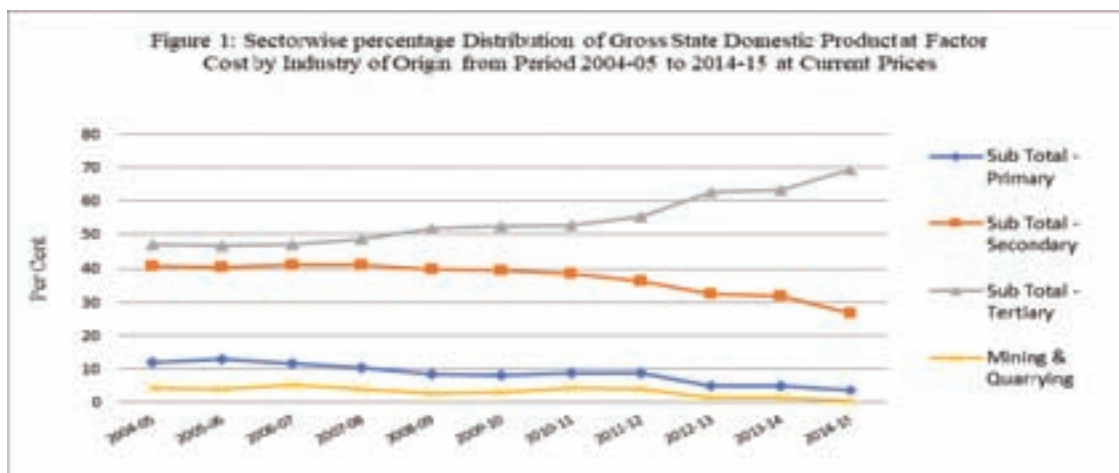
chilies and other pulses.

There is also blossom of sacred groves post mining ban that is of spiritual value to the villagers. We can find the multifaceted impacts of the ban on mining in the state of Goa that was introduced in the year 2012-13. These impacts can be seen across the sectors to which agriculture being the most affected one cannot be an exception. The impacts ranged between the human life, health, industry and the agriculture of this coastal state. We can find the multifaceted impacts of the ban on mining in the state of Goa that was introduced in the year 2012-13. These impacts can be seen across the sectors to which agriculture being the most affected one cannot be an exception. The impacts ranged between the human life, health, industry and the agriculture of this coastal state.

i. Mining and its contribution to the State Economy of Goa:

Sectoral Contribution to the Gross State Domestic Product (GSDP) and Net State Domestic Product (NSDP) of Goa:

Measurement of performance by any state or union territory is depicted through the various economic indicators. Some important economic indicators are Gross Domestic Product (GDP) termed as Gross State Domestic Product (GSDP) when measured for states performance and the Net Domestic Product (NDP) termed as Net State Domestic Product (NSDP) when measured for states performance. The discussion below consists the sector wise percentage distribution of both the Gross State Domestic Product as well as Net State Domestic Product at factor cost by industry of origin both at current as well as constant prices from the time period 2004-05 to 2011-12 in lakh rupees computed by taking 2004-05 as the base year. Also we have displayed the contribution and share of Mining as a percentage of Gross State Domestic Product and Net State Domestic Product at Factor Cost of Goa from the Period 2004-05 to 2013-14 at Current Prices (Rs in Lakh) Base Year 2004-05.



In the primary sector, majority of the contribution comes from Agriculture, Forestry and Fishing fluctuating over time period of 11 years showing a trend of slight increase in the beginning from 7.85 per cent in 2004-05 to 9.24 per cent in 2005-06. The contribution of Agriculture, Forestry and Fishing dropped down to 7.79 per cent in 2006-07 and further to 7.21 per cent in 2007-08. Again, in the year 2008-09 its contribution significantly dropped down to 5.87 per cent before declining it to 5.69 per cent in the year 2009-10. It very marginally managed to increase to 5.70 per cent in 2010-11 and finally reached at 6.90 per cent in 2011-12. Again the fall was witnessed in the year 2012-13 to 6.02 per cent followed by a sharp rise in its contribution to 8.01 per cent in 2013-14 and 6.44 per cent in the year 2014-15. Thus it can be said that the share contributed by Agriculture, Forestry and Fishing to the state GSDP of Goa remained at 6.97 per cent on an average.

It may be noted that individual contributions are equally important of the sub-sectors that depicts that Agriculture contributed the majority of the share to the GSDP of the state followed by Fishing and Forestry and Logging. Hence, agriculture remains the main thrust area that is contributing to the primary sector although its share in the total National Income of the country has come down to less than 14 per cent. Agriculture is the major contributing sector to the primary sector. It started out its task with the contribution of 5.21 per cent in the year 2004-05, increasing it slowly to 5.87 per cent in the year 2005-06. The contribution of agriculture shockingly declined to 4.61 per cent in the year 2006-07 and marginally slowed down to 4.32 per cent in the year 2007-08. This trend of decreasing contribution continued and it gave 3.56 per cent in the year 2008-09. The presence of the vast problems to the state farmers further pushed the contribution of agriculture to 3.26 per cent in the year 2009-10. Agricultural sector continued to contribute the same with 3.22 per cent contribution in 2010-11. Finally showing the signs of slight recovery with contribution of 4.14 per cent in the year 2011-12. Again a decline occurred in its contribution to 3.21 per cent in 2012-13 and slight rise also took place to 3.74 per cent in the year 2013-14 but fell to 3.12 per cent in the year 2014-15. Fishing as a sub-sector which falls under agriculture is the next highest contributor that initiated contribution of 2.04 per cent in 2004-05, and slowly increased it to 2.81 per cent in 2005-06. The contribution of fishing declined down to 2.37 per cent in 2006-07 while the same further fell to 2.21 per cent in 2007-08. The year 2008-09 witnessed a fall in contribution of fishing below 2 per cent (reaching 1.70 per cent) and 2009-10 saw a more fall in the contribution of fishing to 1.61 per cent respectively. Significant fall in the contribution of fishing occurred in the year 2010-11 when it contributed 1.46 per cent the lowest contribution to the state economy and in the following year of 2011-12 its contribution slightly peaked up to 1.81 per cent. Followed by further rise to 1.92 per cent in 2012-13 and major rise in its contribution was witnessed in the year 2013-14 before declining marginally to 2.48 per cent in 2014-15.

Another sub-sector Forestry and Logging under agriculture is the lowest contributing sector to the state economy of Goa with less than 1 per cent for the entire time period. Its initial contribution started with 0.61 per cent in the year 2004-05, maintaining almost the same level of contributions in the year 2005-06 with 0.56 per cent. In the next year however it contributed slightly more than 0.80 per cent in 2006-07. But again the fall in its contribution continued with 0.68 per cent in 2007-08 and to 0.61 per cent in the next year of 2008-09. The role of the sector again increased marginally with its contribution of 0.82 per cent in 2009-10. Surprisingly, in 2010-11 it contributed 1.01 per cent and again showed the same fall in its contribution to 0.94 per cent in 2011-12. With 0.89 per cent contribution in 2012-13 the Forestry and Logging showed a decline and it again increased to 1.67 per cent in terms of its contribution to the GSDP of Goa in 2013-14 and finally decreased to 0.84 per cent in the year 2014-15.

The second sub-sector Mining and Quarrying contributed 4.42 per cent to the Gross State Domestic Product during the year 2004-05. Here too as seen earlier slight rise took place and it contributed 4.67 per cent in the year 2005-06. Major mining activity led to increased revenue to mining companies and subsequent increase in contribution to state of 9.36 per cent in the year 2006-07. This increased contribution to increase slowly to 12.94 per cent in the year 2007-08. Thus in the following years increase in contribution by this sector took place with 16.84 per cent in the year 2008-09, 17.18 per cent in the year 2009-10, 19.80 per cent in 2010-11 and a slight decrease with contribution as opposed to earlier of 18.06 per cent to the state GSDP in the year 2011-12. Drastic reduction in its contribution was witnessed following the mining ban bringing down its contribution to 4.8 per cent in 2012-13 and to 4.16 per cent in 2013-14 respectively with decrease in its contribution to 2.68 per cent in the year 2014-15.

Primary sector as major and a crucial component of the economy of Goa all levels contributed 12.27 per cent during the year 2004-05. In 2005-06 it began to increase its contribution steadily but slowly to 13.91 per cent in 2005-06. Jumped up its contribution to 17.15 per cent in the year 2006-07. In 2007-08 the contribution of primary sector to the state GSDP almost doubled its initial start-up contribution with 20.15 per cent. Primary sector did not lose up on this and again contributed 22.70 per cent in 2008-09. But this rise slowed down drastically in the year 2009-10 with contribution of 22.87 per. An increase to 25.49 per cent was witnessed in the year 2010-11 and again a small decline took place in the year 2011-12 by its share of 24.96 per cent. More than half of the decrease was witnessed in 2012-13 to 10.82 per cent and slight rise took place in the year 2013-14 which was 12.17 per cent and fell to 9.13 per cent in the year 2014-15.

Industrialization propelled the secondary sector with a rise in manufacturing to be the dominant and major dependent sector for growth in the industrial arena to progress heavily. Manufacturing contributed 29.96 per cent in the year 2004-05. But the growth

slowed down and so the contribution to 29.17 per cent in the year 2005-06. Decline in growth continued to 28.01 per cent in the year 2006-07 also. It is interesting to note that this decrease in growth took place for the succeeding years of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12 respectively. During this we see that the manufacturing sector contributed 25.92 per cent, 24.64 per cent, 24.60 per cent, 21.67 per cent and 20.35 per cent respectively. Major rise to 34.87 per cent was witnessed in 2012-13 and slight fall to 31.82 per cent was seen in the year 2013-14 and to 31.68 per cent in the year 2014-15.

Registered Manufacturing within the scope of manufacturing turned out to be the dominant sub-sector by contributing 26.09 per cent to the state GSDP in the year 2004-05, following the manufacturing sector's trend slowdown was also witnessed to 25.24 per cent in 2005-06. Considering these the decrease in contribution continued with 23.87 per cent in the year 2006-07. Almost 5 per cent decline from the original contribution was depicted to 21.76 per cent in 2007-08, followed by 21.16 per cent in 2008-09. However in between a slight rise occurred like that of 21.40 per cent in the year 2009-10. Depression in manufacturing continued with 18.75 per cent contribution in the year 2010-11 and succeeding 17.52 per cent in the year 2011-12. In 2012-13 contribution rose up to 31.9 per cent and again fell to 28.65 per cent in 2013-14 and fell to 27.85 per cent in the year 2014-15.

Unregistered Manufacturing contributed much less than the registered manufacturing with 3.87 per cent as the opening contribution during the year 2004-05. Rise to 3.93 per cent took place in the year 2005-06. This signs of improved contribution of the sector also continued with its contribution of 4.14 per cent in 2006-07. Almost the same contribution continued with 4.16 per cent in during the year 2007-08. Downfall started with its contribution of 3.48 per cent in 2008-09. No improvement took place in the year 2009-10 which depicted through the contribution of 3.21 per cent to the state GSDP, 2.91 per cent contribution in 2010-11 and 2.83 per cent contribution in 2011-12 justified the fall. In 2012-13 contribution increased to 2.98 per cent, 3.17 per cent in the year 2013-14 and 3.82 per cent in the year 2014-15.

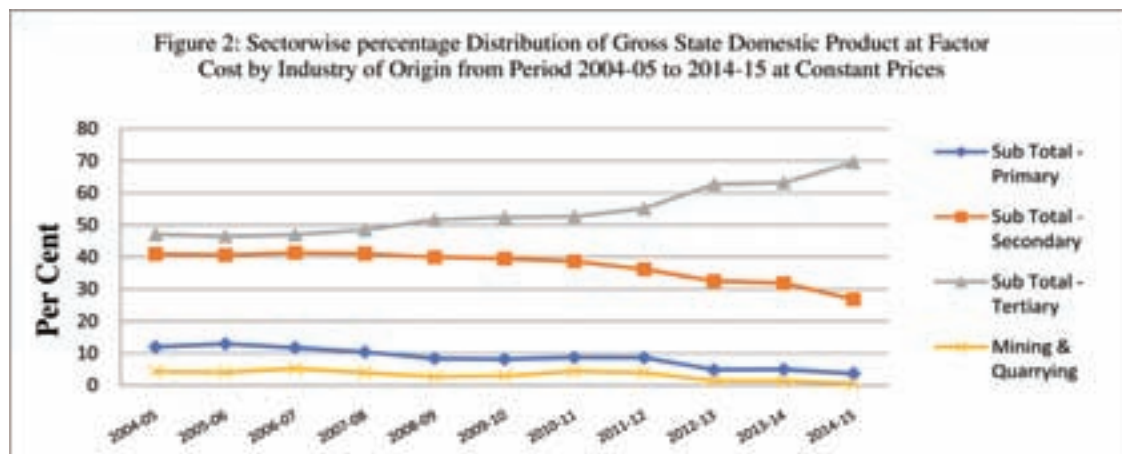
Construction another sub-sector contributed 10.33 per cent to start with in the year 2004-05 showing a fluctuating trend in its contributions within the range of 9 to 6 per cent spread over these years up to 2011-12 and highest contribution of 3.6 per cent in the year 2014-15. Electricity, Gas and Water Supply yet another sub-sector showed a trend of contribution ranging from 2.26 per cent, 6.34 per cent and 6.95 per cent in 2004-05, 2013-14 and 2014-15 respectively showing a marginal contribution of only about 4.69 per cent fluctuations. Secondary sector in total contributed on an average 37.49 per cent with varying contributions from other sectors.

Tertiary sector consists of different types of activities such as the Trade, Hotels and Restaurant that contributed 12.29 per cent in the year 2004-05 and ended up to 11.21

per in 2014-15 with a volatile fluctuations in between these eight years that boosted and brought down at the same time its contribution to the state economy. Transport, Storage and Communication went ahead marginally contributing 14.17 per cent in the year 2004-05 to 13.88 per cent to the Gross State Domestic Product of Goa during the year 2014-15. This however is interesting because it's fall in contribution continued for initial phase of four years from 2005-06 to 2008-09, but again it rose to 13.22 per cent in the year 2009-10. Railways portrays the worst contributing sector with less than 1 per cent starting from 0.40 per cent in the year 2004-05 to 0.30 per cent in the year 2014-15. There have been no startling fluctuations in this sub-sector but just a small rise and fall have occurred in the contribution of this sector. Transport by other means however looked promising in terms of its contribution from 12.39 per cent in 2004-05 to 12.23 per cent in the year 2014-15. But this sub-sector also moved around 11.66 per cent only and did not jump up as expected in its contribution to entire tertiary sector. Storage except 0.01 per cent in 2009-10, 2012-13, 2013-14 and 2014-15 respectively does not give any contribution. Communication contributed 1.37 per cent in 2004-05 to 1.35 per cent in the year 2014-15.

Financing, Insurance, Real Estate and Business Services proved to be major contributor with 11.32 per cent in the year 2004-05 that over eight years' time period came down to 11.23 per cent in the year 2014-15. Fluctuations were in the range of 10 to 11 per cent in its average contribution. With contributions from Banking and Insurance 5 to 4.87 per cent on average in 2004-05 to 2014-15. Real Estate, Ownership of Dwellings and Business Services contributed 5.95 per cent in the year 2004-05 to 6.36 per cent to the Gross State Domestic Product of Goa during the year 2014-15 with maintenance of almost 5.42 per cent average contribution to the state.

Community, Social and Personal Services yet another sub-sector contributed 7.42 per cent in the year 2004-05 and 12.31 per cent in the year 2014-15. Range of 8 to 9 per cent average fluctuation was witnessed over the time period. Public Administration and Other services contributed of around 3 per cent and 4 per cent respectively with small but important contributions to the tertiary sector. Entirely considering the role of all three sectors the tertiary sector contributed the most to the state economy with contributions ranging from 45.19 per cent in the year 2004-05, 45.29 per cent in the year 2005-06, 44.40 per cent in the year 2006-07 and 43.84 per cent in the year 2007-08 respectively. In 2008-09 its contribution declined slightly to 43.28 per cent. Slight increase was again occurred in the year 2009-10 with 43.84 per cent. Thus in 2010-11 and 2011-12 contributions of 44.21 per cent and 46.18 per cent were witnessed showing a rise by almost 1 per cent every year. In 2013-14 the contribution of 46.37 per cent showed again a slight boost that also continued in 2014-15 with 48.63 per cent contribution.



The contribution of three sectors (Primary, Secondary and Tertiary) to the state economy of Goa can be seen clearly. Data shows that in the primary sector majority of the contribution comes from Agriculture, Forestry and Fishing fluctuating over time period of 11 years showing a trend of slight increase in the beginning from 7.85 per cent in 2004-05 to 9.02 per cent in 2005-06. The contribution of Agriculture, Forestry and Fishing dropped down to 6.89 per cent in 2006-07 and further to 6.63 per cent in 2007-08. Again, in the year 2008-09 its contribution significantly dropped down to 5.58 per cent before declining it to 5.11 per cent in the year 2009-10. It very marginally decreased to 4.79 per cent in 2010-11 and showed a minute increase to 5.04 per cent in 2011-12. Again the fall was witnessed in the year 2012-13 to 3.44 per cent followed by a small rise in its contribution to 3.63 per cent in 2013-14 and 3.30 per cent in the year 2014-15. Thus it can be noted that the share contributed by Agriculture, Forestry and Fishing to the state GSDP of Goa was 2 per cent on an average.

The individual contributions of the subsectors are equally vital that depicts that Agriculture contributed the majority of the share to the GSDP of the state followed by Fishing and Forestry and Logging. Hence, agriculture remains the predominant thrust area that is contributing to the primary sector although its share in the National Income of India has come down less than 14 per cent.

Agriculture remains the major contributing sector to the entire primary sector of the state of Goa. It started out its task with the contribution of 5.21 per cent in the year 2004-05, increased slowly to 6.07 per cent in the year 2005-06. The contribution of agriculture shockingly declined to 4.33 per cent in the year 2006-07 and further but marginally slowed down to 4.32 per cent in the year 2007-08. This trend of decreasing contribution of agriculture continued and it gave 3.52 per cent in the year 2008-09. The problems faced by the state farmers further pushed the contribution of agriculture down to 3.24 per cent in

the year 2009-10. Agricultural sector continued to contribute further less with 3.06 per cent in 2010-11. Finally it shows the signs of slight recovery with contribution of 3.52 per cent in the year 2011-12. Again a decline occurred in its contribution to 2.19 per cent in 2012-13 and a slight fall also took place in the year 2013-14 which was 2.13 per cent before declining to 1.85 per cent in the year 2014-15.

In a coastal state like Goa fishing as a sub-sector under agriculture is the predominant contributor that initiated the contribution of 2.04 per cent in 2004-05 which slowly increased to 2.38 per cent in 2005-06. The contribution of fishing declined down to 2.04 per cent in 2006-07 whereas the same further fell to 1.8 per cent in 2007-08. The year 2008-09 witnessed a fall in contribution of fishing below 2 per cent (reaching 1.55 per cent) and 2009-10 saw more fall in the contribution of fishing to 1.43 per cent. Significant fall in the contribution of fishing occurred in the year 2010-11 when it contributed 1.32 per cent the lowest contribution to the state economy of Goa and in the subsequent year of 2011-12 its contribution fell to 1.14 per cent. Followed by worst its contribution of 0.87 per cent in 2012-13 and minor rise in its contribution was witnessed in the year 2013-14 which was 1.12 per cent and marginally fell to 1.04 per cent in the year 2014-15.

Forestry and Logging clubbed under agriculture happens to be the lowest contributing sector to the state economy with less than 1 per cent for the entire time period. Its initial contribution started with 0.61 per cent in the year 2004-05, maintaining the same level of contributions in the year 2005-06 with 0.57 per cent. During the next year however it contributed slightly more that is 0.52 per cent in 2006-07. But again the fall in its contribution continued with 0.50 per cent in 2007-08 and to 0.51 in the next year 2008-09. The role of the sector again increased marginally with its contribution of 0.45 per cent in 2009-10. Surprisingly, in 2010-11 it contributed 0.41 per cent and again showed the same fall in its contribution of 0.38 per cent in 2011-12. With 0.37 per cent contribution in 2012-13 the Forestry and Logging showed a decline and it again increased to 0.38 per cent in terms of its contribution to the GSDP in 2013-14 and slightly rose to 0.41 per cent in the year 2014-15.

Another sub-sector Mining and Quarrying contributed 4.42 per cent to the Gross State Domestic Product during the year 2004-05. Here too as has been seen earlier slight rise took place and it contributed 4.35 per cent in the year 2005-06. Major mining activity led to increased revenue to mining companies and subsequent increase in contribution to state of 6.21 per cent in the year 2006-07. This increased contribution continued to increase slowly to 5.97 per cent in the year 2007-08. Thus in the following years increase in contribution of this sector took place with 6.39 per cent in the year 2008-09, 7.23 per cent in the year 2009-10, 6.3 per cent in 2010-11 and a slight decrease with contribution as opposed to earlier of 5.71 per cent to the state in the year 2011-12. A sharp reduction in its contribution was witnessed during the post mining ban bringing down its contribution

to 1.4 per cent in 2012-13 and to 1.3 per cent in 2013-14 and almost became half by contributing 0.54 per cent in the year 2014-15.

Primary sector as major and crucial component of the economy of Goa at all levels contributed 12.27 per cent during the year 2004-05. In 2005-06 it started increasing its contribution steadily but slowly to 13.37 per cent in 2005-06. There was a decline in the contribution to 13.09 per cent in the year 2006-07. In 2007-08 the contribution of primary sector again fell to 12.59 per cent. Primary sector further suffered losses and had contributed 11.97 per cent in 2008-09. But this rise slowly occurred in the year 2009-10 with contribution of 12.33 per cent. A decrease to 11.09 per cent was witnessed in the year 2010-11 and again a small decline took place in the year 2011-12 by contributing 10.75 per cent. More than half the decrease was witnessed in 2012-13 to 4.83 per cent and slight rise took place in the year 2013-14 to 4.93 per cent and again it decreased to 3.84 per cent in the year 2014-15.

State industrialization propelled the secondary sector with manufacturing rising to be the dominant and major sector for the growth in the industrial arena to progress heavily. Manufacturing contributed 29.96 per cent in the year 2004-05. But the growth slowed down and so the contribution to 29.30 per cent in the year 2005-06. Decline in growth continued with the contribution of 29.39 per cent in the year 2006-07 also. It is interesting to note that this decrease in growth took place for the succeeding years of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12 respectively. During this period we see that the manufacturing sector contributed 28.83 per cent, 27.69 per cent, 27.28 per cent, 26.18 per cent and 24.29 per cent respectively. Major fall with the contribution of 21.11 per cent in 2012-13 and a further fall to 20.28 per cent was seen in the year 2013-14 and 19.81 per cent in the year 2014-15.

Registered Manufacturing within the scope of manufacturing turned out to be the dominant sub-sector of the state of Goa by contributing 26.09 per cent to the state GDP in the year 2004-05, the manufacturing sector's trend slowed down to 25.43 per cent in 2005-06. Considering these the decrease in contribution continued with 25.36 per cent in the year 2006-07. Almost 5 per cent decline from the original contribution was depicted to 24.50 per cent in 2007-08 which was followed by 23.72 per cent in 2008-09. However in between slight rises occurred which is seen through the contribution of 23.52 per cent in the year 2009-10. Depression in manufacturing continued with 22.73 per cent contribution to the GSDP in the year 2010-11 and succeeding 21.52 per cent in the year 2011-12. In 2012-13 contribution rose up to 18.2 per cent and again fell to 17.32 per cent in 2013-14 and reached 16.60 per cent in the year 2014-15.

Another subset of the manufacturing sector is the Unregistered Manufacturing which contributed much less than the registered manufacturing with 3.87 per cent as the opening

contribution to the GSDP during the year 2004-05. It rose to 3.88 per cent in the year 2005-06. This signs of improved contribution also continued with its contribution of 4.03 per cent in 2006-07. Almost the same contribution continued with 4.33 per cent in during the year 2007-08. Downfall started with the contribution of 3.98 per cent in 2008-09. No improvement took place in the year 2009-10 which is depicted through the contribution of 3.76 per cent to the state, 3.45 per cent contribution in 2010-11 and 2.77 per cent contribution in 2011-12 justified the fall. In 2012-13 the contribution of unregistered manufacturing increased to 2.91 per cent and further to 2.96 per cent in the year 2013-14 and increased to 3.21 per cent in the year 2014-15.

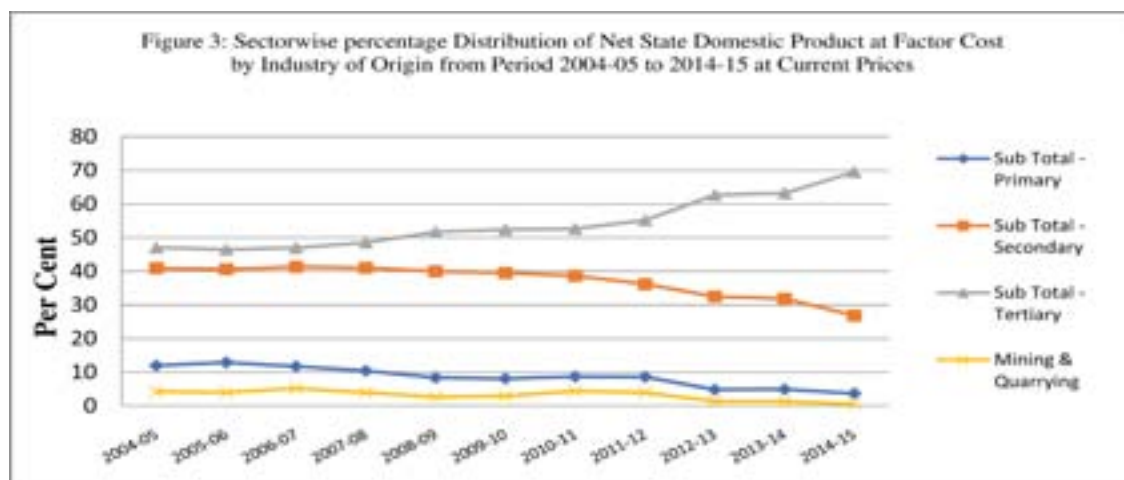
In recent times Construction has emerged as another sub-sector contributed 10.33 per cent to start with in the year 2004-05 showing fluctuating contributions within the range of 9 to 6 per cent spread over the years up to 2011-12, and lowest contribution of 1.60 per cent was seen in 2014-15. Electricity, Gas and Water Supply yet another sub-sector showed the trend ranging from 2.26 per cent in 2004-05 to 10.26 per cent in 2014-15 showing a rise in contribution. Secondary sector in total contributed on an average 37.84 per cent with varying contributions from other sectors.

During the post liberalization the services sector across the world has emerged as the dominant sector. Tertiary sector consists of different types of activities such as Trade, Hotels and Restaurant that contributed 12.29 per cent in the year 2004-05 and ended up to 9.57 per in 2014-15 with a volatile fluctuations in between the period of 11 years that boosted and brought down at the same time its contribution to the state economy. Transport, Storage and Communication went ahead marginally contributing 14.17 per cent in the year 2004-05 to 30.48 per cent to the Gross State Domestic Product of Goa during the year 2014-15. This however is noteworthy because it's fall in contribution took place in the year 2005-06 to 13.89 per cent but again it rose to 32.76 per cent in 2012-13.

The state of Goa does not have a very long stretch of railway network. Railways portrays the worst contributing sector with less than 1 per cent starting from 0.40 per cent in the year 2004-05 to 0.27 per cent in the year 2014-15. There have been no startling fluctuations in this sub-sector but just a small rise and fall have occurred in the contribution of this sector. Road Transport by other means however looked a promising in terms of its contribution from 12.39 per cent in 2004-05 to 28.11 per cent in the year 2014-15. Storage except 0.02 per cent in 2009-10 didn't have any role in the GSDP of Goa. Communication contributed 1.37 per cent in 2004-05 and 2.08 per cent in the year 2014-15. In the tertiary sector Financing, Insurance, Real Estate and Business Services proved to be major contributor with 11.32 per cent in the year 2004-05 that over 8 years' time period came down to 13.83 per cent in the year 2014-15. Fluctuations remained in the range of 10 to 9 per cent of average contribution. Contributions from Banking & Insurance remained at 5.37

per cent on an average in 2004-05 to 7.06 per cent in 2014-15. Real Estate, Ownership of Dwellings and Business Services contributed 5.95 per cent in the year 2004-05 to 6.77 per cent to the Gross State Domestic Product during the year 2014-15. Community, Social and Personal Services is yet another sub-sector which contributed 7.42 per cent in the year 2004-05 and 10.62 per cent in the year 2014-15. Range of 7 to 8 per cent average fluctuation was witnessed over the time period. Public Administration and Other services contributed of around 3 per cent and 2 per cent respectively with a small but important contribution to the tertiary sector.

Considering role of all three sectors the tertiary sector which contributed the most to the state economy of Goa with contributions ranging from 45.19 per cent in the year 2004-05, 45.17 per cent in the year 2005-06, 45.40 per cent in the year 2006-07 and 46.41 per cent in the year 2007-08 respectively. In 2008-09 its contribution was 48.64 per cent. Slight increase again occurred in the year 2009-10 with 48.99 per cent. Thus in 2010-11 and 2011-12 contributions of 49.99 per cent and 52.50 per cent were witnessed showing a rise by almost 1 per cent every year. In 2014-15 contribution of 64.49 per cent showed again slight boost in its contribution.



The contribution of three sectors (Primary, Secondary and Tertiary) to the state economy of Goa which can be seen clearly. Data shows that in the primary sector on the line of GSDP also the majority of the contribution comes from Agriculture, Forestry and Fishing fluctuating over time period of 11 years showing a trend of slight increase in the beginning from 7.70 per cent in 2004-05 to 9.10 per cent in 2005-06. The contribution of Agriculture, Forestry and Fishing decreased to 7.57 per cent in 2006-07 and further to 7.11 per cent in 2007-08. Again, in the year 2008-09 the contribution of the primary sector significantly dropped down to 5.95 per cent before declining it further to 5.76 per

cent in the year 2009-10. Marginally it decreased to 5.79 per cent in 2010-11 and showed a minute increase to 7.25 per cent in 2011-12. Again the fall returned in the year 2012-13 to 6.02 per cent followed by a small rise in its contribution of 8.01 per cent in 2013-14 and declined again to 6.68 per cent in the year 2014-15. Thus it can be said that the share contributed by Agriculture, Forestry and Fishing to the state GSDP of Goa was 6.99 per cent on an average.

The individual contributions to each sector are equally important of the sub-sectors that depicts that Agriculture contributed the majority of the share to the GSDP of the state followed by Fishing and Forestry and Logging respectively. Hence, agriculture remains the main thrust area that is contributing to the primary sector although its share in the total National Income of many countries and of India has come down less than 14 per cent.

In the state of Goa also the agriculture is the major contributing sector to the primary sector of the state. It started out its task with the contribution of 4.96 per cent in the year 2004-05, increased to 5.64 per cent in the year 2005-06. The contribution of agriculture shockingly declined to 4.28 per in the year 2006-07 and marginally slowed down to 4.12 per cent in the year 2007-08. This trend of decreasing contribution continued and it gave 3.59 per in the year 2008-09. The distressed situation further pushed the contribution of agriculture to 3.25 per cent in the year 2009-10. The sector continued to contribute further less with 3.21 per cent in 2010-11. Finally it has shown the signs of slight recovery with its contribution of 4.32 per cent in the year 2011-12. Again a decline occurred in its contribution to 3.21 per cent in 2012-13 and a slight fall also took place to 3.74 per cent in the year 2013-14 before slightly falling to 3.10 per cent in the year 2014-15.

Goa is a coastal state therefore, fishing as a sub-sector under agriculture is obvious to become the next highest contributor that initiated contribution of 2.05 per cent in 2004-05 which slowly increased to 2.82 per cent in 2005-06. The contribution of fishing declined to 2.39 per cent in 2006-07 while the same further fell to 2.22 per cent in 2007-08. The year 2008-09 witnessed a fall in contribution of fishing below 2 per cent (reaching 1.68 per cent) and in the year 2009-10 saw more fall in the contribution of fishing to 1.58 per cent. Significant fall in the fishing contribution occurred in the year 2010-11 when it contributed 1.41 per cent which was the lowest contribution to the state economy and in the subsequent year of 2011-12 its contribution declined further which was 1.84 per cent. Followed by worst contribution of 1.92 per cent in 2012-13 and minor rise in its contribution was witnessed in the year 2013-14 to 3.1 per cent respectively and came down to 2.61 per cent in the year 2014-15.

Another sub-sector of the economy of the state of Goa is vital which Forestry is and Logging under agriculture remains the lowest contributing sector to the state economy with

less than 1 per cent for the entire time period of this study. Its initial contribution started with 0.69 per cent in the year 2004-05, maintaining the same low level of contributions in the year 2005-06 with 0.64 per cent. In the next year however it contributed slightly more that is 0.91 per cent in 2006-07. But again the fall in the contribution continued with 0.77 per cent in 2007-08 and to 0.69 in the next year 2008-09. The contribution of the sector again increased but marginally with its contribution of 0.93 per cent in 2009-10. Surprisingly, in 2010-11 it contributed 1.16 per cent and again showed the same fall in its contribution to 1.09 per cent in 2011-12. With 0.89 per cent contribution in 2012-13 the Forestry and Logging showed a decline and it again increased to 1.67 per cent in terms of its contribution in 2013-14 but in 2014-15 it fell to 0.97 per cent.

The second sub-sector of the state economy of Goa is Mining and Quarrying which contributed 4.26 per cent to the Net State Domestic Product during the year 2004-05. Here too as seen earlier a slight rise took place and it contributed 4.41 per cent in the year 2005-06. Major mining activity led to increased revenue to mining companies and subsequent increase in contribution to state economy of 8.79 per cent in the year 2006-07. This increased contribution further increased to 12.13 per cent in the year 2007-08. Thus in the following years increase in contribution took place with 15.41 per cent in 2008-09, 15.24 per cent in the year 2009-10, 17.64 per cent in 2010-11 and a slight decrease with contribution as opposed to earlier of 14.2 per cent to the state economy of Goa in the year 2011-12. Drastic reduction in the contribution of this sector was witnessed following the mining ban which brought down its contribution to 4.80 per cent in 2012-13 and further to 4.16 per cent in 2013-14 and it contributed 3.02 per cent in the year 2014-15.

Primary sector as the major crucial component of the economy of the state at all levels contributed 11.96 per cent during the year 2004-05. In 2005-06 it began increasing its contribution steadily but slowly to 13.51 per cent in 2005-06. Increased its contribution little bit to 16.36 per cent in the year 2006-07. In 2007-08 the contribution of primary sector shot up to 19.24 per cent. Primary sector further suffered losses and contributed 21.37 per cent in 2008-09. But this rise slowly occurred in the year 2009-10 with its contribution of 21 per cent. An increase to 23.43 per cent was witnessed in the year 2010-11 and again a small decline took place in the year 2011-12 by contributing 21.95 per cent. More than half decrease was witnessed in 2012-13 which was 10.82 per cent which was a sudden shock and slight rise took place in the year 2013-14 to 12.17 per cent which however went down to 9.70 per cent in the year 2014-15.

Industrialization propelled the secondary sector of the state economy of Goa with manufacturing rising to be the dominant and major dependent sector for growth in the industrial arena to progress heavily. This sector contributed 28.28 per cent in the year 2004-05. But the growth slowed down and so the contribution also declined to 28.23 per cent in the year 2005-06. Decline in growth and thereby the contribution continued

to 27.41 per cent in the year 2006-07 also. It is interesting to note that this decrease in growth took place for the succeeding years of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12. During this period we see that the manufacturing sector contributed 25.43 per cent, 24.37 per cent, 24.41 per cent, 21.12 per cent and 19.68 per cent respectively. Major increase up to 34.87 per cent in 2012-13 was seen and slight fall to 31.82 per cent was experienced in the year 2013-14 and further to 29.90 per cent in the year 2014-15.

Registered Manufacturing within the scope of manufacturing turned out to be the dominant sub-sector of the state economy of Goa by contributing 24.29 per cent to the state in the year 2004-05, following the manufacturing sector's trend slowdown was also witnessed to 24.21 per cent in 2005-06. Considering these the decrease in contribution continued with 23.14 per cent in the year 2006-07. Almost 1.07 per cent decline from the earlier contribution. It was depicted to 21.10 per cent in 2007-08, followed by 20.75 per cent in 2008-09. However in between slight rises occurred like that of 21.08 per cent in the year 2009-10. Depression in manufacturing continued with 18.11 per cent contribution in the year 2010-11 and subsequently 16.72 per cent in the year 2011-12. In 2012-13 contribution of the manufacturing sector rose up to 31.9 per cent and again fell to 28.65 per cent in 2013-14 and slightly again to 25.70 per cent in the year 2014-15.

Unregistered Manufacturing is another subset of industry which contributed much less than the registered manufacturing with 3.99 per cent as the opening contribution during the year 2004-05. It rose to 4.02 per cent in the year 2005-06. Such signs of improved contribution also continued with contribution of 4.27 per cent in 2006-07. Almost the same contribution of unregistered industry continued with 4.33 per cent during the year 2007-08. Downfall started with contribution of 3.62 per cent in 2008-09. No improvement took place in the year 2009-10 which is depicted through the contribution of 3.33 per cent to the state economy, 3.02 per cent contribution in 2010-11 and 2.96 per cent contribution in 2011-12 brings out the fall. In 2012-13 contribution increased to 2.98 per cent and 3.17 per cent in the year 2013-14 respectively but increased to 4.20 per cent in the year 2014-15.

Goa is one such Indian state which has witnessed a high rate of migration in the recent past. Therefore the construction becomes another sub-sector which contributed 11.47 per cent to start with in the year 2004-05 showing fluctuating contributions within the range of 9 to 6 per cent spread over the years of our study up to 2011-12, and low contribution of 2.33 per cent in 2014-15. Electricity, Gas and Water Supply yet another sub-sector showed its trend of contribution ranging from 1.22 per cent in 2004-05 to 7.68 per cent in 2014-15. Secondary sector on an average contributed 36.63 per cent with varying contributions from other sectors.

Tertiary sector consists of different types of activities such as the Trade, Hotels and Restaurant that contributed 13.63 per cent in the year 2004-05 and ended with 12.23

per cent in 2014-15 with volatile fluctuations in between these 11 years that boosted and brought down at the same time its contribution to the state economy. Transport, Storage and Communication went ahead marginally with contributing 13.83 per cent to the Net State Domestic Product in the year 2004-05 to 13.27 per cent during the year 2014-15. This however is interesting to note because it's fall in contribution continued for 4 years from 2005-06 to 2008-09 but again rose to 14.56 per cent in the year 2011-12.

As noted in foregoing that the state of Goa being the smallest state in the country it also does not have a very long stretch of railway network. Therefore railways portrays the contributing sector with less than 1 per cent starting from 0.32 per cent in the year 2004-05 to 0.28 per cent in the year 2014-15 to the NSDP of Goa. There have been no startling fluctuations in this sub-sector but just a small rise or fall have occurred in the contribution of this sector.

Road Transport by other means however looked promising in terms of its contribution from 12.18 per cent in 2004-05 to 11.72 per cent in the year 2014-15. Storage except 0.01 per cent in 2009-10 has shown no contribution. Communication contributed 1.33 per cent in 2004-05 and 1.26 per cent in the year 2014-15.

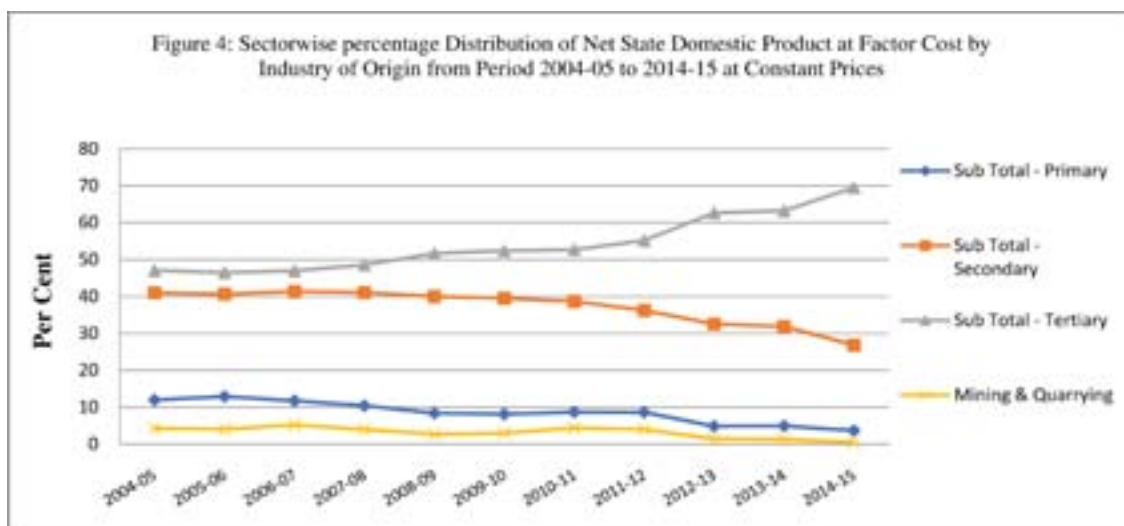
Financing, Insurance, Real Estate and Business Services proved to be the major contributor with 12.14 per cent in the year 2004-05. Over 11 years' time period the contribution came down to 12.19 per cent in the year 2014-15. Fluctuations remained in the range of 10 to 11 per cent.

While the contributions from Banking and Insurance sector has been 6.09 per cent in 2004-05 and 5.64 per cent in 2014-15 the Real Estate, Ownership of Dwellings and Business Services contributed 6.05 per cent in the year 2004-05 and 6.55 per cent to the Gross State Domestic Product during the year 2014-15. Community, Social and Personal Services is of the state economy of Goa which contributed 7.46 per cent in the year 2004-05 and 12.69 per cent in the year 2014-15. Range of around 8 per cent average fluctuation was witnessed over the time period. Public Administration and Other services contributed around 3 per cent and 4 per cent respectively with a small but important contribution to the tertiary sector.

Considering the role of all three sectors the tertiary sector contributed the most to the state economy with contributions ranging from 47.06 per cent in 2004-05, 46.62 per cent in 2005-06, 45.80 per cent in 2006-07 and 45.38 per cent in 2007-08 respectively. In 2008-09 its contribution declined slightly to 44.82 per cent. Slight increase again occurred in the year 2009-10 with its contribution of 45.70 per cent. Thus in 2010-11 and 2011-12 contributions of 46.42 per cent and 49.25 per cent were witnessed showing a rise by almost 1 per cent every year. In 2013-14 the contribution was 46.37 per cent which showed a slight boost in its contribution and further increased to 50.39 per cent in

the year 2014-15.

In the primary sector majority of the contribution comes from Agriculture, Forestry and Fishing fluctuating over time period of 11 years of the present study showing a trend of slight increase in the beginning from 7.70 per cent in 2004-05 to 8.84 per cent in 2005-06. The contribution of Agriculture, Forestry and Fishing to the state economy of Goa dropped down to 6.54 per cent in the year 2006-07 and further to 6.42 per cent in 2007-08. Again, in the year 2008-09 the contribution of this sector significantly dropped down to 5.69 per cent before declining it to 5.17 per cent in the year 2009-10. It very marginally decreased to 4.29 per cent in 2010-11 and showed a minute increase to 4.65 per cent in 2011-12. Again the fall in contribution was witnessed in the year 2012-13 which was 3.44 per cent followed by a small rise in contribution of 3.63 per cent in 2013-14 and marginally fell to 3.17 per cent in the year 2014-15.



Thus it can be said that the share contributed by Agriculture, Forestry and Fishing to the state NSDP was 5.41 per cent on an average.

It may be noted that individual contributions of the subsectors are equally important that depicts that the Agriculture contributed the majority of the share to the NSDP of the state followed by Fishing and Forestry and Logging. Hence, agriculture predominantly remains the thrust area that is contributing to the primary sector of Goa although its share in the total National Income of the India in recent past has come down to less than 14 per cent.

Agriculture remains the major contributing sector to the primary sector of Goa. It started out its task with the contribution of 4.96 per cent in the year 2004-05, increasing slowly

to 5.87 per cent in the year 2005-06. The contribution of agriculture shockingly declined to 3.97 per cent in the year 2006-07 and marginally pushed up to 4.14 per cent in the year 2007-08. This trend of decreasing contribution of agriculture continued and it gave 3.60 per cent in the year 2008-09. The state of Goa also not being an exception to the national agriculture distress the continuation of this sector further pushed down to 3.30 per cent in the year 2009-10. Agricultural sector continued to contribute further less with 2.68 per cent in 2010-11. It has shown the signs of a slight recovery with its contribution of 3.25 per cent in the year 2011-12. Again a decline occurred in its contribution by 2.19 per cent in 2012-13 and further a slight fall took place with contribution of 2.13 per cent in the year 2013-14 and finally to 1.77 per cent in the year 2014-15.

Goa is a coastal state where fishing is predominantly a big economy of the state therefore fishing as a sub-sector under agriculture is the next highest contributor to the NSDP that initiated the contribution of 2.05 per cent in 2004-05 which slowly increased to 2.32 per cent in 2005-06. The contribution of fishing declined to 1.99 per cent in 2006-07 while the same further fell to 1.7 per cent in 2007-08. The year 2008-09 witnessed a fall in contribution of fishing below 2 per cent (reaching 1.55 per cent) and 2009-10 saw more falls in the contribution of fishing to 1.35 per cent. Significant fall in the fishing contribution occurred in the year 2010-11 when it contributed 1.15 per cent, the lowest contribution to the state economy and in the following year of 2011-12 its contribution fell to 0.97 per cent. Followed by worst contribution of 0.87 per cent in 2012-13 and minor rise in its contribution was witnessed in the year 2013-14 to 1.12 per cent that again slightly came down to 0.93 per cent in the year 2014-15.

Another sub-sector of the state economy of Goa is Forestry and Logging which comes under agriculture is the lowest contributing sector to the state economy with less than 1 per cent for the entire time period. Its initial contribution started with 0.69 per cent in the year 2004-05, maintaining the same level in the year 2005-06 with 0.65 per cent. In the next year however it contributed slightly more that was 0.59 per cent in 2006-07. But again the fall in its contribution continued with 0.58 per cent in 2007-08 and 0.59 per cent in the next year of 2008-09. The contribution of the sector again increased marginally to 0.52 per cent in 2009-10. Surprisingly, in 2010-11 it contributed 0.46 per cent and again showed the same fall in its contribution to 0.42 per cent in 2011-12. With 0.37 per cent contribution in 2012-13 the Forestry and Logging showed a decline and it again increased to 0.38 per cent in terms of its contribution to the NSDP of Goa in 2013-14 but again contributed slightly more that is 0.47 per cent in the year 2014-15.

The second sub-sector of the economy is mining and quarrying contributed 4.26 per cent to the Net State Domestic Product during the year 2004-05. Here too as noticed earlier slight rise took place and it contributed 4.04 per cent in the year 2005-06. Major mining activity of the state led to an increased revenue to mining companies and subsequent

increase in contribution to state of 5.18 per cent in the year 2006-07. This increased contribution further increased to 3.97 per cent in the year 2007-08. Thus in the subsequent years increase in contribution took place with 2.68 per cent in the year 2008-09, 2.93 per cent in 2009-10, 4.39 per cent in 2010-11 and a slight decrease with contribution as opposed to earlier of 3.97 per cent to the state NDP in the year 2011-12. A sharp reduction in its contribution was witnessed following the mining ban in the state bringing down its contribution to 1.4 per cent in 2012-13 and to 1.3 per cent in 2013-14 and 0.50 per cent in the year 2014-15.

Primary sector as major crucial component of the economy of the state of Goa at all levels contributed 11.96 per cent during the year 2004-05. In 2005-06 it began increasing its contribution steadily but slowly which reached to 12.89 per cent in 2005-06. Declined its contribution little bit to 11.72 per cent in the year 2006-07. In 2007-08 the contribution of the primary sector again fell to 10.04 per cent. Sector further suffered losses and hence contributed 8.37 per cent in 2008-09. A slight rise to 8.68 per cent was witnessed in the year 2010-11 and again a small decline took place in the year 2011-12 by contributing 8.62 per cent. More than half of the decrease was witnessed in the year 2012-13 to 4.83 per cent and a slight rise took place in the year 2013-14 to 4.93 per cent with increase again in its contribution to 3.67 per cent in the year 2014-15.

Industrialization propelled the secondary sector with manufacturing rising to be the dominant and major dependent sector for growth in the industrial arena to progress heavily. Manufacturing contributed 28.28 per cent in the year 2004-05. But the growth slowed down and so the contribution remained at 28.38 per cent in the year 2005-06. Decline in growth continued the contribution of 28.95 per cent in the year 2006-07. It is interesting to note that the stagnancy in growth took place for the succeeding years of 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12. During this we see that the manufacturing sector contributed 28.68 per cent, 27.78 per cent, 27.35 per cent, 25.61 per cent and 23.53 per cent respectively. Major fall to 21.11 per cent in 2012-13 and further to 20.28 per cent was seen in the year 2013-14 and 15.17 per cent in the year 2014-15.

Registered Manufacturing within the scope of manufacturing turned out to be the dominant sub-sector of the economy by contributing 24.29 per cent to the state in the year 2004-05, following the slowdown in the manufacturing sector also witnessed a stagnant contribution of 24.41 per cent in 2005-06. Considering the stagnancy decrease in contribution continued with 24.79 per cent in the year 2006-07. Depression in manufacturing continued with 22.07 per cent contribution in the year 2010-11 and subsequently 20.78 per cent in the year 2011-12. In 2012-13 contribution of this sector decreased to 18.2 per cent and again to 17.32 per cent in 2013-14. However, its contribution came to 11.69 per cent in the year 2014-15.

Unregistered Manufacturing sector of the state has contributed much less than the

registered manufacturing with 3.99 per cent as the opening contribution during the year 2004-05. It remained at 3.97 per cent in the year 2005-06. Such signs of improved contribution also continued with contribution of 4.17 per cent in 2006-07. Almost the same amount of contribution continued with 4.57 per cent in during the year 2007-08. Downfall started with contribution of 4.24 per cent in 2008-09. No improvement took place in the year 2009-10 is depicted through the contribution of 4.01 per cent to the state, 3.54 per cent contribution in 2010-11 and 2.76 per cent contribution in 2011-12 brings out the fall. In 2012-13 contribution increased to 2.91 per cent and was 2.96 per cent in the year 2013-14 and 3.48 per cent in the year 2014-15.

Construction is another sub-sector which contributed 11.47 per cent to start with in the year 2004-05 showing fluctuating contributions within the range of 9 to 6 per cent spread over these years up to 2011-12, and lowest contribution of 0.04 per cent in 2014-15. Electricity, Gas and Water Supply yet another group of sub-sector contributed ranging from 1.22 per cent to per cent in 2004-05 to 11.60 per cent in 2014-15 showing a rise in contribution.

Tertiary sector consists of different types of activities such as the Trade, Hotels and Restaurant that contributed 13.63 per cent in the year 2004-05 and ended up to 10.45 per cent in 2014-15 with volatile fluctuations in between these 10 years when the contribution boosted and brought down at the same time. Transport, Storage and Communication went ahead marginally contributing 13.83 per cent in the year 2004-05 to 32.64 per cent to the Net State Domestic Product during the year 2014-15. Its contribution fell to 13.44 per cent in the year 2005-06 but it contributed 32.76 per cent in the year 2012-13.

Very much synonymous to the foregoing the railways portrays the insignificant contributing sector with less than 1 per cent starting from 0.32 per cent in the year 2004-05 to 0.26 per cent in the year 2014-15. The sector does not bring startling fluctuations but just a small rise and fall have occurred. Surface Transport by other means however looked promising in terms of its contribution from 12.18 per cent in 2004-05 to 30.25 per cent in the year 2014-15. Storage only contributed 0.02 per cent in the year 2009-10. Communication contributed 1.33 per cent in 2004-05 and 2.12 per cent in the year 2014-15. Financing, Insurance, Real Estate and Business Services proved to be the major contributors with 12.14 per cent in the year 2004-05 that over 8 years' time period it came down to 15.51 per cent in the year 2014-15. Fluctuations came in the range of 12 to 14 per cent in average contribution of this sector. With contributions from Banking and Insurance 6.09 per cent on average in 2004-05 to 8.27 per cent in 2014-15. Real Estate, Ownership of Dwellings and Business Services contributed 6.05 per cent in the year 2004-05 to 7.24 per cent in 2014-15 to the Net State Domestic Product of Goa. Community, Social and Personal Services yet another sub-sector contributed 7.46 per cent in the year 2004-05 and 10.91 per cent in the year 2014-15. Range of 8.18 per cent average fluctuation was

witnessed over the time period. Public Administration and Other services contributed about 2 to 3 per cent with a small but important contribution to the tertiary sector.

Considering the role of all 3 sectors the tertiary sector contributed the most to the state economy of Goa with contributions ranging from 47.06 per cent in 2004-05, 46.49 per cent in 2005-06, 46.96 per cent in 2006-07 and 48.54 per cent in 2007-08. In 2008-09 its contribution increased slightly to 51.66 per cent. Slight increase again occurred in the year 2009-10 with its contribution of 52.39 per cent. Thus in 2010-11 and 2011-12 contributions of 52.66 per cent and 55.16 per cent were witnessed showing a rise by almost 1 per cent each year. In 2013-14 contribution of tertiary sector to the NSDP of Goa was 63.21 per cent showed again slight boost in its contribution and highest contribution of 69.51 per cent came in the year 2014-15.

Table 2: The Contribution of Mining to the Gross State Domestic Product at Factor Cost of Goa from the Period 2004-05 to 2014-15 at Current Prices 2004-05

Year	Mining (Rs/Lac)	GSDP (Rs/Lac)	Mining Share (Per Cent)
2004-05	56198	1271331	4.42
2005-06	66973	1432659	4.67
2006-07	154662	1652283	9.36
2007-08	253255	1956496	12.94
2008-09	427857	2541383	16.84
2009-10	500345	2912554	17.18
2010-11	663199	3350011	19.8
2011-12	664233	3677503	18.06
2012-13	203622	4240747	4.80
2013-14	203482	4889731	4.16
2014-15	141411	5267300	2.68

Source: Economic Survey of Goa, various Issues.

The contribution of mining as one of the vital sub-sectors to the Gross State Domestic Product at current price, as well as the contribution of mining as percentage of the GSDP can be seen clearly. The above data show the contribution of mining over time period of 8 years. In the beginning of 2004-05 the mining is valued at rupees 56198 lakhs, and the total value of GSDP was 1271331 lakh rupees in the same year thus the share of mining in the GSDP of the state of Goa was 4.42 per cent in 2004-05.

In 2005-06 the value of the mining was rupees 66973 lakhs, and the total value of GSDP was 1432659 lakh rupees in the same year thus the share of mining in the GSDP stands at 4.67 per cent in 2005-06 as opposed to its share in the earlier year showing a marginal increase in its share to the GSDP of the state of Goa.

In 2006-07 the value of mining was rupees 154662 lakhs, and the total value of the GSDP stood at 1652283 lakh rupees. In the same year the share of mining in the GSDP was 9.36 per cent as opposed to its share in the earlier year showing more than double increase in its share to the GSDP of the state of Goa.

In 2007-08 the value of mining was 253255 lakhs, and the total value of GSDP was 1956496 lakh rupees. Thus the share of mining in the GSDP was 12.94 per cent in 2007-08 as opposed to its share in the earlier year showing 3 times increase in its share to the GSDP of Goa.

The value of mining in the year 2008-09 was 427857 lakhs, and the total value of the GSDP was 2541383 lakh rupees. The share of mining in the GSDP becomes 16.84 per cent while taking into account the share of mining in 2004-05 the share in 2008-09 is quadrupled. In 2009-10 the value of mining was 500345 lakhs, and the total value of GSDP was 2912554 lakh rupees. Thus the share of mining in the GSDP stood at 17.18 per cent in 2009-10. As opposed to its share in the earlier year shows a marginal increase in its share in the GSDP from 2008-09. In the next year of 2010-11 the value of mining was 663199 lakhs while the total value of the GSDP was 3350011 lakh rupees. In the same year thus the share of mining in the GSDP was 19.80 per cent. As opposed to its share in 2004-05 showing 5 times increase in its share to the GSDP than its initial contribution in 2004-05. In the year 2011-12 the value of mining stood at 664223 lakhs whereas the total value of GSDP was 3677503 lakh rupees. Thus the share of mining in the GSDP was 18.06 per cent. It is evident from the comparative observation of the data given in the above table that the contribution of mining has come down drastically from 18.06 per cent in 2011-12 to 4.80 per cent in the year 2012-13 and further down to 4.16 per cent in 2013-14 (Table 2).

Thus, the overall share of Mining sector in the GSDP of the state of Goa on an average stood at 11.22 for the time period under consideration however; its share was around 5 per cent in the initial year of 2004-05 and finally the same reached at 2.68 per cent in the year 2014-15.

Table 3: The Contribution of Mining to the Gross State Domestic Product at Factor Cost of Goa From the Period 2004-05 to 2014-15 at Constant Prices 2004-05

Year	Mining (Rs/Lac)	GSDP (Rs/Lac)	Share of Mining (Per Cent)
2004-05	56198	1271331	4.42
2005-06	59502	1367162	4.35
2006-07	93351	1504172	6.21
2007-08	94752	1587538	5.97
2008-09	111587	1746618	6.39
2009-10	139093	1924828	7.23
2010-11	133895	2125895	6.3
2011-12	137401	2406670	5.71
2012-13	39329	2817312	1.40
2013-14	39395	3034536	1.30
2014-15	17496	3258173	0.53

Source: Economic Survey of Goa, various Issues.

Share of mining in the Gross State Domestic Product at factor cost at constant prices from the time period from 2004-05 to 2014-15 at Constant Prices in lakh rupees computed by taking 2004-05 as the base year. The contribution of Mining as one of the predominant sub-sector to the total Gross State Domestic Product, as well as the contribution of mining as percentage of the GSDP can be seen clearly. The above data show the contribution of mining over time period of 8 years. In the beginning of 2004-05 the mining valued at rupees 56198 lakhs, and the total value of the GSDP was 1271331 lakh rupees. In the year thus the share of mining in the GSDP stood at 4.42 per cent in 2004-05.

In subsequent year of 2005-06 the value of mining was 59502 lakhs, and the total value of GSDP was 1367162 lakh rupees. Thus the share of mining in the GSDP was 4.35 per cent as opposed to its share in the earlier year the contribution of mining has remained almost stagnant. Looking at the contribution and the value of mining in because of which was rupees 93351 lakhs, and the total value of GSDP was 1504172 lakh rupees. The share of mining in the GSDP was 6.21 per cent in 2006-07.

In 2007-08 through mining the state could ear rupees 94752 lakhs while the total value of GSDP was 1587538 lakh rupees. Hence the share of mining in the GSDP was 5.97 per cent in 2007-08 as opposed to its share in the earlier year it shows an increase by one and a half times. In 2008-09 the value of mining was rupees 111587 lakhs, and the total value of GSDP was 1746618 lakh rupees. In the same year thus the share of mining in the GSDP was 6.39 per cent in 2008-09. As compared to its share in the earlier year it shows a rapid increase in its share to the GSDP.

In 2009-10 the value of mining stood at 139093 lakhs, and the total value of the GSDP was 1924828 lakh rupees. The share of mining in the GSDP was 7.23 per cent. The value of mining was rupees 133895 lakhs in 2010-11 and the total value of GSDP remains at 2125895 lakh rupees in the same year. Thus the share of mining in the GSDP contributed for the year was 6.30 per cent. As opposed to its share in the earlier year of 2009-10 it shows an increase in its share to the GSDP. In 2011-12 the value of mining was rupees 137401 lakhs while the total value of GSDP stood at 2406670 lakh rupees in the same year thus the share of mining in the GSDP of Goa was 5.71 per cent in 2011-12. As opposed to its share in the earlier year it shows a marginal fall in its contribution to the GSDP. It is clear by looking at the data given in the above table (03) that the contribution of mining has come down drastically from 5.71 per cent in 2011-12 to 1.40 per cent in the year 2012-13 and further down to 1.30 per cent in 2013-14.

Thus, the overall share of Mining sector to the GSDP of the state of Goa on an average stood at 4.52 per cent for the time period under consideration however; its share was around 4.42 per cent in the initial year of 2004-05 and finally its share reached at 0.53 per cent in the year 2014-15.

Table 4: The Contribution of Mining to the Net State Domestic Product at Factor Cost of Goa From the Period 2004-05 to 2014-15 at Current Prices 2004-05

Year	Mining (Rs/Lac)	GSDP (Rs/Lac)	Share of Mining (Rs/Lac)
2004-05	46874	1099869	4.26
2005-06	55021	1248779	4.41
2006-07	126501	1439354	8.79
2007-08	206712	1704548	12.13
2008-09	341352	2214880	15.41
2009-10	384447	2522363	15.24
2010-11	507921	2878910	17.64
2011-12	456193	3103322	14.7
2012-13	158026	3703488	4.27
2013-14	186726	4256382	4.39
2014-15	135254	4481486	3.01

Source: Economic Survey of Goa, various Issues.

It is evident that the share of mining in the GSDP of Goa was almost stagnant for the period of 2004-05 and 2005-06. Suddenly in the year 2006-07 the contribution of mining to GSDP doubled and became 8.79 per cent afterwards the share stayed at double digits. Mining as a sub-sector individually in lakh rupees, the total Gross State Domestic Product,

as well as the contribution of mining as percentage of the GSDP of Goa. The above data show the contribution of mining over a time period of 8 years. In the beginning of 2004-05 the mining valued worth rupees 46874 lakhs, and the total value of the GSDP of Goa was 1099869 lakh rupees. The share of mining in the GSDP was 4.26 per cent in 2004-05.

In the year 2005-06 the value of mining stood at rupees 55021 lakhs whereas the total value of the GSDP of Goa was 1248779 lakh rupees. In the same year thus the share of mining in the GSDP was 4.41 per cent. As opposed to the share of mining in the GSDP in the earlier year it shows a marginal increase. In the immediate subsequent year of 2006-07 the value of mining was rupees 126501 lakhs, and the total value of the GSDP was 1439354 lakh rupees. The share of mining in the GSDP was 8.79 per cent while opposed to its share in the earlier year it brings out a double increase in its share to the GSDP.

The value of mining in 2007-08 was 206712 lakhs, and the total value of the GSDP was 1704548 lakh rupees while the share of mining in the GSDP stood at 12.13 per cent looking into its share in the year 2004-05 it shows a triple increase in its share in the GSDP. In 2008-09 the value of mining was 341352 lakhs, and the total value of GSDP was 2214880 lakh rupees. In the same year thus the share of mining in the GSDP was 15.41 per cent. As opposed to its share in the beginning it shows almost 4 times increase in its share to the GSDP. In the value of mining in 2009-10 reached at rupees 384447 lakhs and the total value of GSDP at 2522363 lakh rupees. Thus the share of mining in the GSDP became 15.24 per cent. In the year 2010-11 mining fetched value of rupees 507921 lakhs and the GSDP was 2878910 lakh rupees. Hence the share of mining in the GSDP stood at 17.64 per cent.

While the value of mining in the year 2011-12 was rupees 456193 lakhs the total value of the GSDP was 3103322 lakh rupees. Thus the share of mining in the GSDP stood at 14.70 per cent. As opposed to its share in the earlier year it shows a marginal fall in its share to the GSDP. It is understood by having a glance at data given in the above table (04) that the contribution of mining has come down drastically from 14.70 per cent in 2011-12 to 4.27 per cent in the year 2012-13 and slightly increased to 4.39 per cent in 2013-14.

Thus, the overall share of Mining sector to the GSDP of the state of Goa on an average has remained at 10.12 per cent for the time period under our consideration however; its share was around 4.26 per cent in the initial year of 2004-05 and finally the same reached at 4.39 per cent in the year 2013-14 and contributed lowest of 3.01 per cent in the year 2014-15.

Table 5: The Contribution of Mining to the Net State Domestic Product at Factor Cost of Goa From the Period 2004-05 to 2014-15 at Constant Prices 2004-05

Year	Mining (Rs/Lac)	GSDP (Rs/Lac)	Share of Mining (Per Cent)
2004-05	46874	1099869	4.26
2005-06	48185	1191644	4.04
2006-07	67828	1308515	5.18
2007-08	54278	1365494	3.97
2008-09	39504	1472765	2.68
2009-10	47173	1611867	2.93
2010-11	80378	1832409	4.39
2011-12	83884	2113184	3.97
2012-13	8943	2442104	0.37
2013-14	28812	2609241	1.10
2014-15	13810	2752966	0.50

Source: Economic Survey of Goa, various issues.

The above data shows the contribution of mining over time period of 8 years. In the beginning of 2004-05 the mining valued worth rupees 46874 lakhs, and the total value of NSDP was 1099869 lakh rupees. In the same year thus the share of mining in the NSDP was 4.26 per cent in 2004-05.

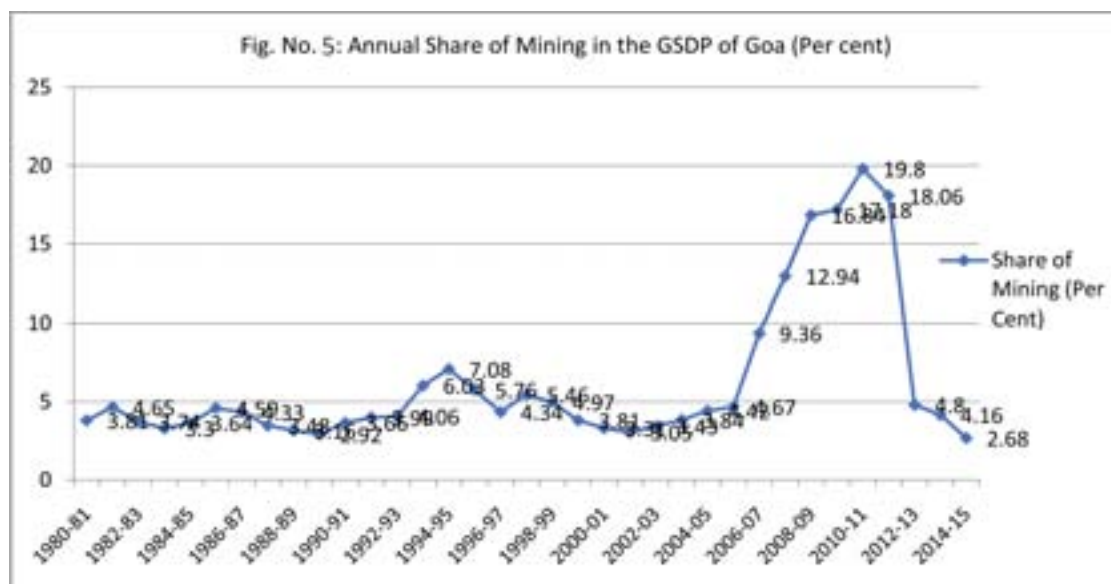
The value of mining in 2005-06 was rupees 48185 lakhs, and the total value of GSDP was 1191644 lakh rupees. Thus the share of mining in the GSDP stood at 4.04 per cent. As opposed to its share in the earlier year the share of mining in 2005-06 has shown a marginal decrease in its share to the NSDP of the state of Goa. In 2006-07 the value of mining stood at rupees 67828 lakhs, and the total value of the NSDP was 1308515 lakh rupees. The share of mining in the NSDP was 5.18 per cent. As compared to its share in the earlier year it has increased its share to the NSDP.

The value of mining in 2007-08 was rupees 54278 lakhs, and the total value of NSDP was 1365494 lakh rupees. In the same year thus the share of mining in the NSDP was 3.97 per cent. The contribution of mining in 2008-09 was rupees 39504 lakhs, and the total value of GSDP was 1472765 lakh rupees. Thus the share of mining in the GSDP was 2.68 per cent. As opposed to its share in the earlier year (2007-08) it has shown a rapid decrease in its share to the NSDP.

For 2009-10 the value of mining stood at rupees 47173 lakhs, and the total value of NSDP was 1611867 lakh rupees. Thus the share of mining in the NSDP was 2.93 per cent in 2009-10 as opposed to its share in the earlier year it has registered a slight increase in its share to the NSDP. In the subsequent year of 2010-11 the value of mining was 80378 lakhs, and the NSDP stood at 1832409 lakh rupees while the share of mining in the

NSDP was 4.39 per cent. As opposed to its share in the earlier year the share of mining in the NSDP has increased. During the year 2011-12 the value of mining was rupees 83884 lakhs, and the total value of NSDP was 2113184 lakh rupees. In the same year thus the share of mining in the NSDP was 3.97 per cent in. It can be pointed out by looking at the data pertaining to the contribution of mining has come down drastically from 3.97 per cent in 2011-12 to 0.37 per cent in the year 2012-13 and further down to 1.10 per cent in 2013-14 and to 0.50 per cent in 2014-15.

The overall share of Mining sector in the NSDP of the state of Goa on an average has remained at 3.03 per cent for the time period under consideration. However; its share was around 4.26 per cent in the initial year of 2004-05 and finally it reached at 0.50 per cent in the year 2014-15.



The contribution of Mining sub-sector is given in lakh rupees. The total Gross State Domestic Product, as well as the contribution of mining as percentage of the GSDP can be seen clearly. The above data show the contribution of mining over a time period of eight years. In the beginning of 1980-81 the mining valued worth rupees 1801 lakhs, and the total value of the GSDP was 47216 lakh rupees. In the same year thus the share of mining in the GSDP stood at 3.81 per cent in 2004-05. The mining was valued worth rupees 2409 lakhs, and value of GSDP was 51787 lakh rupees in the same year thus the share of mining in the GSDP was 4.65 per cent in 2004-05.

In the year 1982-83 the mining is valued at rupees 2302 lakhs, and the total value of the

GSDP was 61625 lakh rupees. Thus the share of mining in the GSDP stood at 3.74 per cent. In the subsequent year of 1983-84 the value of mining was rupees 2149 lakhs, and the total value of GSDP of Goa was 65151 lakh rupees therefore the share of mining in the GSDP was 3.30 per cent. In 1984-85 the contribution of mining is valued at rupees 2880 lakhs, and the total value of GSDP was 79116 lakh rupees. The share of mining in the GSDP for the year stood at 3.64 per cent.

While the value of mining was rupees 3574 lakhs the total value of the GSDP stood at 77792 lakh rupees and the share of mining in the GSDP was 4.59 per cent. Revenue from mining in 1986-87 stood at rupees 3967 lakhs, and the total value of GSDP was 91625 lakh rupees. In the same year thus the share of mining in the GSDP was 4.33 per cent. In the year 1987-88 the mining is valued worth rupees 3539 lakhs, and the total value of GSDP of 101693 lakh rupees whereas the share of mining in the GSDP was 4.26 per cent.

For the year 1988-89 the mining was valued at rupees 3671 lakhs, and the total value of GSDP of the state of Goa was 116155 lakh rupees and therefore the share of mining in the GSDP was 3.16 per cent. In the year 1989-90 the mining was valued at rupees 3911 lakhs while the total value of GSDP was 133958 lakh rupees whereas the share of mining in the GSDP was 2.92 per cent. For the year 1990-91 the mining is valued at rupees 5460 lakhs whereas the total value of GSDP of Goa was 149349 lakh rupees hence the share of mining in the GSDP stood at 3.66 per cent. In 1991-92 the revenue from mining was rupees 7349 lakhs, and the GSDP was 184260 lakh rupees hence the share of mining in the GSDP was 3.99 per cent.

In the beginning of the economic liberalization the mining was rupees 9021 lakhs, and the total value of GSDP was 222410 lakh rupees which bring out the share of mining in the GSDP at 4.06 per cent in 1992-93. In 1993-94 the total value of mining was rupees 15726 lakhs while the GSDP was 260937 lakh rupees and the share of mining in the GSDP was 6.03 per cent. While in 1994-95 the mining was valued at rupees 21862 lakhs the GSDP of the state of Goa was 308978 lakh rupees and the contribution of mining in the GSDP was 7.08 per cent. In 1995-96 the income received from mining was rupees 20824 lakhs while the GSDP was 361375 lakh rupees whereas in the same year thus the contribution of mining in the GSDP was 5.76 per cent. Mining had fetched the receipts for rupees 18736 lakhs and the GSDP was 431679 lakh rupees whereas the share of mining in the GSDP was 4.34 per cent in 1996-97.

Looking at 1997-98 the mining was valued worth rupees 29282 lakhs, and the total value of the GSDP was 535826 lakh rupees. In the same year thus the share of mining in the GSDP was 5.46 per cent. In 1998-99 the total value of mining was rupees 32850 lakhs and the GSDP was 661419 lakh rupees. In the same year thus the share of mining in the GSDP was 4.97 per cent. The state mining sector received the income of rupees 27281

lakhs and the total value of the GSDP was 716355 lakh rupees while the share of mining in the GSDP was 3.81 per cent. In 2000-01 the mining fetched rupees 25179 lakhs while the GSDP stood at 760645 lakh rupees and the share of mining in the GSDP remained at 3.31 per cent.

For 2001-02 the mining is valued at rupees 24484 lakhs and the GSDP was 801639 lakh rupees therefore the share of mining in the GSDP was 3.05 per cent. In 2002-03 the total value of was rupees 34224 lakhs and the value of GSDP 997670 lakh rupees hence the share of mining in the GSDP was 3.43 per cent. In 2003-04 the mining being at the peak of it had fetched rupees 45666 lakhs when the GSDP was 1188798 lakh rupees whereas the share of mining in the GSDP was 3.84 per cent. The income from mining increased to rupees 56198 lakhs and the total value of GSDP was 1271331 lakh rupees which pushed the share of mining in the GSDP to 4.42 per cent in 2004-05. In 2005-06 the value of mining declined to rupees 1801 lakhs and the total value of the GSDP stood at 47216 lakh rupees. In the same year thus the share of mining in the GSDP was 4.67 per cent. In 2006-07 the value of mining was 2409 lakhs and the GSDP was 51787 lakh rupees. In the same year thus the share of mining in the GSDP stood at 9.36 per cent. As opposed to its share in the earlier year we find that the same has increased.

For 2007-08 the value of mining was 2302 lakhs and the total value of GSDP was 61625 lakh rupees whereas the share of mining in the GSDP stood at 12.94 per cent while opposed to its share in the earlier year it had shown an increase of 3.58 per cent. In 2008-09 the value of mining was 2149 lakhs and the total value of GSDP was 65151 lakh rupees. In the same year thus the share of mining in the GSDP was 16.84 per cent. For the year 2009-10 the value of mining was 2880 lakhs and the GSDP was 79116 lakh rupees whereas the share of mining in the GSDP was 17.18 per cent.

While in 2010-11 the value of mining was 3574 lakhs, and the total value of GSDP was 77792 lakh rupees the share of mining in the GSDP was 19.80 per cent. In the year 2011-12 the value of mining stood at 3967 lakhs, and the total value of the GSDP was 91625 lakh rupees whereas the share of mining in the GSDP was 18.06 per cent.

The overall share of Mining sector to the GSDP of the state of Goa on an average has been 6.36 per cent for the time period under consideration however; its share was around 4 per cent (3.81 per cent) in the initial year of 2004-05 and finally it reached at 2.68 per cent in the year 2014-15.

6. Conclusion:

Iron ore mining in Goa has halted post the orders issued by the Supreme Court of India in September, 2012. Post this hard hit mining ban and the onset of discussions revolving around the mining ban scenario ranging from environmental sustainability to

the intergenerational equity the situation still remains unprecedented. With the central government trying to revive the mining sector post the ban faced by several other states the signs of Goan economy returning back to fresh restart of iron ore mining looks blurred. A strong resilience from the environmentalists and equal amount of burden on the government to reestablish mining for the sustenance of livelihood of individuals still remains a top priority. Mining has contributed significantly within the primary sector to the state economy and has led to its growth and development. However its contribution has seen upward rising trend from 5 per cent share in the beginning and later on increasing gradually its share in the total GSDP of the state economy from 2004-05 to 2011-12. This has been going on because of the huge demand created for iron both within the domestic steel industry as well as by foreign countries such as the China. Therefore, due to this increasing demand more minerals were mined and hence the share of mining in the GSDP of Goa had increased tremendously in the recent years almost more than quadrupling.

7. Notes and Policy Issues at State Macro Level:

Mining as a process is usually undertaken to economically exploit the minerals from the earth through different mining processes used in different continents which is generally accompanied by the creation of large mining pits that occur as a result of removal of topsoil that subsequently goes deep in search of mineral bodies. The deeper the ore bodies the larger are the mining pit sizes and there is a tendency that this mining pits running very deep. These mining pits may further expand as the mining for minerals goes on until the deposits get exhausted and then the same are left open by the majority of the mining companies although there may be few exceptions to it. The law prescribes that these mining pits be closed up by filling it with the topsoil removed during the process of mining and then replenishes the same for environmental protection purposes.

Having mines out the valuable economic minerals out of the earth there is a need to return to return the land to its rightful owners or the state exchequer as a fulfillment of lease agreement. Often it is found that the mining pits post extraction of deposits is left abandoned that is either returned or not returned to its rightful owners.

World mineral deposits are located in places where there is presence of large tracts of forests and other vegetation that is natural gift of earth bestowed on the planet earth. Having exactly pinpointed the location of the mineral deposits the mining companies later on obtain permission from the competent authorities to mine in the respective areas by taking demarking these areas that are termed as mining leases. Post fulfillment of all these mandatory administrative documentation finally the area to be mined is cleared off by cutting down the vast amount of trees and other vegetation that often leads to the displacement of the flora and fauna living in these areas which later on migrate to the deep forests or in the absence of which are seen paying visits to the nearby human settlements in search of food and water for their survival hence creating panic situation

in the people residing in the areas close to the forests which may be reacted upon by the residents thus creating endangerment problems to the wildlife. Hence, deforestation undertaken for mining activities not only leads to the destruction of forests but also leads to the displacement of the wildlife habitat that wanders off in search of next source of food wherever it could find it. Thus, it is essential that post mining and subsequent exhaustion of the mineral deposits the mined area pits should be filled up and the same should be afforested upon so that the wildlife can wander there once again thus avoiding the clash of wildlife with human beings as far as possible.

Mining led to piling of large amount of topsoil excavated during mining often termed as the overburden which was traditionally stored on the mining sites had posed great deal of disaster to the surrounding biodiversity and the resultant siltation in the rivers due to the washing off this overburden in the rivers due to rainfall in the monsoon season that posed threat to the aquatic life. Thus it is essential that the overburden created through mining process be stored in a separate protected storage facility created for the same purpose. This will keep the overburden locked up in this protected storage without spilling and flushing it out into the fields, rivers and oceans during the monsoon season.

Since on the existing road infrastructure due to large traffic movement both of the consumers as well as for commercial purposes. This has led to movement of trucks along with other traffic vehicles creating congestion and also due to the movement of trucks through the village roads has led to accidents which has badly affected the village economy. Hence, there is a need to create separate truck transportation routes to carry the iron ore mined from mining sites to the barges and port areas which will also facilitate speedy ore movement as well as reduce the accidents and other health problems created to the people due to the plying of trucks on the roads alongside the villages.

Goa being formerly ruled by the Portuguese has a lot of colonial type of houses that come in the monumental category hence their demolition is impossible in an attempt undertaken to expand the current existing road network of the state of Goa. This leads to traffic congestion hence leading to accidents. Therefore, there is a need to either divert the truck transportation route or create new truck transport routes which seems impossible due to large area of state coming under the forests that re preserved through law that also contains the pristine western Ghats hence destruction of forests to create new truck transportation routes may not be feasible for the state of Goa.

As has been witnessed by the people of Goa that mining of iron ore pre and post mining ban in the state of Goa has proved to be hazardous due to the method adopted for mining out the minerals as well as the mode of transportation undertaken to carry the ore and the incidents that have unfolded in the past due to unrestricted and irresponsible truck movement in the villages around mining areas which created many types of problems to the people. Not only human life was affected and lost but the large effects of these

mining operations were also witnessed by the biodiversity in the form of decreased crop yield levels and destruction of rich flora and fauna present in the state of Goa. Hence, it may be noted that since the mining ban in Goa has been revoked both by the supreme court of India and the state government of Goa under the rule of capping the iron ore production in the state of Goa to limit the production of iron ore in Goa. The coexistence of mining operations in the state of Goa along with protection of the environment and maintaining the well-being of the human beings living around the mining sites may seem to be impossible as the former will clash with the later.

Development of infrastructural facilities in the state of Goa have not only benefitted the public utilities but has also helped the mining industry at large in Goa as good roads help to carry iron ore from mining sites to next transportation source which are the barges. Nature has also bestowed the state of Goa with beautiful rivers such as Mandovi and Zuari which have enabled navigation through barges of the iron ore straight to the port area of Mormugao harbour. This has helped in a great way by reducing the cost of transportation and good movement network for the iron ore. The problem that persists here is the one that occurs during the on loading and off-loading of iron ore from barges that results in the spillage of the iron ore first in the river while uploading and then in the ocean at port while downloading and uploading it onto the vessel. This leads to damage of flora, fauna and ocean species. Thus it is essential that the barges while downloading and uploading the iron ore and vessel uploading process should be careful.

As noted earlier the transportation of iron ore from the uncovered barges has often resulted in the spillage of iron ore into the water bodies that has seriously affected the aquatic life and has even led to the near endangerment of some of the aquatic species endemic to the river basins of the state of Goa such as reduction in the levels of foraminifera in the surface sediments of Mandovi river due to high siltage of iron ore in the river basin that accumulates over a period of time because barges move slowly and also spillage per trip may be combined to an aggregate that becomes a pretty serious problem due to iron ore transport round the year that is a multiplier effect. Hence, in order to protect the aquatic/ marine life it is very necessary to cover the barges and then allow them to transport the iron ore from the rivers as this will not only reduce the spillage of the iron ore from the barges but will also become a good corporate social responsibility (CSR) initiative that may be followed on by the others resulting in widespread use of covered barges to transport the iron ore that will be environment friendly.

Transportation or the movement of either human beings or merchandise through ships, vessels, cargo containers, etc. is allowed up to the carrying capacity of the vessels which is designed to supplement a minimum prescribed amount of load. Beyond this threshold the extra or excess addition of load results in disturbance in the balance of the ship or may also affect the performance of the machines that propel these vessels. In case of

transportation of merchandise such as minerals through the barges there is a prescribed load bearing capacity of each barge that is determined by the respective authorities and is also marked on the barge with a sigma type symbol that indicates that up to this level the barge can deep in water having loaded up with respective minerals such as iron ore. Beyond this point of threshold load capacity further loading of minerals to transport it leads to disturbance in the vessel balance and also there is danger of the vessel getting drowned as too much deep in water is not permissible and in turn may threaten the life of on board human beings. Therefore, the barges carrying the iron ore need to load only the prescribed amount of minerals in order to both abide by the law as well as maintain the safety standards and ensure safety of human life.

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2

शेतकरी उत्पन्न वृद्धी व ग्रामीण विकासाची शाश्वत योजना

- डॉ. एम.एस. देशमुख^१, डॉ. तानाजी नामदेव घागरे^२

गोषवारा:

भारतामध्ये शेतकऱ्यांच्या कृषी मालास किफायतशीर व रास्त दराची उपेक्षा तर दुसरीकडे ग्राहकांची उच्च दराने लूट ह्या दोन्ही प्रथा एकाच वेळेस सुरू आहेत. शेतकरी आपल्या कृषी मालास योग्य व वाजवी दर मिळावा म्हणून आत्महत्या करित आहे तर ग्राहक वर्ग वाढत्या भाववाढीवर नियंत्रण ठेवावे म्हणून मोर्चे काढत आहे. शेतकऱ्यांच्या कृषी उत्पादनास योग्य भाव मिळवून देणे, ग्राहकांचे आर्थिक हित जोपासणे आणि बाजार व्यवस्थेत समन्वय साधणारी योजना निर्माण करणे अनिवार्य बनले आहे. ही सर्व यंत्रणा 'शेतकरी' उत्पन्न वृद्धी व ग्रामीण विकासाची शाश्वत योजना' निर्माण करते. या योजनेचा मुख्य उद्देश म्हणजे शेतकऱ्यांच्या विक्री योग्य कृषी उत्पादनास कायदेशीर दर व न्यायालयीन संरक्षण मिळवून कृषी उत्पन्नात शाश्वत वाढ करणे आणि कृषी क्षेत्रावर आधारित असणाऱ्या ग्रामीण भागाचा सर्वांगीण व चिरंतन विकास साध्य करणे होय. त्याचबरोबर ग्राहकांना उच्चप्रतीचे कृषी उत्पादन रास्त किंमतींना मिळवून देणे, कृषी प्रक्रिया उद्योगांची उभारणी करून रोजगारात वाढ करणे, कृषी क्षेत्राची करमाफी धोरणातून मुक्तता करणे, आत्महत्येच्या मार्गातून शेतकऱ्यांची कायमची सुटका करणे आणि देशांतर्गत व आंतरराष्ट्रीय व्यापार सुलभ करून शेतकऱ्यांच्या उत्पन्नात शाश्वत वाढ करणे सहज सध्या होणार आहे.

शिर्षशब्द : शाश्वत शेतकरी उत्पन्न, कृषी विकास, कायदेशीर दर, हमी भाव, कृषी व्यापार धोरण, सर्वसमावेशक ग्रामीण विकास, कृषी धोरण

अ. प्रस्तावना :

भारताने सन १९९१ मध्ये स्विकारलेल्या 'आर्थिक सुधारणावादी धोरणा' ने कृषी क्षेत्र अधिकाधिक स्पर्धात्मक व बाजाराभिमुख बनले. आर्थिक बदलांच्या अंमलबजावणीमुळे कृषी क्षेत्रात नवीन आदाने, तंत्रज्ञान व यंत्रसामुग्रीचा वापर अधिक वाढला. शासकीय व खाजगी क्षेत्रात निर्माण झालेले संशोधन, तंत्रज्ञान, यंत्रसामुग्री व आधुनिक कृषी प्रणालीचा वापर अधिक सखोल करण्यात आला. त्यामुळे पीक उत्पादन, जमिनीची उत्पादकता व पीक आराखडा यामध्येही सरचनात्मक बदल घडून आले. त्याचा फायदा कृषी क्षेत्र व त्यावर अवलंबून असणाऱ्या शेतकरी वर्गास, ग्रामीण जनतेस, कृषी प्रक्रिया उद्योगक, व्यापारी आणि शहरी ग्राहक वर्गास झाला. परंतू देशात निर्माण करण्यात आलेली नफा केंद्रीत बाजार व्यवस्था, कृषी निर्यातीचे धोरण, भांडवलदारांची भूमिका आणि व्यापारी-दलाल-विक्रेते यांनी निर्माण केलेली समांतर बाजार व्यवस्था यामुळे शेतकरी वर्गास त्याच्या कृषी मालास योग्य, वाजवी व

१ डॉ. एम.एस. देशमुख : प्राध्यापक, अर्थशास्त्र अधिविभाग, शिवाजी विद्यापीठ, कोल्हापूर

२ डॉ. तानाजी नामदेव घागरे : सहाय्यक प्राध्यापक, यशवंतराव चव्हाण स्कूल ऑफ रूरल डेव्हलपमेंट, शिवाजी विद्यापीठ, कोल्हापूर

किफायतशीर दर मिळण्यात अडचणी निर्माण झाल्या. शिवाय शहरी, निम-शहरी भागातील ग्राहकास कृषी उत्पादन उच्च दराने खरेदी करावे लागत आहे. एकीकडे कृषी मालास किफायतशीर व रास्त दराची उपेक्षा तर दुसरीकडे ग्राहकांची उच्च दराने लूट ह्या दोन्ही प्रथा एकाच वेळेस देशात सुरू आहेत. शेतकरी आपल्या कृषी मालास योग्य व वाजवी दर मिळावा म्हणून आत्महत्या करित आहे तर ग्राहक वर्ग वाढत्या भाववाढीवार नियंत्रण ठेवावे म्हणून मोर्चे काढत आहे. शेतकऱ्यांच्या कृषी उत्पादनास योग्य भाव मिळवून देणे, ग्राहकांचे आर्थिक हीत जोपासणे आणि बाजार व्यवस्थेत समन्वय साधणारी योजनानिर्माण करणे अनिवार्य बनले आहे. ही सर्व यंत्रणा 'शेतकरी उत्पन्न वृद्धी व ग्रामीण विकासाची शाश्वत योजना' निर्माण करते. या योजनेचा मुख्य उद्देश म्हणजे शेतकऱ्यांच्या विक्री योग्य कृषी उत्पादनास कायदेशीर दर (एकूण खर्च (C३) अधिक किमान ५० टक्के नफा) मिळवून कृषी उत्पन्नात शाश्वत वाढ करणे आणि कृषी क्षेत्रावर आधारित असणाऱ्या ग्रामीण भागाचा सर्वांगीण व चिरंतन विकास साध्य करणे होय. सदर योजनेच्या माध्यमातून शेतकऱ्यांना उच्च उत्पादन घेण्याची ऊर्जा तर मिळेलच; पण त्याबरोबर ग्राहकांना कृषी उत्पादने वाजवी व माफक दरात सर्वत्र उपलब्ध होतील. शेतकरी वर्ग कर्जमाफीसारख्या धोरणातून कायमचा मुक्त होऊन शाश्वत उत्पन्न प्राप्त करेल. त्यामुळे भारताची ओळख 'सुजलाम-सुफलाम कृषी भारत' अशी पुन्हा एकदा निर्माण करता येईल.

ब. योजनेचे उद्देश:

१. शेतकऱ्यांना त्यांच्या कृषी उत्पादनास कायदेशीर दर व न्यायालयीन हक्क मिळवून देणे.
२. कृषी उत्पादनातून शेतकऱ्यांना शाश्वत उत्पन्न प्राप्त करून देणे.
३. आत्महत्या मार्गाच्या प्रवृत्तीतून शेतकऱ्यांची कायमची सुटका करणे.
४. कर्जमाफी धोरणातून कृषी क्षेत्र कायमचे मुक्त करणे.
५. शेतकऱ्यांच्या कृषी उत्पादकतेच्या क्षमतेनुसार वित्तपुरवठा करणे.
६. ग्रामीण व कृषी क्षेत्राच्या विकासासाठी 'ग्रामीण विकास निधी' ची निर्मिती करणे.
७. कृषी क्षेत्र आधुनिक, स्पर्धात्मक व व्यवसायाभिमुख करणे.
८. ग्राहकांना उच्च प्रतीचे कृषी उत्पादन रास्त किंमतीत उपलब्ध करून देणे.
९. आंतरराज्य व आंतरजिल्हा व्यापार सुलभ करून त्यात वाढ घडवून आणणे.
१०. कृषी विषयक आयात-निर्यात धोरण कृषिपूरक व लवचिक बनविणे.
११. कृषी प्रक्रिया उद्योगांचा ग्रामीण भागात विस्तार करून नवीन रोजगार निर्माण करणे.
१२. तरुणांमध्ये नव-उद्योजकता निर्माण करणे.
१३. शेतकऱ्यांना प्रत्यक्ष लाभ हस्तांतरण (DBT) माध्यमातून वित्तीय मदत प्राप्त करून देणे.
१४. नैसर्गिक साधन सामुग्रीचा महत्तम वापर करून तिचे संवर्धन व संरक्षण करणे.
१५. ग्रामीण भागातून शहरी भागात होणाऱ्या लोकसंख्येच्या स्थलांतरणास आळा घालणे.
१६. ग्रामीण जनतेला उदरनिर्वाहाचे साधन स्थानिक पातळीवर उपलब्ध करून देणे.
१७. ग्रामीण व कृषी क्षेत्रात मूलभूत व पायाभूत सेवा- सुविधा निर्माण करणे.

१८. ग्रामीण भागात बाजारपेठेचा विस्तार घडवून आणणे
१९. भारतास 'कुपोषण मुक्त भारत' बनविणे.
२०. भारतीय अर्थव्यवस्थेचा समतोलित विकासाद्वारे सर्वांगीण विकास करणे.

क. योजनेचे स्वरूप

शेतकरी उत्पन्न वृद्धी व ग्रामीण विकासाची शाश्वत योजनेमुळे सरकार आणि शेतकरी यांना विक्रीयोग्य कृषी उत्पादनाच्या कायदेशीर दराबाबत न्यायालयीन अधिकार प्राप्त होणार असल्यामुळे या दोघांवरती योजनेची सम-समान जबाबदारी राहणार आहे. तरीही यामध्ये शासनाची भूमिका अधिक महत्वाची ठरते. कारण योजनेची अंमलबजावणी व त्यावर नियंत्रण ठेवण्याची जबाबदारी ही संपूर्णतः शासनाची असणार आहे. यामध्ये शेतकऱ्यांचा क्रियाशील व सकारात्मक सहभाग हाच शेतकऱ्यांच्या उत्पन्न वाढीचा मार्ग राहणार आहे. सदर योजनेची अंमलबजावणी ही पूर्णतः ऑनलाइन आहे. त्यामुळे विक्रीयोग्य कृषी उत्पादनास कायदेशीर दर, प्रक्रिया उद्योग, कृषीपूरक निर्यात धोरण, देशांतर्गत व्यापारयासारख्या धोरणांची १०० टक्के अंमलबजावणी होईल.

□ ज्या शेतकऱ्यांना शासनाकडून विक्रीयोग्य कृषी उत्पादनाला कायदेशीर दर प्राप्त करून घ्यायचा आहे, अशा शेतकऱ्यांना योजनेत सहभागी होणे अनिवार्य आहे.

□ जे शेतकरी शासकीय मदत, अनुदान व इतर कोणत्याही सुविधांशिवाय खुल्या, मुक्त व स्पर्धात्मक बाजारामध्ये कृषी व्यवसाय करू शकतात, अशा शेतकऱ्यांसाठी ही योजना ऐच्छिक असून योजनेमध्ये सहभागी होण्याचा वा न होण्याचा निर्णय ते घेऊ शकतात.

१) सरकारची कार्ये, भूमिका व जबाबदारी : शेतकरी उत्पन्न वृद्धी व ग्रामीण विकासाची शाश्वत योजना ही 'शासकीय योजना' असल्यामुळे तिची अंमलबजावणी करण्याची जबाबदारी सरकारवर असणार आहे. योजनेच्या अंमलबजावणीसाठी सरकारने कृषी व्यवसायाशी संबंधित पुढील प्रकारच्या नोंदणी विषयक तांत्रिक, भौतिक व पायाभूतसेवा-सुविधा उपलब्ध करून देणे आवश्यक आहे. या सुविधांच्या माध्यमातून शेतकऱ्यांना त्यांच्या कृषी विषयक सर्व बाबींची वा कृतींची नोंदणी करता येईल.

ऑनलाइन नोंदणी:

सदारच्या योजनेचा मुख्य भाग म्हणजे शेतकऱ्यांनी कृषी व्यवसायाशी संबंधित बाबींची व कृतींची ऑनलाइन नोंदणी करणे होय. यामध्ये शेतकऱ्यांची वैयक्तिक, कृषी, पशुधन, पीक लागवड, एकूण उत्पादन व विक्रीयोग्य उत्पादन या बाबींचा समावेश होतो. शेतकऱ्यांना विक्रीयोग्य कृषी उत्पादनास कायदेशीर दर प्राप्त करून घेण्यासाठी त्यांना आपल्या कृषी विषयक सर्व बाबींची व कृतींची नोंदणी करणे अनिवार्य असणार आहे. जे शेतकरी नोंदणी करणार नाहीत; त्या शेतकऱ्यांना विक्रीयोग्य कृषी उत्पादनाच्या कायदेशीर दराचा कोणताही न्यायालयीन हक्क मिळणार नाही. शिवाय अशा शेतकऱ्यांच्या विक्रीयोग्य कृषी उत्पादनास कायदेशीर दर देण्याचे कोणतेही बंधन सरकारवरती राहणार नाही.

ऑनलाइन नोंदणी प्रणालीचे एकूण २ टप्पे आहेत. पहिला टप्पा हा शेतकऱ्यांची वैयक्तिक माहिती, कृषीविषयक माहिती, पशुधनाची माहिती, कृषी हंगाम, पीक प्रकार, लागवड दिनांक, लागवडीखालील एकूण

क्षेत्र, सिंचन सुविधा व पीक विमायांच्याशी संबंधित आहे. तर दुसऱ्या टप्प्यात एकूण पीक उत्पादन, विक्रीयोग्य एकूण उत्पादन, उत्पादनांच्या विक्रीचे ठिकाण व दिनांक बाबींशी संबंधित आहे. या नोंदणीसाठी सरकारची कार्ये व जबाबदारी पुढील प्रमाणे आहे.

- शेतकऱ्यांना कृषीविषयक बाबींची नोंदणी ऑनलाइन करण्यासाठी शासनाने वेबसाईट व मोबाईल ॲप तयार करावे.

नोंदणी
पहिला टप्पा

अ. क्र	नोंदणी	तपशील
१	वैयक्तिक	१. शेतकऱ्यांचे संपूर्ण नाव :----- २. संपूर्ण पत्ता : गाव ----- तालुका ----- जिल्हा ----- पिन कोड : ----- ३. लिंग : i. महिला ii. पुरुष ४. वय :----- वर्ष ५. शिक्षण :--- i. प्राथमिक ii. माध्यमिक iii. उच्च माध्यमिक iv. पदवी v. पदवीतोर पदवी
२	कृषी	जमिनीचे एकूण क्षेत्रफळ:एकर/हेक्टर i. जिरायती: एकर/हेक्टर ii. बागायती:एकर/हेक्टर
३	पशुधन (संख्या)	देशी गाय : -----संक्रमित गाय: ----- म्हैस: ----- शेळी:----- मेंढी: ----- पक्षी (कोंबडी/बदक/इतर) -----
४	कृषी हंगाम	पीक लागवडीचा हंगाम १. खरीप २. रब्बी ३. उन्हाळी ४. बारमाही

५	पीक लागवड	१. कडधान्य. i. ii. २. तृणधान्य i. ii. ३. फळे i. ii. ४. पालेभाज्या i. ii. ५. तेलबिया i. ii. ६. इतर पिके i. ii.	१. पीक लागवडीचा दिनांक: २. पीक लागवडीखालील क्षेत्र:.....गुंठे/एकर /हेक्टर ३. पीक लागवडीचा प्रकार : i) कोरडवाहु/जिरायती ii) बागायती ४. पीकाचा प्रकार: i) सेंद्रिय ii) रासायनिक ५. पीक विमा नोंदणी क्रमांक : प्रत्येक पिकांचा पीक विमा उतरवणे कायदेशीर व अनिवार्य आहे. त्याशिवाय नोंदणी पूर्ण होऊ शकणार नाही. त्यासाठी सरकारने पीक विमा नोंदणी क्रमांक बँकांच्या माध्यमातून वा ऑनलाइन पीक विमा सुविधेच्या माध्यमातून शेतकऱ्यांना उपलब्ध करून द्यावा.
नोंदणीचा पहिला टप्पा पूर्ण			

- नोंदणी करण्यासाठी शेतकऱ्यांचा आधार क्रमांक हा 'यूजर आयडी' (User ID) असेल. आधार कार्डवर रजिस्टर मोबाइल क्रमांकावरती नोंदणीचा 'ओ.टी.पी' (One Time Password) मिळेल. त्यानंतर शेतकरी नोंदणी करून आपला पासवर्ड बदलू शकतात. आधार क्रमांकामुळे बनावट शेतकरी वा खोट्या माहितीची नोंदणी होणार नाही.
- शेतकऱ्यांचा आधार क्रमांक बँक खात्याशी लिंक असणे अनिवार्य आहे.
- पीक लागवडीची माहिती नोंदविण्यापूर्वी शेतकऱ्यांनी पीक विमा काढणे अनिवार्य आहे. कारण पीक विमा क्रमांकाशिवाय नोंदणी पूर्ण होऊ शकणार नाही.
- शेतकऱ्यांनी पीक लागवड, एकूण उत्पादन व विक्रीयोग्य उत्पादनाबाबतची माहिती अचूक भरावी. अयोग्य वा चुकीची माहिती भरणारे शेतकऱ्यांना पुढील काळात कृषी योजनांसाठी अपात्र ठरविण्यात येतील वा आर्थिक दंड आकरण्यात येईल.

पीक लागवडीची पडताळणी:

ग्राम स्तरावर कृषी अधिकाऱ्याने/ तलाठ्याने शेतकऱ्यांनी नोंदणी केलेल्या कृषी विषयक बाबींची वा पीक लागवड क्षेत्राची पडताळणी करावी. त्यामुळे या प्रणालीत पारदर्शकता निर्माण होऊन शेतकऱ्यांना अधिक विश्वास निर्माण होईल.

प्रत्यक्ष लाभ हस्तांतरण:

शासनास कृषी व पीक लागवडीची नोंदणी केलेल्या शेतकऱ्यांच्या बँक खात्यात 'प्रत्यक्ष लाभ हस्तांतरण' (DBT) माध्यमातून कृषी क्षेत्रानुसार अनुदान वा वित्तीय मदत (खते, औषधे, यंत्रसामुग्री व इतर) जमा करता येईल.

पीक लागवडीची अचूक माहिती उपलब्ध :

या प्रणालीच्या माध्यमातून शासनास विविध पिकांखाली असणाऱ्या लागवड क्षेत्राची माहिती प्राप्त होईल. या माहितीच्या आधारावर शासनास देशांतर्गत एकूण कृषी उत्पादनांचे पूर्वअंदाज बांधता येतील.

नोंदणीचा दुसरा टप्पा

अ. क्र	नोंदणी	तपशील
१	एकूण उत्पादन व विक्री योग्य उत्पादन	<p>१. कडधान्य.</p> <p>i.</p> <p>ii.</p> <p>२. तृणधान्य</p> <p>i.</p> <p>ii.</p> <p>३. फळे</p> <p>i.</p> <p>ii.</p> <p>४. पालेभाज्या</p> <p>i.</p> <p>ii.</p> <p>५. तेलबिया</p> <p>i.</p> <p>ii.</p> <p>६. इतर पिके</p> <p>i.</p> <p>ii.</p>
		<p>१. एकूण उत्पादन:.....किंटल /टन</p> <p>२. विक्री योग्य एकूण उत्पादन:किंटल /टन</p> <p>विक्रीयोग्य उत्पादन म्हणजे एकूण उत्पादनापैकी बाजारात (कृषी बाजार समिती/ ई- नाम माध्यमातून) विक्रीसाठी असलेले उत्पादन होय.</p> <p>शेतकऱ्यांना दैनंदिन/ खाजगी उपभोगासाठीचे उत्पादन व खाजगी पातळीवरील विक्री केलेले उत्पादन सोडून शिल्लक असलेले उत्पादन म्हणजेच विक्री योग्य उत्पादन होय.</p> <p>विक्रीयोग्य उत्पादन हे कृषी बाजार समिती वा ई-नाम माध्यमातून विक्री केले जाईल. याच विक्री योग्य कृषी उत्पादनास कायदेशीर दर' मिळणार आहे.</p> <p>विक्रीयोग्य एकूण उत्पादन=</p>

२	विक्रीयोग्य कृषी उत्पादनाची खरेदी -विक्री	<p>अ) ज्या शेतकऱ्यांनी विक्री योग्य कृषी उत्पादनाची प्रथम नोंदणी केली असेल अशा शेतकऱ्यांची शासनाने पीक विक्रीसाठी प्रथम निवड करावी. कृषी उत्पादनाच्या विक्रीसाठी शासनाने शेतकऱ्यांना तालुका, जिल्हा, शहरी वा जवळच्या भागातील कृषी बाजार समितीमध्ये विशिष्ट तारखेस कृषी माल विक्रीसाठी पाचारण करावे. त्यासाठी विक्री दिनांक व ठिकाण यासंदर्भातील संदेश शेतकऱ्यांच्या मोबाईल क्रमांकावरती पाठवावा. त्यामुळे निश्चित दिवशी विशिष्ट बाजार समितीमध्ये कोणत्या कृषी मालाची व किती आवक येणार आहे ते कळेल. त्यानुसार विक्रीचे नियोजन करता येईल.</p> <p>ब) ज्या शेतकऱ्यांना विक्री योग्य कृषी उत्पादनांची तात्काळ वा आपल्या सोयीनुसार विक्री करवायची आहे; असे शेतकरी कृषी उत्पादनाच्या विक्रीचे ठिकाण (बाजार समिती) व विक्री दिनांक यांची स्वतः निवड करू शकतात. त्यासाठी अशा शेतकऱ्यांनी विक्री दिनांक व बाजार समितीच्या निवडीची नोंदणी ऑनलाइन करावी. ही नोंदणी शेतकरी मोबाईल ॲप/वेबसाईट/नोंदणी सुविधा केंद्राद्वारे करू शकतात. त्यामुळे सरकारला/ बाजार समित्यांना विक्रीचे नियोजन करता येईल.</p>
नोंदणीचा दुसरा टप्पा पूर्ण		

नोंदणी सुविधा:

शेतकऱ्यांनीयोजनेचा लाभ मिळविण्यासाठी कृषी बाबींची व कृतींची नोंदणी करणे अनिवार्य आहे. त्यासाठी शेतकरी स्वतः वेब पोर्टल व मोबाईल ॲपद्वारे नोंदणी करू शकतात. शिवाय शेतकऱ्यांना नोंदणी करण्यासाठी सरकारनेग्राम स्तरावर ग्रामपंचायत/ तलाठी कार्यालयात ऑनलाइन नोंदणीची सुविधा उपलब्ध करून देण्यात यावी.



----- वेब पोर्टल----- मोबाईल ॲप -----

संदेश सुविधा :

नोंदणी केलेल्या शेतकऱ्यांना त्यांच्या मोबाईल क्रमांकावरती सरकारच्या कृषी व पशुधन विभागाचे संदेश

प्राप्त होतील. शेतकऱ्यांनी नोंदणी केलेल्या पिकांबद्दलची माहिती, हवामान, पीक नियोजन, पिकांवरील रोग, रोगांवरील प्रतिबंधात्मक उपाय आणि बदलते वातावरण (आर्द्रता, तापमान, वाऱ्याचा वेग, ढगाळ वातावरण व बर्फवृष्टी) यासंबंधी माहिती संदेशाच्या स्वरूपात पाठवली जाईल. त्यामुळे शेतकऱ्यांना नोंदविलेल्या पिकांचे योग्य व शास्त्रशुद्ध नियोजन करता येईल. शिवाय पशुधनाबाबत रोग व त्यावरील प्रतिबंधात्मक लसीकरण यासंबंधीची माहितीसंदेशाच्या स्वरूपात मिळतील. हे संदेश लिखित, ध्वनी वा दृक-श्राव्य स्वरूपात देण्यात येतील.

२) शेतकरी उत्पन्न वाढीचे मुख्य मार्गः

i) एकूण पीक लागवड क्षेत्र, एकूण उत्पादन व विक्री व्यवस्थाः

स्वातंत्र्य प्राप्तीनंतर ते आजतागायत देशामध्ये वा विविध राज्यांमध्ये एकूण पिकाखालील क्षेत्र व एकूण कृषी उत्पादन याबाबतची अचूक माहिती उपलब्ध होत नसल्याचे निदर्शनास येते. शासन मागील वर्षीचे अंदाजित क्षेत्र विचारात घेऊन ढोबळमानाने चालू वर्षाचे पीक लागवडी खालील क्षेत्राचा अंदाज घेत कृषि क्षेत्राशी संबंधित धोरणात्मक निर्णय (आयात-निर्यात धोरण) व शासकीय योजना जाहीर करत होते. त्यामुळे हे निर्णय व धोरणे शेतीसाठी अनुकूलच असायचे असे नाही. शेतकरीउत्पन्न वाढीच्या शाश्वत योजनेतून एकूण पीक लागवड क्षेत्र, एकूण उत्पादन व विक्री योग्य उत्पादन याबाबत पूर्ण व अचूक माहिती मिळेल.

योजनेतील नोंदणी टप्प्याच्या माध्यमातून विविध राज्यात, जिल्ह्यात, तालुक्यात व गाव पातळीवर विविध पिकाखालील एकूण लागवड क्षेत्र, एकूण पीक उत्पादन व विक्रीयोग्य उत्पादनाची यांची सांख्यिकीय माहिती शासनास प्राप्त होईल. त्यानुसार शासनास शासनास मागणी-पुरवठ्याच्या आधारे कृषी उत्पादनाची आंतरजिल्हा व्यापार, आंतरराज्य व्यापार, आंतरराष्ट्रीय व्यापार, प्रक्रिया उद्योग व कृषी उत्पादनाचे विपणन यासंबंधी निर्णय,नियोजनआणि सार्वजनिक वितरण प्रणालीचे धोरण निश्चित करता येईल. यातून अतिरिक्त उत्पादनाचा प्रश्न निकाली लागेल. त्यामुळे शेतकऱ्यांना देशांतर्गत व आंतरराष्ट्रीय व्यापाराच्या माध्यमातून कृषी मालास रास्त किंमत मिळेल. शिवाय देशांतर्गत मागणीनुसार कृषी उत्पादनाचा पुरवठा संपूर्ण देशभर करता येईल.

ii) कृषी विकास निधीः

योजनेच्या माध्यमातून कृषी उत्पादनास कायदेशीर दर प्राप्त करून घेण्यासाठी शेतकऱ्यांना प्रत्येक कृषी उत्पादनासाठी 'पीकविमा' काढणे अनिवार्य आहे. त्यामुळे सरकारने पीक विमा योजना संपूर्ण देशभर व सर्व पिकांना लागू करावी. सरकारला योजनेतून सर्व कृषी हंगामात पीक विमांच्या माध्यमातून मोठ्या प्रमाणात (हजारो/ लाख करोड रुपये) रक्कम प्राप्त होईल.त्यामुळे सरकारला सर्वाधिक महसूल प्राप्त करून देणारी ही एकमेव व खात्रीशील योजना असणार आहे. या पीक विमा योजनेतून जमा होणारी सर्व रक्कम ही 'कृषी विकास निधी'त जमा करावी. त्यासाठी सरकारने 'कृषी विकास निधी'ची स्थापना करावी. या निधीचा वापर फक्त आणि फक्त शेतकरी वर्गास नैसर्गिक संकटाच्या काळात प्रति एकरी/

हेक्टरी पीक नुकसान भरपाई, अनुदान, वित्तीय मदत व इतर कृषी जोखीम कमी करण्यासाठी करता येईल. शिवाय कृषी क्षेत्रात नवीन पायाभूत सुविधा (गोदाम, वितरण, विपणन, यंत्रे, अवजारे, कृषी विक्री केंद्र) निर्माण करण्यासाठी त्याचा वापर करावा. त्यासाठी सरकारने स्वतः पीक विम्यासाठी एक 'स्वतंत्र व स्वायत्त सरकारी विमा कंपनी' स्थापन करावी. या सार्वजनिक विमा कंपनी मार्फतच शेतकऱ्यांना पीक विमा उपलब्ध करून देण्यात येईल. त्यामुळे योजनेतून मिळणारा सर्व महसूल 'कृषी विकास निधी'त जमा होईल.

iii) कृषी वित्त पुरवठा व कर्ज वसूली:

या योजनेच्या माध्यमातून सरकारला व वित्तपुरवठा संस्थांना नोंदणीकृत शेतकऱ्यांना कृषी व्यवसायासाठी आवश्यक असणारी सर्व प्रकारची आर्थिक मदत करता येईल. साधारण एका वर्षांनंतर नोंदणी केलेल्या सर्व शेतकऱ्यांच्या पीक लागवड व एकूण उत्पादन याबाबत सर्व माहिती सरकारकडे जमा होईल. शिवाय प्रत्येक शेतकऱ्यांचे वैयक्तिक कृषी अभिलेख (रेकॉर्ड) तयार होईल. त्यामुळे सरकार वा बँकामार्फत (राष्ट्रीयकृत/सहकारी/खाजगी) शेतकऱ्यांच्या उत्पादन क्षमतेच्या आधारावर कर्जपुरवठा केला जाईल.

नैसर्गिक आपत्तीच्या काळात (दुष्काळ, महापूर, बर्फवृष्टी, विविध रोग व वातावरणातील बदल) पीक नुकसान प्रमाणानुसार पीक विमा योजनेची रक्कम शेतकऱ्यांच्या बँक खात्यात हस्तांतरित करता येईल. शिवाय शेतकऱ्यांच्या कर्ज परतफेडीचा कालावधी वाढविला जाईल. कारण बँकाकडे वा शासनाकडे शेतकऱ्यांच्या उत्पादकतेची, उत्पन्नाची व त्याच्या कृषी उत्पादन क्षमतेची सांख्यिकीय माहिती शासनाकडे उपलब्ध असणार आहे. शिवाय अनुदानास पात्र शेतकऱ्यांना थेट आर्थिक मदत करता येईल. त्यामुळे कर्जमाफी सारख्या अल्पजीवी धोरणातून शेतकऱ्यांची व शासनाची कायमची सुटका होईल.

iv) जिल्हा प्रक्रिया उद्योग :

देशातील प्रत्येक जिल्ह्याकडे विशिष्ट पीकाचे उत्पादन घेण्याची नैसर्गिक सधनता व क्षमता आहे. नोंदणी प्रणालीच्या माध्यमातून पीक आराखडा, पीक लागवड व पीक उत्पादन विषयक माहितीच्या आधारे शासनाने प्रत्येक जिल्ह्यात सर्वाधिक उत्पादन होणार्या किमान ३ कृषी उत्पादनावर प्रक्रियाकरणारे उद्योग सुरू करावेत (सार्वजनिक/सहकारी/संयुक्त तत्वावर). म्हणजेच प्रत्येक जिल्ह्यात पहिल्या वर्षी मोठ्या आकाराचे ३ प्रक्रिया उद्योग सुरू होतील. शिवाय वैयक्तिक शेतकरी व शेतकरी उत्पादक कंपन्यांना प्रक्रिया उद्योग सुरू करण्यासाठी सरकारने सर्वोत्तम मदत करावी. त्यामुळे शेतकऱ्यांना आपले कृषी उत्पादन त्याच जिल्ह्यातील प्रक्रिया उद्योगास विक्री करता येईल. त्यामुळे विक्रीयोग्य उत्पादनाचे आकरमानही कमी होईल. फक्त महाराष्ट्र राज्याचा विचार केला असता एकूण ३६ जिल्ह्यांपैकी ३३ जिल्ह्यांत पहिल्याच वर्षी एकूण ९९ प्रक्रिया उद्योग निर्माण होतील. देशातील प्रत्येक राज्यात अशा प्रकारचे कृषी प्रक्रिया उद्योग स्थापन झाल्यास कृषी उत्पादन, उत्पादकता, ग्रामीण रोजगार, शेतकरी

उत्पन्न व प्रक्रिया उद्योग यावरती सकारात्मक बदल घडून येतील. प्रत्येक जिल्ह्यामध्ये नवीन रोजगार निर्माण होऊन तरुण व कुशल उद्योजक तयार होतील.

V) देशांतर्गत व्यापार:

सदारची योजना देशातील सर्व राज्यात लागू केल्यास प्रत्येक राज्यातील पीक लागवडीखालील एकूण क्षेत्र, एकूण उत्पादन व विक्री योग्य उत्पादन याची माहिती जमा होईल. एखाद्या राज्यात एखाद्या पिकाचेलागवड क्षेत्र व एकूण उत्पादन कमी झाल्यास त्या राज्यास इतर राज्याकडून कृषी उत्पादनाची खरेदी करता येईल. म्हणजेच देशपातळीवर कृषी उत्पादनांची राज्यांतर्गत व्यापाराच्या माध्यमातून खरेदी-विक्री करता येईल. देशांतर्गत व्यापारातून शेतकऱ्यांना जास्तीचे उत्पन्न प्राप्त होईल. राज्यांतर्गत व्यापाराप्रमाणे जिल्हांतर्गत व्यापारही (जिल्हा-जिल्हा व्यापार) वाढीस लावता येईल.

vi) आंतरराष्ट्रीय कृषी व्यापार :

केंद्र सरकारला या योजनेच्या माध्यमातून राष्ट्रीय पातळीवर सर्व पिकाखालील एकूण क्षेत्र आणि एकूण कृषी उत्पादन यांची अद्यावत माहिती प्राप्त होईल. राष्ट्रीय स्तरावर आवश्यक असणारे पीक-निहाय उत्पादनयाबाबत एकूण मागणी व एकूण पुरवठा यांची तौलनिक मांडणी करता येईल. त्यामुळे सरकारला मागणी- पुरवठा नियमानुसार कृषी क्षेत्राचे आंतरराष्ट्रीय व्यापार धोरण (आयात-निर्यात धोरण) ठरवता येईल. कृषी विषयक आयात-निर्यात धोरणात अधिक लवचिकता निर्माण होईल. ज्या हंगामात वा वर्षामध्ये देशांतर्गत उपभोगपातळीपेक्षा अधिक उत्पादन झाल्यास अनुकूल निर्यात धोरण स्वीकारून शेतकऱ्यांच्या मालास अधिक दर प्राप्त होईल. शिवाय देशास परकीय चलन प्राप्त होऊन विदेशी चलन साठ्यात वाढ होईल.

vii) निर्यात बंदी व आंतरराष्ट्रीय किंमत :

नैसर्गिक संकटाच्या काळात (दुष्काळ, अतिवृष्टी, महापूर, बर्फवृष्टी, रोग व इतर) देशांतर्गत एकूण कृषी उत्पादनात घट झाल्यास सरकार कृषी उत्पादनांच्या निर्यातीवर बंदी लागू करते. त्यामुळे त्याचा आर्थिक फटका शेतकऱ्यांना व त्यांचे नुकसान होते. निर्यात बंदीच्या काळात ज्या कृषी उत्पादनांच्या निर्यातीवर सरकारने बंदी घातली आहे, अशा सर्वकृषी उत्पादनास आंतरराष्ट्रीय बाजारात असणारी सरासरी किंमत हीच शेतकऱ्यांच्या कृषी उत्पादनांची कायदेशीर किंमत असणार आहे. या आंतरराष्ट्रीय बाजारानुसार असणारी कायदेशीर किंमत व बाजारातील प्रत्यक्ष किंमत यातील फरकाएवढी रक्कम सरकारकडून शेतकऱ्यांना बँक खात्यात प्रत्यक्ष लाभ हस्तांतरणाच्या माध्यमातून जमा केली जाईल. निर्यात बंदीच्या काळात सर्व शेतकऱ्यांना ना (नोंदणीकृत व अनोंदणीकृत) या कायदेशीर किंमतीचा लाभ मिळेल. कारण निर्यात बंदीचा फटका योजनेबाहेरील शेतकऱ्यांनाही बसणार आहे. त्यामुळे आंतरराष्ट्रीय बाजारातील किंमतीनुसार शेतकऱ्यांना उत्पन्न मिळेल. निर्यात बंदी उठविल्यानंतर कृषी उत्पादनास सरकारने ठरविलेली देशांतर्गत कायदेशीर किंमत लागू होईल.

viii) कृषी हक्क निधी:

सदर योजनेतील तरतुदीनुसार, कृषी उत्पादनांची कायदेशीर किंमत व बाजारातील प्रत्यक्ष किंमत यातील फराकाएवढी रक्कम सरकारकडून शेतकऱ्यांना बँक खात्यात प्रत्यक्ष लाभ हस्तांतरणाच्या माध्यमातून जमा केली जाईल. ही रक्कम देण्यासाठी सरकारने संचित निधीमध्ये 'कृषी हक्क निधी'ची निर्मिती करावी. त्यासाठी सरकारने आपल्या प्रत्येक वर्षाच्या अर्थसंकल्पामध्ये कायदेशीर किंमत देण्यासाठी आवश्यक असलेल्या एकूण रकमेची वैधानिक तरतूद करावी. त्यामुळे सरकारला आर्थिक पाठबळ व स्थैर्य प्राप्त होईल. शिवाय शेतकऱ्यांकना तत्पर व पारदर्शकरित्या पैसे प्राप्त होतील.

ix) पीक आराखडा :

शेतकरी उत्पन्न वृद्धी व ग्रामीण विकासाची शाश्वत योजनेचा महत्वाचा फायदा म्हणजे पीक आराखड्यामध्ये घडून येणारा सकारात्मक बदल होय. योजनेमुळे कृषी उत्पादनास कायदेशीर किंमतीचे सुरक्षा कवच लाभल्यामुळे शेतकरी उपलब्ध कृषी आदानांचा पर्याप्त वापर करून विविध पिकांचे उत्पादन घेतील. त्यामुळे आंतरपिक, बहुविध पीक व मिश्र पद्धतीचा अधिक गतीने विस्तार होईल. शेतकऱ्यांना उपलब्ध क्षेत्रामध्ये विविध पिकांचे अधिकाधिक उत्पादन घेऊन आपल्या उत्पन्नात वाढ करता येईल.

x) भूजल साठा :

देशातील एकूण पिकाखालील क्षेत्राचा व त्यास आवश्यक असणाऱ्या पाणी वापराचा विचार केल्यास असे दिसून येते की, ऊस पिकाखालील क्षेत्र फक्त ४ टक्के आहे; मात्र शेतीत वापरल्या जाणाऱ्या एकूण पाण्यापैकी ६५ टक्के पाण्याचा वापर ऊस उत्पादनासाठी होत आहे. इतर ९६ टक्के क्षेत्राखालील पिकांसाठी फक्त ३५ टक्के पाणी शिल्लक राहते. ऊसाचे उत्पादन घेण्याचे महत्वाचे कारण म्हणजे इतर पीक उत्पादनापेक्षा ऊस उत्पादनातून काही ठोस उत्पन्न प्राप्त होईल, अशी शेतकऱ्यांची धारणा आहे आणि त्यात तथ्य आहे. पाण्यासाठी शेतकरी विविध स्रोतांचा शोध घेत असून जमिनीखाली खोलवर असणाऱ्या पाण्याचा वापर करण्यास सुरवात केली आहे. त्यामुळे भूगर्भातील पाणी पातळी नष्ट होण्याच्या मार्गावर आहे. यावर कायमस्वरूपी मात करावयाची असल्यास इतर पिकातून शेतकऱ्यांना कायमस्वरूपी उत्पन्न प्राप्तीचा कायदेशीर मिळणे आवश्यक आहे. या योजनेच्या सहाय्याने निर्माण होणाऱ्या कायदेशीर किंमतीमुळे शेतकरी कमी पाण्यावर उत्पादन होऊ शकणाऱ्या पिकांची लागवड करतील. त्यामुळे भूगर्भात असणाऱ्या पाण्याचा वापर कमी होऊन भूगर्भातील पाणी पातळीत वाढ होईल.

xi) कृषी शिक्षण-प्रशिक्षण :

कृषी शिक्षण-प्रशिक्षणाद्वारे बदलते तंत्रज्ञान व पीकउत्पादनाची आधुनिक माहिती शेतकऱ्यांना प्राप्त होते. त्यातून शेतकऱ्यांना आपल्या कृषी व्यवसायांमध्ये बदल करता येतात. या योजनेच्या माध्यमातून

अधिक उत्पादन घेणार्याश उच्च शिक्षित तरुणांना कृषीविषयक तंत्रज्ञान, यंत्रासामुग्री, पीक उत्पादनाचे नवीन तंत्र यासंदर्भात शिक्षण व प्रशिक्षण देण्यासाठी निवड केली जाईल. शिवाय विविध अभ्यास दौऱ्यांसाठी (देशांतर्गत व पाश्चिमात्य) त्यांची निवड करता येईल. त्यामुळे कृषिविषयक आधुनिक तंत्रज्ञान व पीक नियोजन याबाबतची माहिती शेतकऱ्यांना होईल.

३) शेतकऱ्यांची भूमिका व जबाबदारी :

शेतकरी उत्पन्न वृद्धी व ग्रामीण विकासाची शाश्वत योजनेची यशस्विता ही कृषी उत्पादकांच्या सहभागावरती अवलंबून आहे. योजनेच्या माध्यमातून शेतकऱ्यांना कृषी उत्पादनास कायदेशीर दर प्राप्त होणार आहे. त्यासाठी शेतकऱ्यांनी नोंदणी करताना पूर्ण, अचूक व वास्तव माहिती भरावी. कारण या माहितीवरच शासनाचे आयात-निर्यात धोरण, आंतरराज्य व्यापार, प्रक्रिया उद्योग व सार्वजनिक वितरण व्यवस्था यासारखे धोरण ठरणार आहे. शेतकऱ्यांना या योजनेतून लाभ प्राप्त करून घेण्यासाठी पुढील जबाबदारी व कर्तव्य पार पाडणे अनिवार्य आहे.

१. ऑनलाइन नोंदणी करणे.
२. आधार क्रमांक बँक खात्याशी जोडणे (लंक करणे).
३. पीक लागवड, एकूण उत्पादन व विक्रीयोग्य उत्पादनाची वेळेत माहिती भरणे.
४. पीक नोंदणीपूर्वी 'पीक विमा' काढणे.

४) कृषी उत्पादनाची कायदेशीर किंमत :

कृषी उत्पादनाची कायदेशीर किंमत म्हणजे उत्पादनाचा एकूण खर्च (C3) अधिक किमान ५० टक्के नफा असणारी किंमत होय. कृषी शास्त्रज्ञ डॉ. एम. एस. स्वामीनाथन यांच्या अध्यक्षतेखालील आयोगाने सुचललेल्या शिफारशीनुसार एकूण खर्च अधिक किमान ५० टक्के नफा या न्यायतत्वाचे कायदेशीर दर ठरविण्यात आला आहे. कायदेशीर किंमत ही फक्त विक्री योग्य कृषी उत्पादनास लागू असणार आहे. जर शेतकरी आपले एकूण उत्पादन कृषी बाजार समितीच्या वा ई-नामच्या माध्यमातून विक्री करणार असतील तर असे एकूण उत्पादन हे विक्री योग्य उत्पादन असणार आहे. कायदेशीर किंमत ही शेतकऱ्यांसाठी उत्पादनाची व उत्पन्नाची एक उत्तेजक प्रेरणा आहे.

ज्या प्रकारे तिमाही ग्राहक किंमत निर्देशांकानुसार महागाईचा दर ठरविला जातो; त्याचप्रकारे पीक हंगामानुसार कृषी उत्पादनाची कायदेशीर किंमत ठरवली जाईल. पीक हंगामानुसार कृषी आदानांच्या (निविष्ठा) बदलत्या किंमतीनुसार कायदेशीर किंमतीत बदल केला जाईल. त्याकरिता कृषी आदानांच्या किंमतीत झालेला बदल (वाढ-घट) याबाबतची माहिती सरकारला देणे कृषी निविष्ठा उत्पादकांवर कायदेशीर व बंधनकारक राहील. त्यासाठी सरकारने कृषी निविष्ठा उत्पादकांसाठी निविष्ठांची किंमतीची माहिती देण्यासाठी कायदा तयार करावा. त्यामुळे सरकारकडे कृषी आदानांच्या बदलत्या किंमतीची माहिती जमा होईल आणि त्याचा वापर कृषी उत्पादनाचा कायदेशीर दर ठरविताना करता येईल. कृषी उत्पादनाचा एकूण खर्च हा समावेशक/ व्यापक खर्चानुसारच (C3) ठरविला जाईल.

कायदेशीर दर/ किंमत = उत्पादनाचा एकूण खर्च (C3)अधिक किमान ५० %नफा

कायदेशीर दराचे हस्तांतरण :

शासनाने विक्रीयोग्य कृषी उत्पादनासाठी जाहीर केलेला कायदेशीर दर व बाजार समितीमधील प्रत्यक्ष किंमत यामध्ये तफावत निर्माण झाल्यास त्या फरकाएवढी रक्कम सरकारकडून प्रत्यक्ष लाभ हस्तांतरणाच्या (DBT) माध्यमाद्वारे शेतकऱ्यांच्या बँक खात्यात जमा करण्यात येईल. त्यासाठी सरकारने नोंदणीकृत शेतकऱ्यांच्या विक्रीयोग्य कृषी उत्पादास बाजार समितीमध्ये मिळालेला प्रत्यक्ष दर यांची ऑनलाइन नोंदणी करण्याची व्यवस्था करावी. त्यामुळे सरकारला प्रत्येक शेतकऱ्यांच्या बँक खात्यात कायदेशीर दराची रक्कम जमा करता येईल व त्याचा प्रत्यक्ष, पारदर्शक व तात्काळ लाभ शेतकऱ्यांना प्राप्त होईल. याशिवाय निर्यात बंदीच्या काळात आंतरराष्ट्रीय बाराजत असणारी सरासरी किंमत ही कायदेशीर किंमत असणार आहे. निर्यात बंदी कृषी उत्पादनांची कायदेशीर किंमत व बाजार समितीमधील प्रत्यक्ष किंमत यामध्ये तफावत निर्माण झाल्यास त्या फरकाएवढी रक्कम सरकारकडून प्रत्यक्ष लाभ हस्तांतरणाच्या माध्यमाद्वारे शेतकऱ्यांच्या बँक खात्यात जमा करण्यात येईल.

विपणन खर्च व हस्तांतरण:

उत्पादनाचा एकूण खर्च म्हणजे फक्त उत्पादन तयार करण्यासाठी येणारा खर्च होय. परंतू शेतकऱ्यांना आपले विक्रीयोग्य कृषी उत्पादन बाजार समितीमध्ये विक्री करण्याआदोगर उत्पादनांची प्रतवारी, वेष्टण व वाहतूक (Grading, Packing Transportation) यासारख्या विपणन बाबींवर खर्च करावाच लागतो. या केलेल्या खर्चाचा समावेश कायदेशीर खर्चामध्ये नाही. प्रत्येक शेतकऱ्यांकडून हा विपणन खर्च केला जातो. ज्यावेळेस शेतकरी आपले उत्पादन बाजार समितीमध्ये विक्रीसाठी घेऊन येतो, त्यावेळेस सरकारने प्रतवारी, वेष्टण व वाहतूकीवर झालेला सरासरी खर्च हा शेतकऱ्यांच्या बँक खात्यात हस्तांतरित करावा.

५) कायदेशीर हक्क व न्यायालयीन संरक्षण :

शेतकरी उत्पन्नवृद्धी व ग्रामीण विकासाची शाश्वत योजनेस शासनाकडून कायदेशीर व वैधानिक दर्जा देण्यात येईल. त्यामुळे शेतकऱ्यांना व सरकारला न्यायिक अधिकार प्राप्त होतील.

- ◆ नोंदणी केलेल्या शेतकऱ्यांच्या विक्रीयोग्य कृषी उत्पादनास 'कायदेशीर दर' देण्याचे वैधानिक बंधन सरकारवरती राहिल. जर शासनाने 'कायदेशीर दर' देण्यात दिरंगाई केल्यास अथवा असमर्थता दर्शविल्यास शेतकरी न्यायालयात आपला हक्क वा न्याय प्राप्त करू शकतो. शिवाय कायदेशीर प्रक्रियेसाठी येणारा खर्चही शेतकरी प्राप्त करू शकतो.
- ◆ जे शेतकरी चुकीची, अयोग्य माहिती वा इतरांनी उत्पादित केलेला कृषी माल स्वतःच्या नावावर नोंदणी करतात; अशा शेतकऱ्यांनावर कायदेशीर कारवाई करण अ याचे अधिकार शासनास प्राप्त होतील. अशा शेतकऱ्यांचे नाव अपात्र यादीत समाविष्ट करणे, वित्तीय दंड वा सर्व योजनांपासून शेतकऱ्यांना अपात्र ठरविण्याचे अधिकार शासनास प्राप्त होतील.

६) कृषी उत्पादन विक्रेत्यांची नोंदणी:

योजनेतील सहभागी शेतकऱ्यांना ज्या प्रकारे आपल्या कृषी उत्पादनाची संपूर्ण नोंदणी करणे अनिवार्य आहे त्याच प्रकारे नोंदणीची अनिवार्यता कृषी उत्पादन विक्रेत्यांवर करण्यात येईल. जे व्यापारी-विक्रेते कृषी बाजार समित्यांकडून विक्रीयोग्य उत्पादन खरेदी करतात अशा विक्रेत्यांना सरकारकडून/ बाजार समितीकडून विक्री परवानासाठी नोंदणी करणे कायदेशीर राहील. सरकारने कृषी विक्रेत्यांना विक्री परवाना/ विक्री नोंदणी क्रमांक द्यावा किंवा त्यांचा आधार क्रमांक हाच नोंदणी क्रमांक करावा. या नोंदणी क्रमांकावरती व्यापारी- विक्रेत्यांनी खरेदी केलेल्या कृषी उत्पादनाची नोंद करण्यात येईल. त्यामुळे विक्रेत्याने कोणते कृषी उत्पादन व किती प्रमाणात विकत घेतले आहे, याची सर्व माहिती सरकारकडे जमा होईल. त्यामुळे बेकायदेशीर कृषी उत्पादनांच्या साठवणुकीवर आळा घालता येईल व त्यातून कृत्रिम भाववाढीवर नियंत्रण ठेवता येईल. शिवाय सरकार बेकायदेशीर साठेबाजी करणाऱ्या विक्रेते-व्यापऱ्यांचा विक्री नोंदणी क्रमांकानुसार शोध घेऊ शकते आणि त्यांचा विक्री परवाना कायमचा रद्द करू शकते.

७) कृषी दर ॲप :

शेतकऱ्यांना त्याच्या कृषी मालास योग्य, वाजवी व किफायतशीर दर न मिळण्याचे प्रमुख कारण म्हणजे व्यापारी-दलाल-विक्रेते यांनी निर्माण केलेली समांतर बाजार व्यवस्था होय. या व्यवस्थेमध्ये शेतकऱ्यांचे कृषी उत्पादन कवडी मोल किंमतीने खरेदी केले जाते आणि ग्राहकांना उच्च दराने विक्री केले जाते. शिवाय देशांतर्गत एकूण कृषी उत्पादन कमी असताना व निर्यात बंदीच्या काळात नफा केंद्रीत व्यापारी-विक्रेते कृषी उत्पादनांची कृत्रिम भाववाढ निर्माण करून कृषी उत्पादन ग्राहकांना अवाढव्य किंमतींनी विकतात. यावर कायम स्वरूपी मात करण्यासाठी बाजार समितीमधील कृषी उत्पादनांच्या प्रतवारीनुसार दैनंदिन दर जाहीर करणे हा महत्वाचा उपाय ठरतो.

सरकारने प्रत्येक कृषी बाजार समित्यांवर कृषी उत्पादनाचा दैनंदिन दर झमोबाइल ॲप्लीकेशनफंद्वारे जाहीर करण्याचे बंधन घालावे. त्यासाठी प्रत्येक कृषी बाजार समित्यांनी स्वतंत्र मोबाइल ॲप्लीकेशन तयार करावे. हेमोबाइल ॲप्लीकेशनग्राहक स्वतःच्या मोबाइलमध्ये वापरू शकतील. कृषी बाजार समितीमार्फत विक्री केलेल्या कृषी उत्पादनाचा दैनंदिन दर आणि प्रत्यक्ष बाजारात मिळणारा मिळणारा दर यांची तुलना ग्राहकांनामोबाइल ॲप्लीकेशनद्वारे करता येईल. यामुळे कृषी उत्पादनाबाबत ग्राहकांची बाजारात होणारी आर्थिक लुट व पिळवणूक यास कायमचा प्रतिबंध घालता येईल.

८) कुपोषणमुक्त भारत:

जागतिक पातळीवर अन्नसुरक्षा व उच्च राहणीमान याबाबतचे शाश्वत विकासाचे ध्येय ठरविण्यात आलेले आहे. नॅशनल फॅमिली हेल्थ सर्वे ४ नुसार, भारताच्या एकूण लोकसंख्येमध्ये १४.५ टक्के लोकसंख्या कुपोषित आहेत. म्हणजेच प्रति ७ व्यक्तींमध्ये १ व्यक्तीला सकस व पौष्टिक अन्न पुरेशा प्रमाणात उपलब्ध होत नाही. शिवाय पाच वर्षाखालील ३८.४ टक्के बालकांमध्ये पोषण घटकांची कमतरता आहे. या योजनेच्या माध्यमातून सरकारकडे

पीक लागवड व एकूण उत्पादन याबाबतची अचूक माहिती मिळाल्यामुळे सरकारला सार्वजनिक वितरण व्यवस्था अधिक पारदर्शक, सक्षम व जलद करता येईल. सर्वसामान्य जनतेला पौष्टिक अन्नधान्य पुरेशा प्रमाणात व वेळेवर देता येईल. त्यामुळे 'कुपोषण मुक्त भारत' निर्माण करता येणे शक्य होईल.

९) शेतकरी उत्पन्न वाढीचे सहाय्यक मार्ग:

देशातील शेतकऱ्यांचे उत्पन्न दुप्पट करण्याचे उद्दिष्ट सरकारने नुकतेच जाहीर केले आहे. देशाच्या कृषी विकासाचा दर व सद्यस्थिती विचारात घेतली असता, फक्त शेती क्षेत्रातून शेतकऱ्यांचे उत्पन्न दुप्पट होणार नाही. त्यासाठी कृषी आधारित वा कृषीपूरक व्यवसाय व उद्योग स्थापन करावे लागतील किंवा आहे त्या व्यवसायात पारदर्शकता निर्माण करून शेतकऱ्यांना पूर्ण कार्यक्षमतेने त्यामध्ये सहभागी होण्यासाठी प्रवृत्त करावे लागेल. देशातील सर्व शेतकऱ्यांना कृषी व कृषी आधारित व्यवसायांमध्ये सामावून घेणारे व शेतकऱ्यांच्या उत्पन्नात वाढ घडवून आणणारे पुढील सहाय्यक आधारभूत मार्ग आहेत.

i) नैसर्गिक/सॅद्रिय शेती:

नैसर्गिक पद्धतीने अन्नद्रव्यांनी समृद्ध केलेल्या जमिनीत जेव्हा पिके घेतली जातात तेव्हा त्यास नैसर्गिक/सॅद्रिय शेती असे म्हटले जाते. सॅद्रिय शेती ही एक जीवनपद्धती आहे. केवळ पिकांचे उत्पन्न वाढविण्यासाठी ही संकल्पना मर्यादित नाही. (१) सॅद्रिय शेतीमुळे जमिनीचे व प्रत्येक सजीवांचे आरोग्य व त्यांच्या जीवनमानाचे संतुलन राखले जाते. (२) सॅद्रिय शेतीची कार्यपद्धती ही पर्यावरणीय पद्धत व नैसर्गिक जीवनचक्र पद्धतीवर आधारित असून पर्यावरणास पोषक आहे. (३) वर्तमानकालीन मानवी आरोग्य व पर्यावरणाचे रक्षण करण्याबरोबर भविष्यकालीन पिढीच्या जीवनमानाची व आरोग्याची शाश्वती सॅद्रिय शेतीतून प्राप्त होते. शेतकऱ्यांच्या उत्पन्नात वाढ घडवून आणण्यासाठी कृषी उत्पादकतेत वाढ व उत्पादन खर्चात घट होणे आवश्यक व अनिवार्य होते. ही दोन्ही उद्दिष्टे सॅद्रिय शेतीमधून पूर्ण होतात.

भारतातील सॅद्रिय शेती व शेतकरी विखुरलेला आहे. सॅद्रिय उत्पादनावर प्रक्रिया करणारे उद्योग पुरेशा प्रमाणात उपलब्ध नाहीत. सॅद्रिय बाजारपेठांचा अभाव, ग्राहकांमध्ये कमी जागरूकता, उत्पादक व ग्राहकांमध्ये समन्वयाचा अभाव यासारखे प्रश्न आजही सुटलेले नाहीत. सॅद्रिय शेतीच्या वृद्धी व विकासासाठी सॅद्रिय शेतीबद्दल शेतकरी व उत्पादकांमध्ये असणार्या गैरसमजुती दूर केल्या पाहिजेत. प्रमाणीकरणाच्या मानकांचे विश्लेषण शास्त्रीय व सोप्या भाषेत शेतकऱ्यांसाठी उपलब्ध करून दिले पाहिजे. सॅद्रिय शेतीच्या विकासासाठी पीकनिहाय तंत्रज्ञान प्रायोगिक तत्त्वावर विकसित करणे, शेतकऱ्यांना सॅद्रिय शेती प्रशिक्षणाची सोय, सॅद्रिय शेतीमाल विक्रीसाठी सुनियंत्रित यंत्रणा व निर्यातक्षम सॅद्रिय मालाला बाजारपेठ उपलब्ध करून देणे यासारख्या उपायोजना करणे अत्यावश्यक आहे.

ii) दुग्ध व्यवसाय :

कृषी व्यवसायाला सर्वाधिक उपयुक्त असलेला पूरक उद्योग किंवा जोडधंदा म्हणजेच दुग्ध व्यवसाय

होय. भारतातील दुग्ध व्यवसायाचा विचार केला असता असे दिसून येते की, शेतकऱ्यांना प्रति एक लिटर दुधापासून मिळणारी किंमत व ग्राहकांनी दूध खरेदी करण्यासाठी दिलेली किंमत यामध्ये सर्वाधिक तफावत आहे. त्यामुळे सरकारने कायदा करून शेतकऱ्यांना त्यांच्या दुधाचा योग्य मोबदला देण्याचे धोरण राबवावे. शेतकऱ्यांनी दूध संकलन केंद्रात जमा केलेल्या दुधातील पोषक द्रव्य व त्याची पातळी आणि ग्राहकांनी खरेदी केलेल्या दुधातील पोषक द्रव्य व त्याची पातळी यामध्येही प्रचंड तफावत आहे. म्हणजेच शेतकऱ्यांनी जमा केलेल्या दुधापासून जे काही दुग्धजन्य उपपदार्थ (दही, ताक, लस्सी, श्रीखंड, पनीर, आइसक्रीम, चॉकलेट व इतर पदार्थ) तयार केले जातात. त्यांचा मोबदला शेतकऱ्यांना मिळत नाही. त्यासाठी सरकारने दुग्धजन्य उपपदार्थ पासून मिळणाऱ्या आर्थिक मिळकतीचा हक्क दूध उत्पादक शेतकऱ्यांना उपलब्ध करावा.

शेतकऱ्यांना दुग्ध व्यवसायातून अत्यल्प उत्पन्न मिळण्याचे प्रमुख कारण म्हणजे दुधातील भेसळ होय. आजही भारतात भेसळयुक्त दुधाचा महापूर सुरूच आहे. प्रत्यक्ष उत्पादनापेक्षा अधिकचे दूध भेसळ रूपाने बाजारात उपलब्ध आहे. शिवाय काही समाज कंटकांनी रासायनिक प्रक्रिया केलेले नकली दूध निर्माण करण्याचा उद्योगच चालू केला आहे. भेसळयुक्त व नकली दुधाच्या उत्पादनामुळे शेतकऱ्यांना त्यांच्या शुद्ध दुधास योग्य किंमत मिळण्यात अडचण निर्माण झाली आहे. त्यामुळे भेसळयुक्त व नकली दूध निर्माण करून समस्त नागरिकांच्या आरोग्याशी खेळणाऱ्या गुन्हेगारांवर सरकारने कठोरातील कठोर कारवाई करावी. यासाठी दूध भेसळ हा 'अजामीन पात्र' गुन्हा म्हणून लागू करावा.

iii) मत्स्य शेती:

शेती पूरक व्यवसायाच्या व अन्न सुरक्षेच्या दृष्टीने मत्स्य उत्पादन हा महत्वाचा घटक आहे. मत्स्य शेती म्हणजे कृत्रिमरीत्या नैसर्गिक वातावरणात केली गेलीली माशांची पैदास होय. मागील काही दशकापासून समुद्रातील मत्स्य उत्पादनाच्या बरोबरीने गोड्या पाण्यातील मत्स्य शेती, शेततळ्यातील मत्स्य शेती मोठ्या प्रमाणात सुरू झाली आहे. शेततळ्यातील मत्स्य शेती हा शेतकऱ्यांना शाश्वत उत्पन्न प्राप्त करून देणारा व्यवसाय आहे. अल्प पर्जन्यवृष्टी/दुष्काळी भागातील शेतकऱ्यांसाठी तो एक वरदानच ठरणार आहे. कारण शेततळ्यातील मत्स्य व्यवसाय हा शेतकऱ्यांना दुहेरी लाभ मिळवून देतो. १) पीक उत्पादनासाठी पाण्याची उपलब्धता. २) मत्स्य पालन. त्यामुळे शेततळ्यातील मत्स्य शेतीच्या विकासासाठी सरकारने सर्वोत्तमरी मदत करावी.

iv) मधुमक्षिका पालन :

मधुमक्षिका पालन हा शेतीवर आधारित एक महत्वाचा उपक्रम आहे. मधुमक्षिकांच्या परागीकरण कार्यामुळे शेती क्षेत्रात विशेष करून फुलोरा वनस्पती, फळबाग व तेलबियांचे पीक उत्पादनात सुमारे ३० ते ५० टक्के वाढ होते. मधुमक्षिकांमुळे पीक उत्पादनात वाढ आणि मध व उपपदार्थ पासून आर्थिक फायदा होत असल्याने मधुमक्षिका पालन हा शाश्वत उत्पन्न प्राप्त करून देणारा उद्योग म्हणून उदयास येत आहे. मध हे एक अत्यंत पौष्टिक अन्न व औषध असल्यामुळे त्याची बाजारातील मागणी

दिवसेंदिवस वाढत आहे. इस्राईल या देशातील सरकारने प्रत्येक शेतकऱ्याने शेतात मधुमक्षिका पालन केले पाहिजे, असा कायदा केला आहे. त्याच प्रकारच्या कायद्याची गरज भारतातील कृषी क्षेत्रासाठी आहे.

वरील सहाय्यक आधारभूत मार्गाप्रमाणेच कुक्कुट पालन, शेळी पालन आणि रेशीम उद्योग याद्वारे शेतकऱ्यांच्या उत्पन्नात वाढ करता येईल. तत्पूर्वी देशात असणारे शेतीविषयक कायदे वा अधिनियम (जीवनावश्यक वस्तु कायदा) की जे कालबाह्य झालेले आहेत, शेतकऱ्यांच्या आर्थिक पिळवणूकीस व विकासातील अडथळे ठरत आहेत, असे सर्व कायदे सरकारने रद्द करावेत.

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COMMUNICATION SKILLS AND MODERN FORMS OF COMMUNICATION: AN OVERVIEW

Dr. Ravindra Basawani Teli

Abstract:

Wonder of wonders is a man and he has created an amazing world of communication for expressing his or her feelings to others. Today's mantra is "Communicate or Perish". Information, Communication and Technology (ICT) has whirled in all walks of life. ICT has become a life blood of any business. Researches in the area have shown that 70% to 80% of total working time of professionals is spent on a communication. Communication is considered to be vital in the motivation of employees. In this paper the researcher has pointed out the whole gamut of the business communication covering – meaning, concept, importance, process of communication, classification, principles of communication, and barriers of business communication. We are able to communicate any information-voice data or image to anyone anywhere any time. All with one hand held device, the world will shrink but our horizons will expand. In the near future it will be the computer world with knowledgeable robots called as "know bots" which will work for a man in finding data and applying artificial intelligence. The paper further highlights on important of communication skills and gives inventory of modern communication skills.

Keywords : Grapevine, ICT, Know-bots, SIM.

1) Introduction :

Communication skill is needed in almost every sphere of life which connects all living beings. In fact, the progress of human kind from Stone Age to Space Age has been possible because of hundreds of inventions and effective communication. It is the life blood of every individual and organization. Education, Innovation and Communication have become the currency of the 21st century. Communication means any behavior which results in an exchange of meaning. Man is a social animal who has thoughts, emotions, feelings etc. There is a constant urge to express desire. It is found that, most of our waking hours, we spend in communication – i.e. we spend 45% of our time in listening, about 30% in speaking, 15% in reading and 10% in writing. Wonder of wonders is a man

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and he has created amazing world of computer. Now-a-days computers and networking are used to generate information, data transfer, electronic mail, reservations of transport facilities, entertainment, desktop publishing, database management, etc. It can be said that “Learn Information Communication and Technology (ICT) today or face intellectual death tomorrow”.

ICT has whirled its way into every aspect of daily life in one way or the other. Currently, 3.5% of India's workforce is equipped with formal skills training, whereas the figure stands at 96% for South Korea, 74% for Germany, 68% for UK, 52% for USA and 46% for China. India has workforce of 48.74 crore people, out of which more than half, i.e. 51% is in non-agriculture sector. 75% of the Indian Companies are struggling to find technically equipped workforce. In addition to constantly upgrading their present one and acquiring new skills, Indian youth will have to be able to work in different languages, cultures and climates. Hon. Prime Minister Narendra Modi launched four landmark initiatives of the Ministry of skill development and entrepreneurship. The Government has earmarked a budget of Rs. 1500 crore to spend on Skill India Mission (SIM) this year only. In next five years, the Government plans to invest Rs. 1 lakh crore in skilling India. There are two basic forms of communication 1) Non-verbal communication and 2) Verbal communication. In modern days, with the advent of information technology the world has shrunk into a global village and it has brought revolutionary changes in the field of communication. Modern technology has created different forms and variety of techniques of modern communication, viz., telecommunication network, internet, electronic device, mobile etc. The present study attempts to gauge into communication- meaning, process, forms, principles, barriers, skills and different forms of modern communication.

2) Meaning, Concept And Importance Of Communication :

The term communication is derived from the Latin word ‘communis’, which means ‘common’. Thus communication means rendering/sharing common ideas values, opinions, information, facts, emotions, understanding etc. The Latin term ‘communicare’ and ‘communico’ means to share or participate (Jain A.K. et.al, 2008). Communication is thus essentially a social affair. It is imparting information or knowledge.

According to Allen, “Communication is the sum of all the things that one person does, when he wants to create understanding in the mind of others. It is a bridge of meaning. It involves a systematic and continuous process of telling, listening and understanding”, (Herekar 2007)

William Haney has said, “Communication is eminently essential in business, in

government, military organizations, hospitals, schools, communities, homes- anywhere people deal with one another. It is difficult in fact, to imagine any kind of interpersonal activity which doesn't depend on communication."

Communication is an integral part of any business organization. Information is the lifeblood of a business. Business executives must have good correspondence skills. Today, when competition is rising business concerns require information about prices, similar products of various companies, technology available, rules and regulations of the government, finance etc. On the basis of this information, the business organization decides the production and marketing strategy so as to adjust itself with the changing business environment. It is only because of communication that an organization becomes an open system when it interacts with its environment.

In the world of business, as opined by Marion Harper –“to manage a business is to manage information”. Many Business to Business (B2B) and Customer to Customer (C2C) organizations are facing the problem of a lack of skill-sets. Not having the right people was road block in improving business. It is an interesting thing that when a person wants to express some idea to other person, he/she uses marketing concept. Communication has a vital role in every business organization and even in every walk of life because today no organization can fail due to lack of capital. If it fails, it would be due to lack of proper understanding of the things and poor management. In today's world, where the rule follows that 'Survival of the fittest', everyone should understand new ways and techniques and skills of communication to become successful. Communication is important in all job responsibilities. Effective communication is a valuable asset in personal and commercial life.

In modern professional organizations a great deal of importance is therefore attached to devising and maintaining an efficient system of communication. It enables the gathering and marshalling of data which is necessary for decision making. Researches in the area have shown that 70% to 80% of total working time of a professional is spent on a communication. In India, other languages are also used for this purpose, out of the total time spent on communication, 64.14% is on communicating in English as against 27.22% in Hindi and 8.64% in regional languages. Thus the role of English in professional world is still dominant (Krishna Mohan and Meera Banerji 1990)

Philip Crosby, the quality Guru, has listed important features for the person who can succeed in the race in the 21st century. The key characteristics which would help present professionals to become tomorrow's leaders are-

Strategic awareness, adaptability in new structure and work culture, ability to work in international team, think global and act local, language skills, basic understanding of financial viability, high task orientation, human relation skills and self-reliance. Personality Development is the improvement of behavioral traits such as communication skills, interpersonal relationships, attitude towards life and restoring our ethics. Character is the prerequisite to achieving a better individual personality. Sweetly spoken words have their own advantage and it is a major component in developing our personality. Society gives respect to a person who has control over his speech and everybody wants to converse with a person who is sweet spoken. That is why we should always try and inculcate sweet and soft spoken words in our speech. Man is considered superior and intelligent as compared to rest of the creatures. This is mainly because man is sentimental, and he has the capacity to express himself. The man who knows the interest of others and knows what type of conversation would please them and also knows to talk about appropriate things at appropriate time, certainly impresses everyone. Now-a-days the subject 'Impression Management' has been developed covering all the aspects of communication and personality development.

According to Peter Druker, every employee is a knowledge worker and sharing of knowledge for betterment of the performance is essential. Due to global competition, organizational structures have become flat. Number of the organizations has virtual teams and quality circles, which need free flow of information. The success of any organization depends on its employees, who must feel that they belong to the organization. Communication is considered to be vital in the motivation of employees. The organization too must make the employees feel that they are wanted and that it cares for their well-being. How is this done? This is done by communication. If communication is timely and effective, it will improve the morale of employees and contribute to the general efficiency and success of the firm. When superiors provide accurate and up-to-date information to their subordinates, it will prevent rumors and increase confidence.

3) Communication Process

Basically for completing the process of communication, at least two parties are necessary- one is the sender of information and other is the receiver. It involves selecting the method of communication and piece of information or message. After the message is encoded into words/symbols, it is transmitted by the sender through medium/channel of communication like-face to face conversation, letters, telephone, twitter, face book, Whats App, different applications in mobile etc. Fourth step in communication is receiving message to the receiver. Then receiver decodes the message, so that it is understood. Decoding is exactly

opposite of encoding. It is drawing out the meaning from words/symbols/write-ups/code etc. Receiver interprets the message into meaningful information. After understanding the message, the receiver gets an opportunity to accept or reject it. Communication becomes meaningful and complete when it is understood in correct sense and feedback is given to sender from receiver.

4) Classification Of Communication

There are as many different forms of communication as there are needs in human day-to-day interactions. Generally speaking, communication is the responsibility of every single member of an organization. It is incorrect to suppose it is the responsibility of the top manager to communicate and of all others to receive. It is also not correct to believe that communication originates from the subordinates, and the superiors only listen. Communication, in fact originates from everyone in the organization and everyone is a receiver of information. The essence of a good system of communication is that everyone in the organization knows- When to communicate; What to communicate; To whom; How; What are the means of communication; What are the various techniques of communication; Formal channels for transforming information; Informal channels for communication.

Some of the major forms of communication are set out under-

- a) **Formal Communication-** It is an officially created communication between the various positions in the organizational structure. George Terry has given 18 channels of formal communication: Special interviews, Telephone calls, Departmental meetings, Mass meetings, Conferences, Company newspapers, Company magazines, Company hand books, Information booklets on products selling and display materials, Employee benefit publication, pension plans, insurance and savings, Special purpose publications-executive messages and company policies, Annual report to employees, Supervisory publications, Direct mail letters and Film strips, slides and motion pictures.
- b) **Informal communication/ Grapevine:** It is not created by any official reason. It is concerned with social relationship among the members of the organization. It is quick, direct and spontaneous. Grapevines may have official recognition or management may discourage such communications. It may have constructive or destructive effects on the organization. A good manager must have a skill to utilize grapevine for the purpose of effective communication. It must be used carefully because the information is unofficial. There are four types of informal

- communication-1) Single strand in which an individual communicates with other individuals in a sequence. 2) Gossip, where individual communicates other individuals on a non-selective basis. 3) Probability, where a individual communicates with other individuals on the basis of law of probability and 4) Cluster network, in which the individual communicates with only those persons whom he trusts.
- c) Downward communication- In this communication information flows from the superiors to subordinates. It includes communication regarding the policies, procedures, programmes, orders, instructions, reports to the subordinates.
 - d) Upward communication- In this communication information flows from subordinates to superiors. It includes reports regarding progress of performance, suggestions, opinions of subordinates, but certain information is filtered because it reaches to the top management.
 - e) Lateral/horizontal communication- The communication between persons of the same management level is held to effect coordination and speed in the function, it removes misunderstanding.
 - f) Oral/Verbal communication- It is face to face communication between one person and another person and between individual and a group. It can be either formal or informal, it has immediate response and the effect can be noted. Also it gives a feeling of importance and personal touch. It includes telephonic conversation, meetings, speeches, interviews, group discussion, seminars, symposium, conferences, conventions etc. The visual aids are also used like maps, pictures, charts, slides, overhead projectors, blackboard, movie projector, audio, video tape etc. for effective communication.
 - g) Written communication- It includes all paper work related communications like agreements, proposals, manuals, reports, statements etc. It is more carefully thought of and better understood by the people. They are useful when law requires retention of documents. This communication takes a long period to get the feedback.
 - h) Non Verbal communication- It refers to all external stimuli other than spoken or written words. It includes Paralinguistic/ gestures, body motion, eye contact, space distancing, social distance, characteristics of appearance, change of voice, use of space and distancing, silence etc. It is believed that a charming person has a pleasant voice, a dynamic person has vibrant voice and a confident

person has an assured voice. As per Birdwhistell 35% of the messages are carried verbally and 65% are conveyed non-verbally. The main elements of non-verbal communication are- personal appearance, posture, gestures, facial expressions, eye contact, the distance between speaker and listener, tone of speaker, pauses and emotional contents of the communication, display of material things, use of signals, kinesics touch etc.

- i) Other Forms- Intrapersonal (It refers to how people communicate with themselves internally. As one learns to understand oneself, he begins to understand others, which enhances emotional intelligence, ability to adapt change and facilitates self-development.) Interpersonal (It is between two and more persons. It is analyzed using tools like transactional analysis and Johari window.), Mass Communication, Aural communication in which the auditory sensory system is used like alarm bell, warning beep, Centralized, Decentralized, Incidental/unintentional, Instrumental/ intentional, etc.

5) Principles Of Effective Communication

For effective communication one must follow the following principles-

- 1) Clarity- The sender must ensure that the message is clear. Use a language or an expression commonly understood especially by receiver and avoid jargon.
- 2) Attention- Give undivided attention to all incoming messages (Homai Pradhan et.al, 1999). The information communication technology (ICT) culture today has created a flood of information therefore nothing can be understood without full attention.
- 3) Adequate Coverage- information should be sent to all related parties.
- 4) Timing- Avoid eleventh hour communication. It should be at proper time.
- 5) Integrity- There should not be a credibility gap in communicators. The superiors should have faith in subordinates and the subordinates should possess integrity in implementing the message.
- 6) Use of informal information- A good manager must recognize the existence of informal groups and use their information carefully.
- 7) Credibility- As the actions speak louder than the speech, credibility is exhibited by action as what has been said.
- 8) Courtesy- It is defined as being polite, considerable, helpful, obliging, friendly and respectful in manners and action.

- 9) Completeness- The information should be complete in all respects. But convey only relevant information and avoid repetition. Further 'You' approach is must to address the needs of the receiver.
- 10) Implementation- Communication seeks a change so, everyone must correctly react to any message or communication. Tremendous savings can be affected in any organization if communications and their implementation are correctly done in the light of objectives of organization (Homai Pradhan 1999).

6) Barriers To Communication

Communication breakdown is one of the major problems. There are number of barriers to communication viz., noise, network, breakdown, geographical distance, information overload, inadequate information, last minute or poor timing communication, ineffective organizational structure, language/semantic barriers, deliberate ignoring, emotional barriers, lack of attention, selective perception, poor retention, senders credibility, cultural barriers etc.

Loss of transmission (while communicating through levels of management), failure to communicate by superior to subordinate due to unfavourable attitude, sometimes, subordinates do not communicate certain information due to lack of motivation or fear of adverse effect (Rao P.B. 2011).

These obstacles must be eliminated as much as possible so that the communication will be effective.

7) Important Communication Skills

Communication Skills may be defined as the ability to employ language in ways that will most efficiently and effectively transfer ideas from one person to another.

For effective communication, following communication skills should be acquired-

- a) Letter writing- To be successful in business it is necessary to recognize the importance of letter writing and to give consideration to the art of letter writing. This is the most common form of communication. Letters are the language of business. A good letter is one that is easy to read, clear and which expresses its objectives with simplicity and brevity. The qualities which are essential for a good letter are collectively called Cs of communication. They are Correctness, Clarity, Conciseness, Courtesy, Completeness, Compactness, Consideration, Confidence etc.

- b) **Listening-** All skills of communication must be mastered by anyone who wants to have a successful career; among these skills listening is the most important of all. Any interaction with others whether at home, with friends, at college or at work depends for success on your ability to listen. The higher your position in the organization, the greater is your listening responsibility. Listening is the best communication. Based on a survey covering a million workers it appears that companies which encourage upward communication and listen to their employees perform better than other companies (Rao Nageshwar and Rajendra p. Das 2006)
- c) **Dialogue-** It is conversation between two or more persons. It also used to present character in a play. In business it is needed to exchange ideas and opinions, you cannot control what other people talk but you can control what you yourself do.
- d) **Summarization-** A summary or precise is condensed version usually one third of the length of the original piece of writing. It is a test of ability to understand what you read and express yourself concisely. These two skills are essential for work like email, minutes, advertisement, synopsis, abstract etc. Summarizing involves reading skills, understanding, judgment in selecting important points and ability to write in simple and clear style for easy reading.
- e) **Report Writing-** It is logical presentation of facts and information. They are feedback to managers. There are Routine and Special Reports.
- f) **Interview-** It is a formal meeting in which a person face to face communicates to get information which is needed from the other person.
- g) **Other Skills-** To become a successful communicator one should become expert in other different communication skills like how to read, (Becoming a good reader needs one should be active and have huge word power/ vocabulary and art of quick remembering), People who read are the people lead (E. H. McGrath S.J. 2003), how to write, how to learn, how to speak, how to run a meeting, how to teach and train, how to manage, time management, stress management, proxemics / ways of relating to space/ space language, human relations skills, negotiations, presentations, etc.

8) Modern Forms Of Communication

Telecommunication Network

It includes- telephone, internet and broadcasting i.e. TV and Radio. India ranks third in telecommunication network. There were 1.053 billion telephone connections in Aug.2016. More than 1.00 billion people use mobile phones and 462.12 million people use internet connections (Jan.2016). There were 869 telephone channels and 345 Radio stations (Mar. 2016), (Competition Success Review 2017)

Telephone

Next to the postal system the telephone remained the largest organized interpersonal communication network for centuries. In a way, it can be called an extension of the oral communication system. Now with internet, virtually linking all nations the telephone has become the largest single integrated communication system ever devised so far. The e-mail, the voice mail are only spin-offs of the telephone system (Andal 2005).

Alexander Graham Bell invented telephone, which has almost all the advantages of face-to-face oral communication, except that one cannot see the facial expression and gestures of the other party. This is overcome by new technology. When used effectively, telephone is the most efficient tool of modern communication.

Internet

In late 1980's world realized the commercial potential of the World Wide Web (www) which proved to be a great revolution in communication. The internet helps the users in 3 ways- a) to get information b) to supply information and 3) to compile information. Any business organization /individual can create website and could be updated time to time the information. It provides e-mail facility through which electronic transfer of mail, documents, data and also money can be made. Different computers can talk to each other for quick communication.

Today, newspapers and research articles are read by people on day-to-day basis save for future reference. One can get different facilities through E-banking, E-learning, E-governance, E-commerce, E-banking, E-marketing, E-manufacturing etc. Taxpayers using E-return facility get refund of tax within a month as against filing, returns through paper needs to wait for refund for many years. Now-a-days mobile phone also gives a facility of using email, internet and modern services.

Internet provides other facilities such as- person to person network, wireless fidelity,

(Wi-Fi), Portable Document Format (PDF) in which the message cannot be altered, blogs, twitters, Moving Picture (MP-3) search engines, Wikipedia, chat room, face book, whatsApp, multimedia etc.

Cellular phones/mobile phones

Cellular technology or mobile phones are being used to contact the external world. The services of mobile companies have increased the speed of communication and within less time and cost. The facility of short messaging service (SMS) is the cheapest way of communicating messages. SMS is used to receive orders, to get quick replies, to get quick decisions etc.

Facsimiles (Fax)

It is an electronic device used for transmission of message in its original form over any distance within few minutes. Fax machine is normally connected to telephone lines. With the advent of internet this device has little use.

Teleconferencing

On T.V. we often see the teleconferencing where a panel of experts in the studio room is connected to different TV news-reporters across the world and they interact each other. In modern times, MNCs have their teleconferencing communication across the business units situated at different parts of the world. It is a form of communication which is proved for mutual consultation and quick decision-making.

Telephone Answering Machine

These are attached to telephone to pass on pre-recorded standard messages to the telephone callers. They are used in telephone exchanges, railways, airways booking offices banks etc.

9) Conclusion

Good communication is effective and it promotes trust among the communicators. Information handling and its transfer across great distances has revolutionized the style of work, leisure and life of the people through the years. The time taken to send a message has reduced from number of days to nanoseconds. Computers are undoubtedly changing our life style and work culture. Communication skills are rated as a critical factor for employability and careers. Communication gap will ruin the industry. We all need to learn communication skills, understand different forms of communication, different languages, computerization and networking not as a fashion but as a genuine need of an

hour. Management Information System (MIS) is useful for managerial decision making and doing things right at first time and every time. We are able to communicate any information-voice data or image to anyone anywhere any time. All with one hand held device, the world will shrink but our horizons will expand. In the near future it will be the computer world with knowledge able robots called as “know bots” which will work for a man in finding data and applying artificial intelligence.

Modern forms of communication have their limitations too. Internet and other modern channels are dependent on human beings for getting instructions. There is scope for cyber- crimes/frauds. A harmful implication of latest techniques is the loss of personal touch. However, modern communication tools and skills play an important role in all walks of human life as well as organizational life.

We must get rid of the inferiority complex and defeat the defeatist spirit that plagues us. We must celebrate our success and encourage the talented to work for missions which will bring glory to India. Due to face book, Arkut, Twitter, U Tube, M phone, Internet, Gaming, Virtual reality artificial intelligence etc. future generation will be knowledge able and competent.

Today, global managers have to know communication skills, various languages spoken in different countries and manage diverse workers with different culture and traditions. It is equally important that the boss creates an atmosphere that encourages feedback from the employees. Failing to hear what the employees are saying indicates gross negligence on the part of the manager. Half of the job is done if the manager comes across as a friend rather than a boss. Effective communication requires right time, right place, right rapport, right language, right strategy, right and positive attitude and right skills. In real life, the modern tools and skills of communication should be used carefully to avoid cyber crimes and also cheating from anyone.

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4

महात्मा जोतिबा फुले यांचे जल धोरण

S. M. Kubal

प्रस्तावना

थोर समाजसुधारक म्हणून महात्मा फुले ओळखले जातात. स्पृश्य-अस्पृश्य, महिला आणि शेतकरी यांच्यासाठी त्यांनी आयुष्यभर कार्य केले. उक्ती तशी कृती करणारा समाजसुधारक म्हणून त्यांचा आदर करतात. शेतकऱ्यांच्या दारिद्र्याच्या समस्येसाठी जी अनेक कार्य त्यांनी मांडली आहेत. त्यात पाणी या समस्येचा महात्मा फुले इतका अभ्यास या आधी कोणीच केलेला आढून येत नाही. त्यांनी ते शेतकऱ्यांचा आसूड, गुलामगिरी यासारख्या ग्रंथांतून त्यांनी शेतकऱ्यांचे चित्र मांडले आहे. भारतामध्ये पाणी आणि शेतीचा शास्त्रशुद्ध अभ्यास करून त्याविषय प्रश्नांची मांडणी करून महात्मा फुले यांनी त्या प्रश्नांचे उपाय मांडले आहेत. देशाच्या अर्थव्यवस्थेचा शेती हा मुख्य स्रोत असून बहुतांशी शेती ही पावसाच्या पाण्यावर अवलंबून असून तसेच सिंचनाचा अभाव यामुळे शेती उत्पादनात घट होत असल्याने भारतीय अर्थव्यवस्था ही कमजोर झाल्याचे त्यांनी मांडले आहे. फुले हे स्वतः शेतकरी असल्यामुळे या सर्व परिस्थितीची जाणीव होती. शेतीच्या कमी उत्पादन क्षमतेचा त्यांनी अभ्यास केला आणि त्यांनी जल धोरण तयार केले. त्यांच्या मते शेतीच्या उत्पादकता वाढविण्यासाठी सिंचन वाढवावे आणि पाण्याचा चांगल्या प्रमाणात वापर झाला पाहिजे.

संशोधनाचा उद्देश

१. महात्मा फुले यांचा शेतीविषयक व जल धोरणाविषयी विचारांचा आढावा घेणे.
२. भारतीय दुष्काळी परिस्थितीमध्ये महात्मा फुले यांचे जल धोरणाविषयीचा अभ्यास करणे.

गृहितक

महात्मा फुले यांचे जलधोरण आजही देशाला मार्गदर्शक ठरतात.

संशोधन प्रणाली

प्रस्तुत संशोधनासाठी दुय्यम स्रोतांमार्फत माहितीचे संकलन करून दैनिक वर्तमानपत्रे, इंटरनेवरील लेखांच्या आधारे सदर शोधनिबंध सादर केला आहे.

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जल स्रोत

शेतीसाठी लागणारे पाण्याचा स्रोत पावसाचे पाणी व भूजल या दोन मार्गाने मिळते.

महात्मा फुले यांनी शेतीसाठी आवश्यक असणाऱ्या पाण्याबाबत विचार करून पाण्याचे संवर्धन, पाण्याचे योग्य वाटप व पाण्याचे नियोजन या त्रिसुत्राचा विचार करून आपले विचार मांडून मार्ग सुचविले.

१. पावसाचे पाणी

भारतात तसेच महाराष्ट्रात पावसाचे प्रमाण हे असमान आहे. महाराष्ट्रात मुख्यते जून ते सप्टेंबर या कालावधीत दक्षिण-पश्चिम मन्सूनमुळे पाऊस होतो. सरसरी हे पावसाचे प्रमाण ७० टक्केच्या पुढे असते. पडणारे पावसाचे नदी नाल्यातून वाहून जाण्याचे प्रमाण हे जास्त असल्याने फुलेंनी पाणी साठविण्याचे मार्ग सुचविले आहे.

१. धरणे/बांध २. कालवे

१. धरणे/बांध

फुल्यांनी मोठी धरणे न बांधता छोटी धरणे व लहान बांध बांधून पाणी जिरवण्यावर व पाण्याचा संचय करण्यावर भर दिला आहे. त्यांनी दरी-डोंगरामध्ये बांध व टाक्या बांधून नैसर्गिक तलाव व जमिनीत पाणी जिरवण्यासाठी बंधारे बांधण्याचे सुचविले आहे ज्याने जमिनीची धूप थांबेल. जमिनीत पाणी जिरवल्यामुळे विहीरीचा पाणी साठा वाढेल. त्यामुळे विहीर, नदीना उन्हाळ्यातील पाणी उपलब्ध होईल. तसेच या प्रणालीसाठी खर्चही कमी प्रमाणात आल्याने सरकारचा व शेतकऱ्यांचा फायदा होईल. (जोतीराव फुले, अनुवादित, आशा मुंडले, २००२, ११७)

ब. कालवे

शहरांना व शेतीला पाणी पुरवठा करण्यासाठी सरकारने नियोजनबद्ध कालवे बांधवे. हे कालवे नैसर्गिक असावे. जेणे जमिनीच्या पाण्याची पातळी वाढेल. तसेच कालव्यामुळे पूर परिस्थिती नियंत्रणात आणता येईल. कालवे हे शेतीला पाणीपुरवठा करण्याचे महत्त्वाचे साधन असून प्रतिवर्षी किमान उद्दीष्ट समोर ठेवून कालव्याची बांधणी करावी असे फुले यांनी सुचविले आहे. कालवे बांधताना होणारा खर्च सरकारला तसेच अनुशंधाने शेतकऱ्याला परवडणारा नसल्याने ब्रिटीश सरकारकडे असलेल्या फल्टर्नीचा उपयोग त्यासाठी करावा. असे त्यांनी सुचविले आहे. (उध्दत, तीर्थकर, रॉय, २०११, १११).

२. भूजल

हजारो वर्षांपासून जमिनीच्या भूगर्भात पाणी साठलेले आहे. हे पाणी विहीरीद्वारे शेतीसाठी वापरले जावू शकते. फुले मात्र विहीरीद्वारे वापरले जाणारे पाणी व भूगर्भाच्या पाण्याच्या साठ्याची पातळी याचा विचार करतात. भूगर्भातील पाण्याची पातळी वाढावी यासाठी त्यांनी पाणी आढवून जिरवण्याचे उपाय सांगितले. फुले जमिनीवरचे पाणी व भूजल याचा एकाच वेळी विचार करतात. (आय. आय. आर. २०११, ११९).

● विहिर

शेतीला पाणी पूरवठा विहिरीतून करण्याचा स्त्रोत हा पारंपरिक आहे. विहीर ही शेतकऱ्याला परवडणारी जलवाहिनी असून शेतकऱ्याने एक विहीर खोदून भूगर्भातील पाण्याचा शेतीसाठी वापर करावा असे फुलेंनी सुचविले आहे.

महात्मा फुलेंनी ब्रिटीश सरकारला पाण्याविषयी योजना दिली. त्यामध्ये गावातील पाणड्यांकडून भूगर्भातील पाण्याची माहिती करून घ्यावी. तसेच पाणी सर्वेक्षण करणाऱ्यांच्या मदतीने राज्यातील सर्व क्षेत्रामधील पाण्याच्या स्त्रोतांचे सर्वेक्षण करून घ्यावे. गावाच्या नकाशावर त्यांच्या नोदीं घ्याव्यात. तसेच सांडपाणी व ताजे वाहणारे झरे याचा रेखांतर पद्धतीने गावाच्या नकाशावर नोदणी कराव्या. विहिर खोदण्याचा खर्च गरीब शेतकऱ्यांना परवडणारा नसल्याने खोदलेल्या विहिरीचे संरक्षण करण्यासाठी त्यांनी विहिरीना संरक्षण भिंत बांधण्याचा उपाय सुचविले. जेणे पावसामध्ये वाहणारे पाणी विहिरीत न गेल्याने विहिरीत गाळ साठणार नाही. त्यामुळे पाण्याची पातळी चांगली राहिल. (जोतीराव फुले, अनुवादीत, आशा मुंडले, २००२, ११७).

जल धोरण आणि खर्चाची संसाधने

महात्मा फुले यांनी कालव्याद्वारे शेतकऱ्यांच्या जमिनीला पाणी पुरवठा करण्याचे धोरण मांडले. जल संसाधनासाठी येणारा खर्च व त्यामुळे ब्रिटीश सरकारचे असलेले दुर्लक्ष याचा विचार करून महात्मा फुलेंनी कालवे बांधताना सरकारच्या फ्लॅटनीतील दोन लाख शिपायांचा वापर करावा. त्यांच्या कडून कालवे व तळी बांधून घ्यावीत. शेतकऱ्यांना विहिरी खोदण्यास मदत व प्रोत्साहन द्यावेत.

या सुविधा सिंचनासाठी शेतकऱ्यास दिल्या गेल्यास शेतकऱ्याची जमिनीची उत्पादकता वाढेल जेणे शेतकऱ्याची तळ भरण्याचे क्षमता वाढेल व ब्रिटीश सरकारला सिंचनाच्या सुविधावर करावा लागणारा खर्च वसूल करता येईल.

जलस्त्रोतांच्या देखभाल व संरक्षणाची शेतकरी व सरकारची जबाबदारी

जलसंवर्धनाचा फायदा हा शेतकऱ्यांना होत असल्याने तसेच त्याच्या देखभालीची शेतकऱ्यांना पूर्ण माहिती असल्याने देखभालीची जबाबदारी शेतकऱ्यांना द्यावी व ती त्यांनी घ्यावी. पाण्याच्या टाक्या, बंधारे, व धरणे यांच्या देखभालीची जबाबदारी शेतकऱ्याने घेतल्याने शासनाला खर्चात कपात होईल तसेच शेतकरी ज्या आत्मयत्ने हे काम करतील त्यामुळे देखभालीचा दर्जा हा उत्तम असेल. सहाजिकच शेतामध्ये येणाऱ्या पूराचे प्रमाण घटेल किंवा पूर येणार नाही. तसेच धरणातून छोटे नाले, कालवे विकसित करता येते. हे करताना नैसर्गिक स्त्रोतांचा जास्तीत जास्त वापर करावा.

जल जागरण व साक्षरता

पाणी हे बहुमुल्य, दुर्मिळ असून त्याचा उपयोग योग्य पद्धतीने पूरेपूर केला पाहिजे असे मत फुलेंनी मांडले आहे. यासाठी पाण्याबाबत सर्व शेतकरी व जनतेमध्ये जागृता निर्माण करून जलसाक्षरता निर्माण करण्याबाबत महात्मा फुले यांनी मत मांडून तसेच प्रत्यक्ष प्रयत्न केले आहेत. धरणात असणारा पाणीसाठा व शेतीसाठी लागणारे पाणी

याची माहिती सरकारच्या पाणी विभागातील अधिकाऱ्यांना असल्याने त्याबाबतचे नियोजन करून ते योग्य रितीने राबवावेत. इंग्रज अधिकाऱ्यांनी ही जबाबदारी ब्राम्हण अधिकाऱ्यांवर न सोपवाविता स्वतः पार पाडावी. कारण ब्राम्हण अधिकाऱ्यांचा दृष्टीकोन हा दुशित आहे. पाणी पूरवठ्यामध्ये योग्य नियोजन असावेत. त्यामुळे शेतीस पाणी वेळेस मिळाल्यास पिकांवर वाईट परीणाम होणार नाही. शेतकऱ्याचे उत्पन्न वाढेल त्यामुळे सरकारचेही उत्पन्न वाढेल. बंधान्यातून व कालव्यातून पाणी काढण्याचे अधिकार हे शेतकऱ्यालाच असावेत आणि किती पाणी काढावे याचे ज्ञान शेतकऱ्याला असल्याने उत्पादकता वाढेल.

पाण्याची दृढिकता व मर्यादित साठा व पूरवठा याचा विचार करता पाण्याचा उपयोग हा अत्यंत काळजीने, काटकसरीने करावा. असे फुले सुचवितात. शेतीसाठी पाणी हे कालवे व सरी पध्दतीने न नेता पाईपचा वापर करून न्यावे. जेणे पाणी वाया जाणार नाही किंवा त्याचे प्रमाण कमी होईल. यासाठी ते नळ योजनेचाही उपयोग करण्याचा मार्ग सुचविला आहे. शेतीच्या रोपाला पाणी देतांना छोट्या पाईपचा वापर करावा, मोठ्या पाईपचा वापर करू नये असेही ते सुचवितात. म्हणजेच फुले ठिबक सिंचन पध्दतीचा पुरस्कार करतात.

जल संवर्धन व जल वाटप याचे फायदे

१. जल संवर्धनाचे फायदे –

- अ. जल संवर्धनामुळे शेतीला मुबलक पाणी मिळते.
- ब. जल संवर्धनामुळे शेतीसाठी बारमाही पाणी मिळते.
- क. शेतीची व जमिनीची धूप थांबते.
- ड. बंधान्यामुळे जंगलातील पर्वतामधील पालापाचोळा, मृत्यु जनावारे यामुळे तयार झालेले कंपोस्ट खत वाहून जात नाही. त्यामुळे जमिनीची सुपिकता वाढते.
- ई. शेतकऱ्यांच्या जमिनीचा कस सुधारल्याने शेतकऱ्याची अनुशंगाने सरकारची आर्थिक परिस्थिती सुधारेल.

२. जल वाटप

- अ. शासनाने जल वाटपचे अधिकार शेतकऱ्यांना द्यावे.
- क. शेतकऱ्यांना शेतीनुसार पाण्याच्या आवश्यकतेची माहिती असल्याने ते त्या प्रमाणात पाण्याचे वाटप व नियोजन करतील. (यासाठी त्यांनी नळ योजना सुचविली).
- ड. प्रत्यक्ष रोपांच्या मुळांना पाणी द्यावे म्हणजे त्याचा जास्तीत जास्त उपयोग करावा.
- ई. पाण्याचा जास्तीत जास्त उपयोगासोबतच पाण्याचे संवर्धनही जास्तीत जास्त करावे.
- फ. जास्तीत जास्त शेती पाण्याखाली आणावी.

निष्कर्ष

महात्मा फुलेंनी तयार केलेली किंवा मांडलेली जलनिती १९ व्या शतकातील जलनिती ही २१ व्या शतकातही उपयुक्त आहे. त्यांनी १९ व्या शतकात सुचविलेली ठिबक सिंचन, कालवे व नदी जोड हे २१ व्या शतकात उपयोगात आणले जात आहेत. त्यांनी सुचविलेली व्यापारी शेती, फूल व फळांची शेती २१ व्या शतकात मोठ्याप्रमाणात वापरी जात आहे. त्यांनी सुचविलेले शेतीविषयकचे शिक्षण हे आज फार मोठ्याप्रमाणात विकसित झाले असून शेतकरी हा शेतीविषयक ज्ञाने सज्जान झाला आहे. त्यांनी सुचविलेली ठिबक सिंचन योजना इजराई या देशाने वापरून आज तो देश विकसित झाला आहे. अशी ही त्यांची जलनिती त्यांच्या काळातच नव्हे तर पुढील युगासाठी उपयुक्त ठरेल.

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‘Impact of MGNREGS and Women’s Participation through Poverty Alleviation in the Panhala Tehsil of Kolhapur District’

Mr. Sandip Tukaram Patil

Abstract:

Since independence India has been suffering from chronic poverty and unemployment problems, especially in the rural areas. As per Lakdawalamethodology for financial year 1999 - 2000, 26.10% population of India (260.25 million people) was considered as below the poverty line. As per Tendulkar methodology for financial year 2011-12, 21.9% population of India (269.3 million people) was considered as below the poverty line. Out of 269.3 million people living below the poverty line a staggering 216.5 million people were from rural India

Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is opening a new window for the opportunity of livelihood for rural women in India. The paper focuses on the rural aspect as nearly two thirds of India’s population is in rural area and nearly 30% of them constitute BPL population of the country. With this as a base of research study the present paper focuses on the Impact of MGNREGS and Women’s Participation in Panhala tehsil of Kolhapur District in Maharashtra State. A field survey with a sample study of 232 beneficiaries as respondents from 47 BPL households in Pisatri and Padal village.

Keywords : MGNREGS, Poverty, Wage Employment

1. Introduction

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a revolutionary Act of the Government of India with tremendous potentiality of eradicating unemployment situation in the country. The National Rural Employment Guarantee Scheme (NREGS) implemented by the Ministry of Rural Development is the flagship programme of the Central Government that directly touches the lives of the poor and promotes inclusive growth in the country. The NREGA was notified on September 7, 2005 and was the first of its kind in the world (Bordoloi, 2011). The Act is considered as a significant vehicle for strengthening decentralized and deepening process of democracy by giving a pivotal role to the Panchayati Raj Institution (PRI) concerning planning, monitoring and implementation. The first phase of NREGA was started on February 2,

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2006 in 200 districts of the country including 12 districts of Maharashtra. In the year 2007, the second phase of NREGA had started where 6 districts of Maharashtra were also included. The third phase started on April 1, 2008 where remaining 15 districts of Maharashtra came under the purview of the Act. The present study focuses upon 'Impact of Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and Women's Participation through Poverty Alleviation in the Panhala Tehsil of Kolhapur District'. The area of study located at 'Panhala' Tehsil of Kolhapur District in the Maharashtra State. Panhala is a hilly region situated in the Sahyadri mountain ranges with agriculture as the main occupation of the people and 11.5 % of the households living below poverty line. 'Panhala' Tehsil is the face of present rural India reflecting poor and remote socio-economic conditions. Using this as a case an attempt on appraisal and an efficacy of MGNREGS is adopted in the study area by using secondary and primary data by the researcher.

2. Ensuring right to work for rural women: Present rural context of India often sees women workers as invisible workers. Schedule II, Section 6 of MGNREGA Act states 'While providing employment, priority should be given to women in such a way that at least one third of the beneficiaries shall be women who have registered and requested for work under the scheme.' MGNREGS is the first scheme, which provides the right of employment to the rural people with a specific reservation for the rural women. MGNREGA makes a conscious effort to provide employment to the rural women by ensuring work identity and employment as a right. Surely, this scheme marks a paradigm shift in this way by ensuring the right of employment to the rural people, especially women. Thomas (2008, p.8) argued that "NREGA is unique in the sense that, it gives primary importance to women participation and empowerment as well as a corruption less implementation of the wage employment programme; through social auditing by Gram sabhas."

3. Objectives of study:

1. To identify the participation of women workers under MGNREGS
2. To find out the awareness of MGNREGS among the respondents
3. To study how many people have been benefited from MGNREGS Scheme in the villages selected for present study.
4. To study the impact of the MGNREGS on the rural community and on its environment.

4. Research Methodology and source of Data collection :

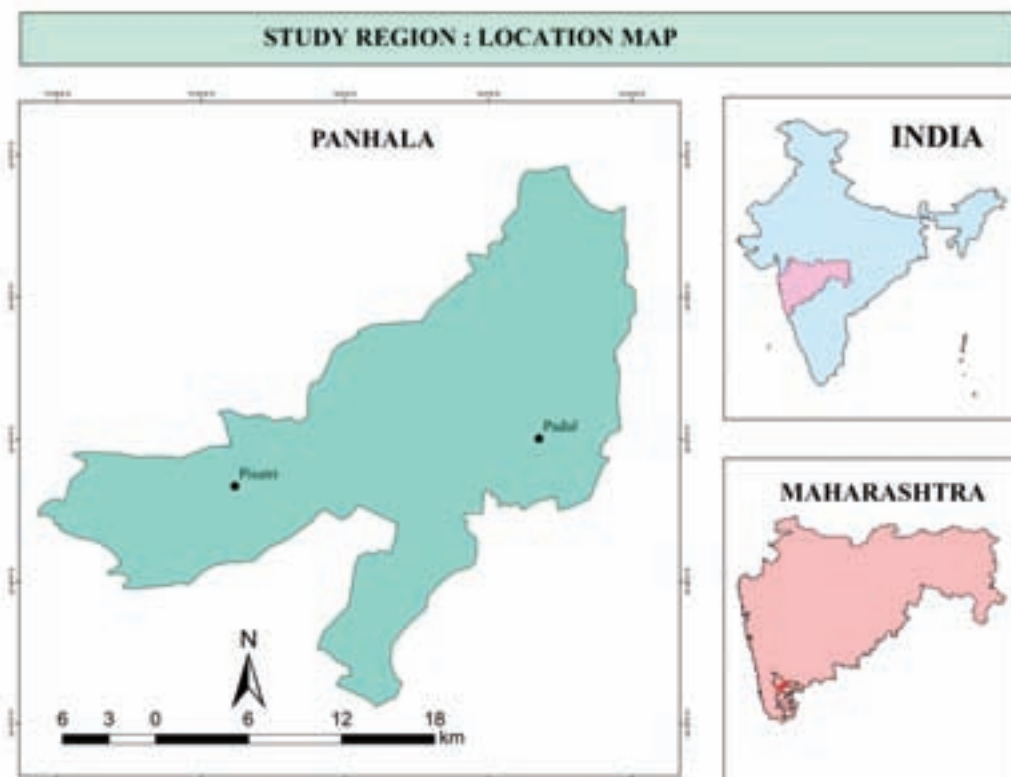
Present research is based on the reference work from books, research journals, news papers, and websites. Secondary data is referred from District Census handbook. Primary

data through field survey is collected by conducting interview of the officials from related offices and questionnaire method has been used for 47 sample BPL households in the selected villages of Pisatri and Padal of Panhala tehsil.

5. Study Area:

‘Panhala’ Tehsil has area of 56871.35 hectare land. It is located in Kolhapur District of Maharashtra, India with hilly region in the vicinity of Sahyadri mountain ranges. Western part of study region is hilly in nature and above 900 meters from mean sea level. Eastern part of the Tehsil is 600 meters above mean sea level. Panhala-Jotiba hill range lie at the centre of the Tehsil. Tehsil is surrounded by Karvir, Shahuwadi, Gaganbavada, Hatkangale and Radhanagari tehsils in Kolhapur District and also Shirala, Walava Tehsils in Sangali District. It is located in between 16° - $50'$ N latitude and 74° - $59'$ E longitude. It encompasses an 129 villages supporting a population of 259417 include rural population is 251603 and urban population is 7814 and number of households are 52853 as per 2011 census.

Figure 1. Location of the study area in the Panhala Tehsil of Kolahpur District



6. Economic aspects :

Agriculture is the main occupation of the people in Panhala tehsil which is practiced by many in a traditional way. Therefore yield is low and so farmers' income is less. There are 52299 families in the tehsil of which 9199 families (9.4 per cent) are living Below poverty line (2002). Further the conditions are worsened as income opportunities are few due to distance, as well as accessibility and availability in terms of public transport which is relatively less between employment generating cities like Kolhapur, Pune and Mumbai. Much of the employment is seasonal resulting in lower economic standards and poverty situations. Hence Mahatma Gandhi National Rural Employment Guarantee Scheme has provided off season source of livelihood to the rural people. Two villages namely Pisatri and Padal are selected as sample villages of Panhala Panchayat Union Block for the present paper. 47 households below poverty line (22 and 25 from both villages) with a sample of 232 beneficiaries of MGNREGS as respondents were undertaken for study (Table 1)

Table 1 reveals number of households living below Poverty line at 24 (14.5%) in Pisatri village and 149 (17.31 %) in Padal village. A sample of both 47 BPL households living below poverty line was selected from Pisatri and Padal villages having a population 131 and 101 respectively. Table 1 concluded that near about 50 % female population is comprised in this scheme. Compared to the law Ensuring right to work for rural women it is better increased the women population in that study areas

Table 1. Profile of sample village and selection of Households under MGNREGS (2017-18)

S. N.	Name of the Sample Village	Distance from Tehsil H.Q. and District H. Q. in Km by road	Total No. of HH	Total Pop.	Total no. of HH living below poverty Line	No. of Sample HH selected living BPL	Total pop. of the BPL sample H.H.		
							M	F	Total
1	Pisatri	45 / 65	165 (Up to April 2018)	817 (Up to April 2018)	24 (14.55 %)	22 (91.66%)	71 (54.19)	60 (45.81)	131
2	Padal	20/ 16	861 (Up to April 2018)	4358 (Up to April 2018)	149 (17.31%)	25 (16.78%)	53 (52.48)	48 (47.52)	101
Total			1026	5175	173 (17.31%)	47 (27.16%)	124 (53.44)	108 (46.56)	232

Source of Information: Grampanchayat and Aanganwadi Office (Year 2018-19)

Abbreviations:

No.: Number, **HH:** Households, **Pop.:** Population, **Tot:** Total, **H.Q.:** Head Quarter, **Km:** kilometer.

Table 2 reveals that 61.70 percent respondents have become more than 100 Rs per

day and 23.41 percent respondents have wage 100 Rs. 6.38, 8.51 percent respondents getting wage rating at 80 Rs and 90 Rs respectively. But Wage rating Rs 70 is absent. So it is concluded that no fix wage getting to the sample respondents per day. The wage difference between fewer wages and more wages is above Rs 70.

Table 2. Wage received per day in MGNREGS (Year 2017-2018)

Sr. No	Wage per day (in Rs)	Village wise Number of respondents		Total No of respondents	Percentage
		Pisatri	Padal		
1	70	-	-	-	-
2	80	-	03	03	6.38
3	90	-	04	04	08.51
4	100	-	11	11	23.41
5	More than 100	22	07	29	61.70
	Total	22	25	47	100.00

Source: Based of field work by researcher Apr.2018

7. Structure of House: House structure of BPL Households selected as sample is given in table 3. It is important to note that 4 (18.18 %) and 9 (36.00%) households in Pisatri and Padal are Pucca houses while all the rest 34 households (18 and 16 from Pisatri and Padal respectively). This reflects the low level of economic standards of these households.

Table 3. Structure of House of BPL households in study area (Year 2017-18)

Settlement	Sample Households	Pucca houses	Kaccha houses
Pisatri	22	4 (18.18 %)	18 (81.82%)
Padal	25	9 (36.00%)	16 (64.00 %)
Total	47	13 (27.66)	34 (72.34)

Source: Compiled and computed through survey by researcher (April 2018)

Table 4. Status of land ownership of BPL HH in sample villages (Year 2017-18)

Settlement	Sample HH	Landless HH	< 1 acre	1-2 acre	> 2 acre
Pisatri	22	03	10	09	-
Padal	25	07	14	02	02
Total	47	10	24	11	02

Source: Based of field work by researcher. (Apr. 2018)

Table 4 depicts the status of landholding of the sample HH selected for present study. A total of 10 BPL HH (03 and 07 from Pisatri and Padal respectively) is landless

while 24 HH have less than one acre, 11 HH with 1-2 acre and only 2 HH with more than 2 acre of landholding. These small sizes of landholdings where people are dependent only on rainwater for cultivation therefore are economically weak. Hence many HH are working as agricultural labour as noticed from Table 5 that people from 19 and 20 BPL HH are working as agricultural labour in Pisatri and Padal respectively while 01 and 0 households are working as cultivators and 02 and 05 BPL households work as non-agricultural labour.

Table 5. No. of BPL Households engaged in Occupation (2017-18)

S.N.	Settlement	Agricultural labor	Cultivator	Non-agricultural labour
1	Pisatri	19	01	02
2	Padal	20	-	05
	Total	39	01	07

Source: Compiled and computed by researcher through field survey (Apr. 2018)

8. Status of Beneficiaries under MGNREGS: It is important to note that at least one member from each BPL household were given card jobs under MGNREGS table 6

Table 6. Number of Members receiving Job cards in BPL Households under MGNREGS during the Year 2011 -12 to 2017-18

S. N.	Number of members receiving Job cards in BPL family	Village wise Number of HH and beneficiaries				Total number of beneficiaries	
		Pisatri		Padal		Number of BPL HH	Total number of Beneficiaries from BPL HH
1	1	03	03	06	06	09	09
2	2	14	28	12	24	26	52
3	3	03	09	02	06	05	15
4	4	02	08	04	16	06	24
5	5	0	0	01	05	01	05
	Total	22	48	25	57	47	105

Source: Compiled and computed by researcher through field survey (Apr. 2018)

9. Social impact: Seasonal unemployment and over population pressure are some of the push factors for outmigration or rural workers to urban areas. However provision of livelihood through MGNREGS has prevented outmigration of rural workers (table

6) from BPL households (21 and 24 from both villages) except one in each household out migrating from both sample villages. Such poverty alleviation programmes have nonetheless helped the families to maintain their social ties strongly besides getting economic strength on one hand and on the other hand in reducing urban pressure by preventing push factor.

Table 6. Effect of MGNREGS in reducing migration from BPL HH: (Year 2011 -12 to 2017-18)

S. N.	BPL Households	Village wise Number of BPL HH		Total No of BPL HH
		Pisatri	Padal	
1	Out -migration	01	01	02
2	Out Migration prevented	21	24	45
Total HH		22	25	47

Source: Compiled and computed by researcher through field survey (Apr. 2018)

Table 7. Caste- wise composition of population of beneficiaries under MGNREGS Year 2017-2018

S. N.	Settle-ment	Caste					Total Num-ber of ben-eficiaries
		Open	OBC	SC	NT	SBC	
1	Pisatri	17	02	03	-	-	22
2	Padal	05	03	11	06	-	25
	Total	22 (46.80)	05 (10.64)	14 (29.79)	06 (12.77)	-	47

Compiled and computed by researcher through field survey (Apr 2018)

The data caste shows that caste wise distribution of the respondents. The percentage of the open caste sample respondents is 46.80% but Casts include OBC, SC, NT, and SBC account more than 50 % respondents.

10. Status of Work undertaken in MGNREGS in the study area : Construction of wells, construction of roads, Plantation, Ropevatika and Gharkuletc.works in the villages of PisatriandPadal under the scheme of MGNREGS was undertaken that provided employment female and male members from the BPL households in the study area table

8. a total amount of Rs.1740711 were disbursed to the people under MGNREGS for the, construction of roads, Plantation, Gharkul, RopevatikaJawaharwell, CCT, etc. in two villages for a total of 652 labour, working over days in Pisatri and Padtotal villages.

Table 8. Settlement wise implementation of work completed under MGNREGS in the study area (Year 2011-12 to 2017-18)

Village	Year	Nature of work	Status of work	Total no. of days required for completion	Total labour		Total labour	Total Amount dispersed (in Rs)
					M	F		
Pisatri	2013-14	Plantation (1)	Completed	65	89	130	219	313000
	213-14	CCT (1)	Completed	23	65	28	93	101211
Padal	2012-13	Jawahar well (1)	Completed	19	47	17	64	250000
	2013-14	Ropevatika (1)	Completed	30	18	25	43	470000
	2011-12	CCT (1)	Completed	34	23	57	80	100000
	2013-14	RoadPlantation (1)	Completed	7	21	35	56	100000
	2011-12	Panand road	Completed	45	35	24	59	270000
	2016-2018	Gharkul (7)	Completed	101	20	18	38	136500
Total		13 works	Completed	324	318	334	652	1740711

Source: Based on field work by researcher Apr.2018

Conclusion: It is no doubt that the MGNREGS has provided a livelihood to the people and has helped to some extent to increase their annual incomes on one hand and having some necessary resources created in the form of wells to provide with drinking water sources for the villagers on the other hand. Construction of wells has been possible

and facilitated only because of such useful schemes provided by our government with necessary financial arrangements. Besides, it has also helped in preventing outmigration of rural working population which has helped to maintain the demographic balance of the family as well as social well-being. Such schemes would definitely help in checking rural to urban migration and so in minimizing the resultant urban influx and urban problems. However the limitations to such schemes are in the form of getting the approvals for project proposals under MGNREGS well in advance and the time taken for disbursement of such grants.

Suggestions: Such poverty alleviation programmes should be a continuous process providing year round employment to the people. This therefore calls for sincere effort in the preparation of different project proposals with justification and focus on welfare of the underprivileged society. Such projects based on priority for a period of at least next 15 to 20 years should be put forth giving estimations of time period and total cost required. However it is important to note that such programmes need to end at earliest and effort towards increasing socio-economic status of the society is essential. Concrete, concerted and sincere efforts in the direction of complete eradication of poverty forever (present as well as future) are indispensable. Introducing sustainable commercial agricultural practices, mixed farming, livestock activities supported by agro-processing units, marketing of agro-products and allied industries in rural areas is the need for rural India. This is possible through collaborative effort by administrators, academicians, industrialists, marketing organizations, financial institutions and the local community to come together in developing such kind of closed network. This will support sustainability with more balanced regional development with judicious distribution of socio-economic resources.

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CASTE, GENDER AND SELF-RESPECT MOVEMENT IN WESTERN INDIA

Vaishali Prakash Pawar

Abstract:

Chimanabai Gaikwad, Vimalabai Bagal and Baba Adhav works in the field of women emancipation. Their idea of human being is not only liberal, but it deals with freedom, equality and fraternity. They included both Male and female in the idea of Human being. They opposed the inhuman traditions related to women and accepted the modern and liberal education for women.

Key Words : Truth Seekers Society, Satyashodhak, Gender discrimination, Humanism, Equal rights, Political Power

Introduction :

The present research paper is divided in three parts. First part is about the Chimanabai Gaikwad's views on Women; Second part is about the Vimalbai Bagal's Views on Women

And the Third part deals with the Baba Adhav's views on Women. These three personalities' works for the upliftment of the weaker section of the society. Women is the most weaker section of the society.

Chimanabai Gaikwad's views on Women

Chimanabai II was the wife of Sayajirao Gaikwad of Badora. She came from aristocrat family of Davas Princely State. After married to Sayajirao Gaikwad, her views were changed (Interview Baba Adhav 17th Dec 2017). Sayajirao Gaikwad gives her modern and Liberal education, firstly her relatives and she oppose to modern education, but Sayajirao was the modern and liberal king. She visited many western countries along with him then she became broad minded and accepted to take education. In 1885 Maharaja take a charge of his state. He decided to convert his state from traditional to modern state. He decided to educate her wife. He appointed two lady teachers Sagunabal Dev and Nandabai Patel for teaching Marathi and English respectively. She learned many different languages like

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Marathi, English, Gujarati and Sanskrit. She also went for hunting with her husband and alone also. She was well-known hunter. She gave priority to her health. She did exercise regularly, walk 75 minutes every day, did horse riding, did 35 minutes physical exercise every day, plays table- tennis. She opposed and did not follow the curtain tradition (*Pardah tradition*) (Hindurao Manda, 2015:164)

In 1911 she wrote book on the Status of women in India in Gujarathi language. This book focused on Patriarchal system of Indian Society where in all social structures of life the dominance of male was found. European countries modern liberal idea of equality was her utopia. She compare Indian women with European women and her main observation was Indian women were excluded from social life. Women were not participated in public life therefore the policies and schemes were not successes in society. She argued than women should participate in the public life (Education, business, banks, science and technology, health and medicine). She argued that women should participate and improve their position, but without help of male they didn't get the status. Therefore in order to develop our society, it is necessary to have co-operation among men and women.

Her priority was women education; she gave economic assistance by giving Rs. 200 every month. She also sponsored scholarship to few selected women who were studying Bombay College (100000 rupees). Being the trustee she sponsored for girl student as well. In 1926 the Irish lady Margarat Kzins established All India Women's Paridhad, its first conference was held at Pune in 1927. Chimanabai Gaikwad chaired Parishad. In this, Parishad she strongly emphasized on primary education for the girl child. She condemned the tradition of child marriage. Sarojini Naidu, Kamala Devi Chatopaday, Mahalaxmi Reddy, Princess Amarut Kaur, Hansa Meheta were participated in this conference. All the participants came on conclusion that women should get education by considering bottom-up approach rather than traditional top-down approach.

Chimanbai's work for women

- 1) **Queen Chimanbai Ladies Club:** On 3rd March 1903 Chimanbai established Queen Chimanbai Ladies Club. The major objective was to improve the relation among the women so they should come together and discuss their ideas and experiences. Many royal family women joined this club for sporting activities.
- 2) **Chimanbai Women Industry:** Chimanbai desired to see economic independence for women. As Economic independence was the base of all freedoms, she emphasized professional education for them. She requested Maharaja Sayajirao Gaikwad to provide financial assistance for this. Maharaja temporarily rejected

this request as the treasury of the state belongs to common mass so he couldn't give immediate funding. He asked Chimanabai to convince her concerned views to people in order to get financial assistance. Considering the treasury issue Maharaja decided to provide financial assistance from his private property. In India, first time *Anand-melava* (Happy Conference) was organized by Chimanabai Gaikwad, which earned funding of 3500 rupees. In 1910 Maharaja and Maharani additionally provided 6000 and 4000 rupees respectively for the same. Skill based institution was originally formed for the upliftment of poor women, institution provided training of stitching and tailoring and every participant woman got 2 rupees stipend for that (Hindurao Manda, 2015:164). Every year around 200 women enrolled for this training and hostel facility was provided to rural women.

- 3) **Maharani Chimanabai Women's Society (MCWS):** With the objective to provide modern liberal approach to the middle class women, Shardaben Mehta established MCWS institution on 20th Feb 1915. Institution was to provide the basic human rights and negative rights for their socio-economic upliftment which will also help to improve their living. In the institution activities like lectures series, Nursing, Tailoring, Drawing, typing courses were conducted (Hindurao Manda, 2015:176).
- 4) **Girl's Health Centre (Kanya Arogya Mandir):** For providing physical training to girls, in 1915 this institution was established. The ultimate goal behind this was health and self-defense for girls. Every year 300 girls were benefitted from this activity (Hindurao Manda, 2015:176).
- 5) **Girls Maharani High School:** In 1931-32 this school was established to provide higher education to women it was then best school in Baroda state. Institution ran courses like Home sciences, music, drawing, handloom, embroidery, gardening, etc. In the same year around 76 girl students were benefitted by the school (Hindurao Manda, 2015:176).
- 6) **Bhagini Samaj:** Bhagini Samaj was established by Gulabbai Zaveri on 8th April 1921. Ultimate objective behind this was to provide skill of language and to develop the social sense and awareness of Marathi speaking women. Programs like exhibition, Essay, singing, Debate competition, were organized by the Bhagini Samaj (Hindurao Manda, 2015:177).
- 7) **Maharani Chimanabai Child welfare institution:** To promote institutional

delivery among economically backward women Maharani Chimanabai established this institution. Institution provided medical check-up facility for every school in Baroda State (Hingurao Manda, 2015: 176,177).

Vimalbai Bagal's Views on Women

Vimalabai Bagal was influenced by ideology of Truth Seekers Society. Vimalbai Bagal was daughter of Ganpatrao Pawar, he was lawyer in Kolhapur Princely State. Vimalabai Bagal married with Vasantao Bagal and her father in law Khanderao Bagal was activist of TSS. Her marriage happens through new rituals of Satyashodhak. Vasantao Bagal was the famous lawyer and first people elected mayor of the Kolhapur Princely State (1941). Following are the views of Vimalabai Bagal about Women.

- A. Issue of codification and reform Hindu personal law should be debated in the Fourth decade. In 1941, the colonial government had appointed a four-member Hindu Law Committee, known as the Rau Committee after its chairman B. N. Rau. B. N. Rau, prepared a Draft Code dealing with Succession, Maintenance, Marriage and Divorce, Minority and Guardianship and Adoption. It was that Code that was widely circulated and discussed and given the name "Hindu Code Bill". Then Dr. B. R. Ambedkar was review of Hindu Code Bill. Therefore, issue of Hindu Code Bill had in the debatable in India. Vimalabai Bagal had supported and actively participated in the movement of codification and reformation of Hindu Personal Law (Powar Chhaya, 2014:21).
- B. In 1947 All India women' association Conference happened in Kolhapur (Maharashtra). Vimalbai was active in the conference and propounded following four points in this Conference,
 1. Widow should have right to adopt the children.
 2. Widow should have right over her husband's property.
 3. Divorced women should have right to her husband's property.
 4. Boy and Girl child should have equal rights over Father's property.

These four points were modern in 1940's and moreover they were in favor of women.

C. Anti- Polygamy Movements (APM)

Anti- Polygamy Movement (*Dvibhariya Pratibandhak Andolan*) started at Kolhapur in 1943. N. C. Phadke (Professor and well known writer) married for 2nd time while

he already had a wife. All women organizations in Kolhapur organized meeting of Prohibition against the 2nd marriage of N. C. Phadke, Vimalbai also participated in this Prohibition Meeting. She had propounded following four points in APM Conference (Pawar Chhaya, 2014: 17-18).

1. When first wife is alive (or not divorced), husband has no right to marry again.
2. Such Second marriages should be declared as illegal.
3. If such couples have children, they should be declared illegal.
4. Government should ban such practices through law.

APM demanded to make such laws at Kolhapur Regency Council, but the demand of APM was rejected hence APM boycotted on Kolhapur Regency Council. APM sent Anti-Polygamy Law draft to Bombay Legislative Council it was accepted and its bill had passed in Bombay Legislative Council, it transformed in law (Power Chaya, 2014: 17-19).

D. Vimalbai Bagal had expressed her views on Hindu Code Bill in the Public sphere following are those:

1. The Agenda of All India women conference on change in the Hindu Code Bill at Kolhapur in 1947 was propounded by Vimalbai Bagal.
2. Lalita Vihar Women's Organization (LVO) held at Kolhapur, Queen Indumati was the chairman of LVO. She calls a meeting to discuss on Hindu Code Bill. Well known lawyer Adv. Pusalkar also invited for this meeting. He argued that this law depends upon Hindu religion. So that the demand to changes in this law was not rational. Vimalabai opposed to him and argued that those religion and law rejected women as a human, why should women follow the rules of that religion and law? She raised important question in public sphere and she demanded the amendments in law as a human being. She also argued that women are rational and knows their interest very well. Because of this law women became economically independent and women got property in their hands; and women better knew how to protect that property from males. Women are not ready to become a target of law. Women will act with their own consciousness but never act according to irrational (Power Chaya, 2014: 21-25).

E. In 1948 Vimalabai was elected as a member of Kolhapur Nagar Parishad and became a Chairman of Sanitary Committee. She propounded two major points in the meeting of sanitary committee.

1. Should have Day Care Centre for children's of women employee of Kolhapur Nagar Parishad (Pawar Chhaya, 2014:29).
2. For the poor women should have Maternity home at the Kolhapur City. The sanitary committee sanctioned the demand of Maternity home and sent to civil board and it will be rejected. Vimalabai organized protest meeting against it in various places of Kolhapur. At the meeting of annual budget session of municipal council Vimalabai opposed to sanctioned amount of swimming pool against Maternity Home of poor women. This means Vimalabai demanded women's human rights and negative rights and council was demanded positive rights for citizens.

She denied and walk-out from that meeting. Because of walk-out; councils calls a special meeting for the same. Meanwhile Vimalabai mobilize number of women and present for that meeting with majority, because of mobilization of women, pressure was created tremendously and Mayor of the city was changed his decision. He announced the demand of Maternity homes was stationed and *Royakel Wakhar's* place was given for this home. But one day this place was given to school board. Vimalabai went to mayor office and argued that within next 24 hours this place will not give to Maternity home then she will be on fasting. Her demand was stationed on 15 August 1951 and Maternity home was inaugurated and named as a Savitribai Phule Maternity Home. Vimalabai proves following capabilities of women

1. Vimalabai creates political power through mobilization of women.
 2. With the help of political power the constructive work happens.
- F. Rajaram Maharaj had started a free Maharani Laxmibai girl's high school in Kolhapur Princely State. After the independence it transferred to Bhkati Seva Institute. This university increased the fee so that many poor girls drop out from school (Powar Chaya, 2014: 29).

Baba Adhav's Views on Women

After independence, Baba Adhav started taking efforts in the field of women emancipation. He has been working on social reform with ground-breaking schemes. His thoughts reflect synthesis of Mahatma Phule, Dr. B. R. Ambedkar, Maharshi Shinde and Ram Manohar Lohia's women thought. He was influenced by Mahatma Phule's women related Satyashodhak thought. Dr. Adhav's idea of human being is not only liberal, but it deals

with freedom, equality and fraternity as well. According to him, Male and female both are included in the idea of Human being.

According to Dr. Adhav, Woman is a rational being. Dr. Adhav's Women ideology has been developed in the ideological framework of Mahatma Phule. Male female discrimination is a critical issue, it has to do with power, justice, rights, law. Baba Adhav's views have been critical to Gender discrimination, feudalism and semi- feudalism (Interview Baba Adhav 17th Dec.2017). He has belief that with the help of constitution women's right can be guaranteed through the principles of equality, fraternity, dignity and freedom from discrimination. Baba Adhav consistently working for the right to equality, right to dignity, right to freedom, right to work, right to equal status, and right to girl education therefore, his comprehensive approach is reflected in his institutional mechanism (Mahatma Phule Samta Pratisthan), as well as in some of the policies of Maharashtra government.

Baba Adhav's Views on women History

According Dr. Adhav there was myth that only males have created history of social movement so far, Dr Adhav rejected this myth and argued that both men and women created Social movement history. Women were excluded from the records of the history. He represented and rewriting female centric history. E.g. Satyashodhak Samaj, Non-Brahmin Movement as well as Maratha State in medieval period.

- A) Dr. Baba Adhav gave credit to women for establishing Maratha State during medieval India. Mahrani Jijabai was founder of Maratha state. She was policy maker and policy executor, her administration was best example of good governance. She was advisor to Chhtrapati Shivaji Maharaj.
- B) Dr. Adhav has accepted and explained women's political right to rule in the medieval state. He gives another example of Raani Tararani and Raani Jijabai (Second). Dr. Adhav mentioned above facts and he concluded following four points
 - I) In the medieval period women's political work was creative. Women too park in establishing state and ruled state wherever needed.
 - II) In the medieval period ruling women were Decision maker and policy maker (Baba Adhav, Rajaramshastri Bhagavat).
 - III) Aim of state was to liberate and emancipate women and peasant's welfare.
 - IV) Social Inclusion was the main feature of social policy in the period of Raani Tarabai and Raani Jijabai.

- C) Dr. Adhav's view was different from other social reformer because practice of Sati is prevalent in eastern and northern states of India, it was not practiced in Maratha State during the regime of Shivaji Maharaj (medieval period). To substantiate this he gives four major examples,
- I. When Jijabai's father died her mother did not follow practice of Sati (Sinddkhadraja).
 - II. When Malojiraje died his wife did not undergo practice of Sati (Indapur).
 - III. When Sahaji Maharaj died Jijabai did not undergo practice of Sati.
 - IV. When Rajaram Maharaj died Tararani did not undergo practice of Sati (Karveer).

According to Baba Adhav above mentioned facts show that, practice of sati was not prevalent in the Maratha state. Maratha state was against this practice. Statute of Manu was established in the premises of Jaipur high court. Practice of Sati was legitimized by Law of Manu (Manusmriti) therefore, he participated in agitation to remove the Statute of Manu in Jaipur high court premises. Dr. Baba Adhav recently criticized Hindi film Padamavatas film glorifies the practice of sati.

- D) Dr. Adhav is against social glorification. Real social fact has been shown by Dr. Adhav as he shows that real social history, Mahadji Nibalkar was Son in law of Shivaji Maharaji, he died in the battle of Malshiras (Solapur), that time his wife Sakhubai underwent practice of Sati, but Bajaji Nibalkar her father in law had accepted Muslim religion. Moreover, he again rejected Islam and accepted Hindu religion. After his acceptance of Hindu religion Sakhubai, daughter of Shivaji was married with Mahadji. As in the battle of Malshiras her husband and father in law led their lives she kept on facing social pressure for undergoing practice of Sati. According to Dr. Adhav, religious practice and political religious practice were vary as per the situation. Political religious practice has strategy to gain Political control. Even after this entire incidence Maratha State did not believe in theory of pollution. According to Dr. Adhav, Shivaji differentiated Political and religious practices. (Adhav, Purogami Satyashodha, July-sept. 2010: 6-7). Dr. Adhav concluded that sakubai's undergoing practice of Sati was not a major fact was just an exception. This incidence can be neglected as accepting Islam was a political strategy to achieve political gains, therefore this has nothing to do purity and impurity. As per Dr. Aadhav this is the real history but some projected this in other way for their personal interest.

E) Shahu Maharaj was irreplaceable leader in Non-Brahmin movement. To support women's right of education, he established women's school in Kolhapur Princely State. In the royal family of Shahu Maharaj, Vijayamala (daughter in law of shahu) was widow, he provided her English education. Princess Indumati was widow in early period; Shahu Maharaj gave her right of knowledge and right of participation in public life. According to Adhav, Shahu Maharaj was promoted and inspired Princess Indumati to express her thought in public life but Aakka Maharaj was against women's participation in public life.

Dr. Adhav considers this as very important because women's history and historical view has not reflected in Non-Brahmin Movement. Non-Brahmin leaders in the second rank didn't accepted historical legacy of women's emancipation. Non-Brahmin Movement's conference held in *Akhil Bharatiya Maratha Shikshan Parishad* (All India Maratha Education Conference). In the same conference Mrs. Shinde argued that *Akhil Bharatiya Maratha Shikshan Parishad* was dominated by the male and women were excluded. Baba raised consistent question on shift of women's right in Non-Brahmin Movement. He assumes this as a blockage for social movement.

Baba Adhav's Views on Women's Education:

Dr. Adhav is a staunch supporter of women education. Woman being a rational human being and a citizen as well, he emphasized on women education. He stated Men and women have equal right of education and co-education. He rejected classical and neo classical liberal thought on women's education. As per him the role of state is most important in women's education, by this way he supported human rights and negative rights like civil and political rights such as freedom of speech. Dr. Adhav has articulated following thought on women's education.

- A) According to Dr. Adhav, education helps human being to lead life with humanity and education helps to provide humanitarian sense to a woman that is why women should provide with education therefore, he has linked women education with the progress of entire human being. According to Dr. Adhav, humanism refers to a perspective that affirms notion of human freedom and progress (Speech Baba Adhav 10th April 2003).
- B) Women education provides an opportunity to develop the family in the framework of humanism therefore he has been working on the unit of family (Speech Baba Adhav 10th April 2003).

- C) Baba Adhav is founder of the Social Conference Association. According to Baba Adhav, Education is extremely significant for the reason that it leads women to great opportunities to in good health themselves. With education women has the authority to achieve greatness. Getting an education is a big part of living an energetic life. Education gives women broad minded approach and helps to do well in everything they do. Women being the half of the population of the country, there is a need of right kind of education for women as women education helps to change the society (Speech Baba Adhav 10th April 2003).
- D) According to Dr. Adhav, women's education is not confined to close doors, their education would be better if they get out of their homes. Women education should be linked to employment as women are workaholic in the field of job. They develop collectiveness in the job (Speech Baba Adhav 10th April 2003).
- E) Dr. Adhav, connected women's education to health, educating women is the best way to improve the health, nutrition and economic status of a household. Traditionally women's are victims of hunger than the men; Dr Adhav argued that this awareness helps women to get aware on hunger and distribute it equally among male and female, which ultimately helps to distribute family food equally irrespective of gender (Speech Baba Adhav 10th April 2003).
- F) Dr. Adhav's vision on Women's education has interrelated to Social economy as well as National economy, which constitute a micro unit of a national economy. In this context, it can be argued that lack of women education can be an impediment to the country's economic development. In India, women achieve far less education than of men. As per the Census report 2001, the literacy rate of women is 54.16 per cent and that of men is 65.38 per cent. There is a need of a sincere effort to improve the education attainment of women education at both government and voluntary organizations (Speech Baba Adhav 10th April 2003).

Conclusion:

The Maratha Caste thought about the Gender. Chimanabai Gaikwad, Vimalabai Bagal and Baba Adhav developed the gender thought within the framework of Liberal and socialist thought. This thought based on equality among the man and women. This thought accepted the democratic values and opposed the feudalism. Women were excluded from public life. The process of inclusion of women was happened because of self respect movement.

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SUCCESS STORY OF SOME THIRD GENDERS – A STUDY

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Abstract:

As per higher education policy for weaker section, open Universities have made equal opportunity of education to society inclusive of all types of minority (sex, caste, religion and language). However, in most societies, there has been a lot of discrimination regarding equal social rights and education to third genders, even though they legally have equal human rights.

In this study it has been found that some of the third genders have occupied good positions in the society and are proving their talents and capabilities even without the moral support of their family members and society.

In this paper success story of 11 third genders namely Apsara Reddy, AQkkai Padmashali, Gauri Sawant, Disha Pinky Shaikh, Nisha Ayub, Urmi Jadhav, Kalki Subramaniam, Rose Venkatesan, Saumya Gupta, Zainab Patel and Madhuri Sarode have been studied.

Key words : Third gender, Hijra, success story, education, discrimination

Introduction :

As per higher education & changing policy for weaker section, open Universities have made equal opportunity of education to minority and weaker sections of the society inclusive of all types of minorities (sex, caste, religion, language) who has interest, need and ability irrespective of their biological parameters like age and sex and social parameters like caste and religion. Indira Gandhi Open University has started free education (without any fees) to third gender community (sex minority).

Regarding third gender, we imagine typically different people having strong make-up wearing female attire, with cracked voice and clapping loudly in a distinct manner. These people are called as hijras. They normally earn their living by means of begging, dancing at public places with typical loud clapping and by sex work. These hijras are considered auspicious, holy and sanctified since ancient times and are invited for giving blessings

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to newly born baby and during marriage ceremony and other such occasions. They are given full respect and gifts during such events, however, in general they live their lives as a rejected group of the society since many decades. They have no normal lives like other citizens. Their childhood is mostly neglected, troubled by their own parents and society and spent in confusion of gender identity.

A brief history of Hijra:

Hijra, in India, has been a part of the society since a very long time. In history, over 4,000 years ago and also written in ancient literature, the hijra community is evidence to the sexual diversity that is integral part of the society.

The hijra community has been known from ancient literature, the most known of which is the Kama Sutra. This literature on human sexual behavior was written sometime between 400 BCE and 200 CE. Existence of hijra community is significantly available in some of the most important literature of Hinduism, including the Mahabharata and the Ramayana. One of the many forms of Shiva, involves him integrating with his wife, Parvati, to become the intersexual Ardhanari. During the Mughal-kingdom, from 16th to 19th century, hijra community has held important positions in court and various government organizations.

The Third Gender and Education:

One of the aims of education is to give proper shape to the hidden talents present in the students and also to develop various good qualities and characters amongst them. The development of nation depends upon the nature of the citizens. A good citizen is an asset for the nation. The qualities essential to be a good citizen are sense of social responsibility, social duty, a sense of sacrificing own interest for the larger interests of the nation, a spirit of social service, independent thinking ability, love for freedom, fearlessness, socio-political consciousness etc. Therefore, these values should be inculcated in the minds of children and individuals through the planned and organized system of education.

Very little education is being provided to students about the third gender, and it is exposed in a negative sense. Providing knowledge on negative interpretation is one of the main causes of discrimination against the third genders. Government and people both should recognize that the third gender community is a part of society who has legally equal human rights and the need to be educated about them should be thought of seriously. This is now slowly being recognized by governments.

Coming to the second issue, there has been a lot of discrimination regarding education

for the third gender. In most societies, there has been a huge discrimination against the third gender in the field of education. Many educational institutions hesitate to admit third genders for reasons such as “other students feeling uncomfortable etc.” Such discrimination is not beneficial for any society where a certain section of society is discriminated. Many people feel that this is an important reason for such shameful living conditions of third genders.

Importance of the study :

Hon’ble Supreme Court has given a decision during 2014 and directed the Government to give equal rights to third gender community. However, even today peoples of third gender are not easily accepted by the society and they face many problems while working in the society. However, without the moral support of family members and society and in spite of great hardship, harassments and ill treatments from the surrounding, some of the third gender people have occupied good positions in the society and they are performing very well and proving their talents and capabilities.

Objectives of the study:

To make awareness amongst the society by way of success story of thirdgenders in context with their 1) birth, 2) own gender feelings, 3) transformation, 4) gender identity 5) physical and intellectual capability and 6) status, respect and responsibility achieved by them.

Success story of some of the third genders:

Study (Sandhani et al 2019) of success story of 13 thirdgenders is very interesting and encouraging. This study includes Principal - Manvi Bandopaddhyay, Judge - Joyita Mandal, MLA - Shabnam Mavshi, Mahamandleshwar - Laxmi Narayan Tripathi, Police officer – K. Prithika Yashini, Mayor - Madhu Kinnar, Sarpanch - Dnyaneswar Shankar Kamble, news reader – Padmini Prakash, Host – Rose Venkyateshwar, bank employee - Monika Das, police constable – Ganga Kumari. All these thirdgenders are the first to occupy such prestigious positions. Some others are police officer – Sudha and Gurakhi – Shahanaj studied by them, In spite of huge discrimination, great hardship, harassments and ill treatments from all, these 13 thirdgenders have occupied very good positions in the society and are doing well and proving their talents and capabilities. Success story of eleven thirdgenders studied are reported below.

1) First transgender woman appointed as a National General Secretary of National Mahila Congress: Apsara Reddy :

Apsara Reddy (Lokmat 2019) is a transgender Journalist. She took birth as a male child with the name Ajay having mother Anuradha and Ramesh Reddy as a father in Chennai. Her father Ramesh is from a well-educated family. Her mother Anuradha is also from a well read and travelled family. Apsara in an interview (Latha 2016) very proudly said that “my mother is actually my superhero, she is responsible for shaping me to be the person I am today”. Her grandfather Gopalkrishna Reddy was a very generous man and he donated his entire property to Apsara Reddy.

She started her education in a prestigious school ‘Sishya’ in Chennai and she topped ICSE examination. She obtained BA degree in broadcast Journalism from Monash University at Australia. Then she obtained a postgraduate degree (MA) in broadcast developmental economics from City University London.

Recently she was appointed as the national general secretary of All India Mahila Congress (Newsd 2019) by Rahul Gandhi on 08/01/2019. She is the first transgender occupying such a prestigious position in the politics.

During her childhood, she was the talk of the town because she was different with respect to gender. People used to make a fun of her, humiliation and discrimination due to her gender identity. Today she is again the talk of whole nation not for her gender identity but for her high profile capability and occupying prestigious position in the politics.

She has served for Common wealth Secretariat in London, BBC World Service, Deccan Chronicle, the Hindu, New Indian Express. She has served for the Indian Consulate in Melbourne as a media adviser to the Consulate General, Dr. T.J. Rao. She has also worked for UNICEF to launch a health campaign across Tamil Nadu.

2) Akkai Padmashali :

Akkai Padmashali, was born as a boy named as Jagadeesh but chose to become a transgender. She is from a middle-class family in Bangalore; her father was in the air force and her mother, a homemaker (Ralph, 4/11/2017, The Times of India, 21/4/18).

She had a confused childhood, often inviting her parents’ anger for wearing her sister’s dress or playing with girls. Her parents even took her to local doctors and traditional healers, but it didn’t change anything.

Her challenging, but inspiring journey as she fought for her rights and acceptance in society shows the true strength of the human spirit. At the age of 12, feeling confused

and lonely, she tried to kill herself twice, today she is inspiring hundreds to fight for Transgender Rights & Justice (The Better India, 14/4/2015).

About four years later, Akkai disclosed to her brother that she wanted to be a girl. Her brother was the first to accept her as she is, but their parents did not accept this. During the next four years she spent her time with other transgenders and came to know that there are many others like her. She never felt lonely any more. Seeing the sexual violence that others like her face every day, Akkai was motivated to join Sangama, a local NGO that works for sexual minorities.

With Sangama, she realized the importance of educating the policy makers and the judiciary about the problems faced by people belonging to sexual minorities in India. Section 377 of the IPC (Hindustan Times, 8/2/2018) makes sexual acts between two persons of the same sex and other sexual activities that are “against the order of nature” punishable. This leaves scope for sexual minorities to be exploited.

Akkai couldn't complete her education and she hasn't studied beyond high school, but she speaks near-perfect English. She was invited by the Indian President to attend the swearing-in ceremony of the Chief Justice of India. She was also invited by the International Bar Association to speak about the legal rights of sexual minorities, in a conference held at Tokyo in October 2014. She is founder-member of Ondede (meaning 'convergence' in Kannada), an organization which create awareness about sexuality, sexual diversity and the right to choose one's sexual orientation.

3) Gauri Sawant, the trans 'mommy':

Gauri Sawant was born in Bhavanipeth in Pune as Ganesh Sawant, her father was a police officer (चित्रलेखा साप्ताहिक, 5/5/2014). Her mother died when she was 5 years old, since then, there was no one to take her care. When she was young, like every other father, he would take her on bike rides and loved her equally as a boy. But, later due to her gender identity, her father was slightly embarrassed.

One day, at the age of 17, Gauri left behind her family but not her identity and went to Dadar in Mumbai. Initially she joined her friends who fed and cared her and later, she was introduced to Humsafar Trust (one of the oldest LGBTQ organizations in India). By the grace of god, she never had to beg. Initially she earned Rs 1,500 per month. Her communication skill is very impressive.

One of her main tasks was to make awareness about STDs. During this work, she adopted Gayatri as a daughter who was never breast-fed as her birth-mother was HIV positive,

eventually, her birth-mother died when Gayatri was five years old. Eventually, Gauri became her mother and took care of her studies in all respect. And naturally a strong bond that of a mother – daughter was formed between them. Gauri says, “Gayatri is the angel of my eyes, I haven’t done anything for her, she has given me everything—the title of ‘mother’, which is one of the truest expressions of womanhood, in my journey from boy to girl”.

She had been highlighted by various publications even before the Vicks opportunity came knocking. However, shooting this campaign projected her into overnight recognition. She initially refused the offer, but accepted 6 months later.

After Vicks opportunity (The Indian Feed, 1/4/2017), her journey was recognized to demonstrate that care, love, and a sense of family must go beyond class and gender. Her real story was even more heart wrenching and beautiful than the one shown in the campaign. Gauri, besides working with 1,000 to 2,000 people for sensitization about their legal rights and STDs, is actively involved in the running of a shelter for young third genders who are rejected by family. She also has a pet cause – saving the turtles and nurturing the street dogs.

4) Disha Pinky Shaikh :

The Vanchit Bahujan Aghadi has appointed a transgender person Disha Pinky Shaikh, a writer and poet, as its spokesperson for Maharashtra. She says her party will make people know her third gender community in a better way. Further, she says that she will use the opportunity to speak up on behalf of the downtrodden. (Hindustan Times, 26.2.2019). Talking about her party, she said, “Our motto is very clear. It is to give access to those who are minorities, downtrodden, shunned by the society and do not have access to the social or political system directly unlike others”.

Shaikh is originally from Yeola of Nashik. Presently her residence is at Shrirampur of Ahamadnagar district. She says that her life has been full of struggles. Her family members rejected her due to gender identity. Due to this, she could hardly study till 10th class. She says, the transgender clapping is symbolic to the transgender community and a way to ask people for money. Further she says, “We should be recognized as human beings. I want my transgender sisters to earn livelihood, get jobs, educate themselves and not be identified with the sound of the clap”.

She said, “I found support with my guru in Shrirampur. I have faced depression in my teenage years. I wrote down my feelings and turned them into poems. My guru introduced

me to a book which was the biography of Babasaheb Ambedkar, and this was a turning point in my life. Ambedkar has a major influence on my life and who I am today.” She has been invited in various conferences as a motivational speaker.

5) Nisha Ayub:

Nisha Ayub was born as a boy in Malacca, Malaysia, on 5/5/1979. At the age of 6, her father died and she was raised by her mother who is a Muslim convert to Christian. At the age of 9, she participated in a fancy dress competition, by that time, she realized her feminine gender (Malay Mail Online, 24/4/2016).

Due to Islamic sharia laws enforced in Malaysia, Nisha has faced excessive injustice and harassment. As per Sharia (Islamic) law, a male person is prohibited from dressing or behaving like a woman in public. Under this law in the year 2000, she was imprisoned for 3 months in a male prison, eventually the warden and other prisoners sexually assaulted her (Human Rights Watch, 10/8/2015).

Nisha is best known for defending the rights of transgender persons. Upon release from jail, she became an advocate of transgender rights. She has founded two NGOs, Seed Foundation & Justice for Sisters to help “transgender people, sex workers, & people living with HIV”. These two organizations have gained much commendation and helped for equal rights to transgender people all throughout SE Asia. Her work has far-reaching impact and she is a respected activist throughout the world.

Her legal advocacy through Justice for Sisters resulted in the Federal Court of Appeals overturning the validity of the Sharia law by ruling that it was “discriminatory and unconstitutional”. The three-judge panel unanimously ruled that the law deprived trans people the right to live with dignity. In 2016, San Diego declared April 5 to be Nisha Ayub Day in the US city. In the declaration, San Diego mayor Kevin L. Faulconer said: “Nisha Ayub continues to fight for the equality and protection of all people in her country and beyond its borders” (Malay Mail Online, 6/4/2016). Nisha Ayub was honored with Awards as given in table. 1 during 2015 and 2016:

Table. 1 : Nisha Ayub was honored with following Award in 2015 and 2016:

S. No.	Year	Award
1	2015	Asia LGBT Milestone Awards (ALMA) : Hero of the Year
2	2015	Human Rights Watch : Alison Des Forges Award for Extraordinary Activism
3	2016	United States : International Women of Courage Award

6) Urmi Jadhav :

Urmi Jadhav's first name was Ganesh. She recalls being called as chakka and mamu, and feeling highly uncomfortable with her gender identity. Due to harassment at school level she could not complete her 10th standard education.

Today, Urmi is working as the transgender/ hijra spokesperson for Humsafar Trust Mumbai, India, since 2014 (Magazine Outlook, 27/5/2015) as an outreach worker and handles community interaction workshops. She speaks persuasively with police, doctors, lawyers, politicians and transgender rights advocates all over India about being trans and being a woman. She says, "Humsafar Trust is my maika, my maternal home where I found myself."

Urmi has also worked as a senior associate with project Sanjeevani – a support group for people living with HIV; and as a project counsellor on target interventions with the MSM community. Urmi is the president of a hijra community based organization called Kinnari Kastoori and is a vocal activist for transgender rights.

A performing artist by hobby, Urmi loves designing dance pieces and is also one of the core members of a popular dance group in Mumbai, the Dancing Queens. Urmi has also appeared in several documentaries.

According to Urmi, a law gives transgenders an opportunity to apply somewhere or do something but for their real progress, they need to become educated and they need to be socially accepted. Only when the gap between education and social acceptance, is filled, the transgenders can come into the mainstream.

7) Kalki Subramaniam :

Kalki is a well known social activist, journalist, an author and an actor. She has also founded the Sahodari foundation which supports the transgender community for the social, economic and political empowerment of transgender persons in India. She has two Master's degrees one in Journalism and Mass Communication and the other in International Relations.

Kalki works for the transgender community through Sahodari Foundation on several issues, like entrepreneurship training which can positively change the poor transgender. She also provides guidance and counseling for a better life away from begging and sex work - a life with dignity. She has delivered lectures in many prestigious institutions like IIT Madras, Jindal Global Law School, National Judicial Academy and many other institutions across India.

She is professional actress, and made short documentary film, script writer. Her collection of poetry in Tamil titled 'Kuri Aruthean' was published recently by reputed publishing house Vikatan publishers. Kalki was awarded the 'Lifetime Achievement Award' on 21/02/2009 by the Lioness Club of Chennai in appreciation of her work on transgender rights advocacy. She has received several awards for her contribution towards transgender rights. She was invited by the USA in October 2010 for 16 days program on Human Rights activism & Awareness through IVLP to Washington DC, New York and Salt Lake City. She is the first transsexual to be invited by the USA.

Kalki's presentation in Indian film world happened with 'Narthaki', an unconventional film about the life journey of a transsexual woman. She became the first transsexual film star in India to do a lead role in a major feature film.

She was invited in 2012 to be present in the swearing in ceremony of Chief Justice of India Hon'ble Altamas Kabir to the Rashtrapati Bhavan, New Delhi.

Junior Chamber International Pondicherry White Town in 2013 honored her with the outstanding Social Worker Award. She received the Best Poet award in 2015 from Born 2 Win Trust, Chennai for her extraordinary presentation through poetry in her Tamil book 'Kuri Aruthaen'.

8) Rose Venkatesan :

Rose was born in 1980. At the age of 5 she became aware of her gender identity. She finished high school education in the year 1996 from Sri Ramakrishna Mission Higher Secondary School, Chennai. She obtained degree in mechanical branch from Sathyabama University, Chennai between 1997 and 2001. She travelled to the United States to study Biomedical Engineering at Louisiana Tech University between 2001 and worked as a website designer before returning home to Chennai in 2003 (Facebook 16/3/2012).

She is the first Indian talk show host based in Chennai, Tamil Nadu. She is a trans woman, and has been active in many fields like television and radio. Rose worked in the television talk show Ippadikku Rose which was shown on Vijay TV. The show began in February 2008 and ended in April 2009. Then she became a Radio Jockey at BIG FM 92.7 in June 2011, airing the afternoon show Rosudan Pesungal (English: Talk with Rose) on Weekdays. At present she is involved in organic farming. She trains employees to get their American accent right and teaches them English grammar and speech, (The Economic Times, 7/5/2014)

9) Saumya Gupta:

Initially she could not get support from her family for her gender identity. However, after repeated attempt they accepted her. She said there can be parents who are very accepting, but there are parents who will just disown you. In an Indian scenario, it is very difficult because they can't accept it.

Saumya Gupta is working as a deputy manager of Humsafar Trust's Delhi office. Generally workplaces are increasingly becoming harmful for women with reports of harassment, sexual assault and demands for sexual favors. Saumya Gupta and research interventionist Richa Vashishta finds Humsafar to be a safe space.

10) Zainab Patel :

Zainab was born in Mumbai and is one of the petitioners in the National legal services authority versus Union of India a case on transgender right. Zainab Patel is a transgender woman and works as HIV, health and human rights consultant at United Nations Development Programme (UNDP). As a policy analyst, she provides technical support on human rights and collaborates with regional and national civil society partners and institutions on policy inputs. She takes keen interest in LGBTI rights and health and social development issues. She works on management of social mobilization initiatives benefitting marginalized populations like persons living with HIV, landless women, LGBTI people and persons impacted by gender based violence. She said there are several challenges that prevent private and public sector organizations from opening up their doors to third genders. Other challenges include creating a safe working environment as society has a subconscious bias (Kad 2017)

11) Madhuri Sarode:

Madhuri Sarode is a founder member of Transgender welfare equity and employment trust (TWEET) foundation which works for third gender rights. She is a transgender and married with Jaykumar Rajnath Sharma on 28/12/2016 in Mumbai. This is a first open transgender marriage done in a temple at Mumbai.

She was born as a boy in a middle class family and was named as Prakash. As a child, he liked to wear his sisters' dresses and dance. During childhood, he was frequently beaten by her parents and sisters for her feminine behavior. He was learning Kathak from the age of three. He was honored with all the top prizes in the dance competitions during school education. Recent discussion conducted by TWEET foundation with sex worker of hijra community says "so what? Sex work gives us gender affirmation, takes care of our

expenses and also gives us freedom to choose. We are proud to be sex worker.” Sex work is accepted as a full-fledged formal job by many hijra community members (Kad 2017).

Conclusion:

It has been found that nothing can stop a strong mind and strong willpower irrespective of gender identity, as with passing time more and more third genders/ hijras are also breaking all barriers and coming out successful on this narrow-minded society.

Each individual being in the Universe is indeed unique and an integral part of the nature. Therefore, it would be unfair to judge and discriminate people who may be different by appearance or from manmade stereotype male or female. Now India and some other country has realized that every individual has equal rights and privileges and started following the policy of “live and let live”.

Therefore, it becomes necessary to study the success story of some of the third genders so that the attitude of society regarding third gender that they are incapable/ inferior may change and this will help third gender to get equal human rights.

Awareness of equal education opportunity for getting equal human rights to them has become necessary part of education to all other students at high school and college level. This will definitely help to change the mindset and attitude of the society in ignoring basic human rights to the third genders.

National AIDS control organization (NACO) reported consistent increase in HIV vulnerabilities in transgender community due to violence, unemployment, rare facility of education and zero support from their own family.

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