



# **Jharkhand Vision & Action Plan 2021**

## **Volume I**

### **Comprehensive Document**

**DEPARTMENT OF PLANNING CUM FINANCE  
GOVERNMENT OF JHARKHAND**

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# List of Abbreviations

S.No	Abbreviation	Details
1.	AABY	Aam Aadmi Bima Yojana
2.	AAI	Airport Authority of India
3.	ABL	Activity Based Learning
4.	ANC	Antenatal Care
5.	AMRUT	Atal Mission for Rejuvenation and Urban Transformation
6.	BPL	Below Poverty Line
7.	CBO	Community-based Organisations
8.	CBCS	Choice-based Credit System
9.	CCE	Continuous and Comprehensive Evaluation
10.	CEEP	Climate & Energy Education Programme
11.	CMP	Comprehensive Mobility Plan
12.	CNT Act	Chhotangpur Tenancy Act
13.	CoE	Centre of Excellence
14.	CPD	Continuous Professional Development
15.	CSO	Civil Society Organisations
16.	CTE	Centres for Teacher Education
17.	DAY- NRLM	Deen Dayal Antodayay Yojna- National Rural Livelihood Mission
18.	DBT	Direct Beneficiary Transfer
19.	DEIC	District Early Intervention Centers
20.	DGCA	Director General of Civil Aviation
21.	DHTE	Department of Higher and Technical Education
22.	DPMCU	Data Processing Milk Collection Unit
23.	DWCD&SS	Department of Women and Child Development and Social Security
24.	DoLET	Department of Labour, Employment and Training
25.	ECBC	Energy Conservation Building Code
26.	EDI	Education Development Index
27.	E-GRAS	Electronic Government Receipt Accounting system
28.	ESDM	Electronic System Design and Manufacturing
29.	FRU	First Referral Units
30.	GER	Gross Enrolment Ratio
31.	GFBC	Green Factory Building Code
32.	GoI	Government of India
33.	GoJ	Government of Jharkhand
34.	GPI	Gender Parity Index
35.	HSC	Health Sub Centers
36.	HWC	Health and Wellness Centers
37.	IAPPD	Integrated action plan for prevention of pneumonia and diarrhea
38.	IASE	Institute of Advance Studies in Education
39.	ICAR	Indian Council for Agriculture Research
40.	ICDS	Integrated Child Development Services
41.	IFSR	India Forest Survey Report
42.	IGNOAPS	Indira Gandhi National Old Age Pension Scheme
43.	IGNWPS	Indira Gandhi National Widow Pension Scheme
44.	IGNDPS	Indira Gandhi National Disability Pension Scheme
45.	IFFCO	Indian Farmers Fertiliser Cooperative Limited
46.	INM	Integrated Nutrient Management
47.	IVRI	Indian Veterinary Research Institute
48.	ITS	Intelligent Transport System
49.	JABV	Jharkhand Awasiya Balika Vidyalaya
50.	JFM	Joint Forest Management
51.	JBV	Janashree Bima Yojana
52.	JCERT	Jharkhand Council for Education Research and Training



S.No	Abbreviation	Details
53.	JHARCRAFT	Jharkhand Silk, Textile and Handicraft Development Corporation
54.	JNV	Jawahar Navodaya Vidyalaya
55.	JOHAR	Jharkhand Opportunity for Harnessing Rural Growth
56.	KGBV	Kasturba Gandhi Balika Vidyalaya
57.	KRIBHCO	Krishak Bharati Cooperative Limited
58.	KSY	Kishori Shakti Yojna
59.	LAMPS	Large Area Multi-Purpose Societies
60.	LFPR	Labour Force Participation Rate
61.	LSK	Lokshiksha Kendra
62.	MMGSY	Mukya Manti Gram Sadak Yojna
63.	MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
64.	MFP	Minor Forest Produce
65.	MoU	Memorandum of Understanding
66.	NABARD	National Bank for Agriculture and Rural Development
67.	NAS	National Achievement Survey
68.	NCVT	National Council on Vocational Training
69.	NER	Net Enrollment Ratio
70.	NFBS	National Family Benefit Scheme
71.	NFL	National Fertilizer Ltd
72.	NLMA	National Literacy Mission Authority
73.	NRDWP	National Rural Drinking Water Programme
74.	NSAP	National Social Assistance Programme
75.	OJT	On the Job Training
76.	PACS	Primary Agriculture Credit Societies
77.	PDS	Public Distribution System
78.	PMAY	Pradhan Mantri Awas Yojna
79.	PMFBY	Pradhan Mantri Fasal Bima Yojan
80.	PMGAY	Pradhan Mantri Grameen Awaas Yojana
81.	PMGSY	Pradhan Mantri Gram Sadak Yojna
82.	PMKVY	Pradhan Mantri Kaushal Vikas Yojna
83.	PMKSY	Pradhan Mantri Krishi Sinchai Yojana
84.	PRI	Panchayati Raj Institutions
85.	PVTGs	Particularly Vulnerable Tribal Groups
86.	RGSA	Rashtriya Gram Swaraj Abhiyan
87.	RKSK	Rashtriya Kishor Swasthya Karyakaram
88.	RMSA	Rashtriya Madhyamik Shiksha Abhiyan
89.	RSBY	Rashtiya Swasthya Bima Yojana
90.	RUSA	Rashtriya Ucchatar Shiksha Abhiyan
91.	SAIDI	System Average Interruption Duration Index
92.	SAIFI	System Average Interruption Frequency Index
93.	SAPCC	State Action Plan on Climate Change
94.	SBCC	Social and Behavior Change Communication
95.	SBM	Swachh Bharat Mission
96.	SDG	Sustainable Development Goals
97.	SHGs	Self Help Groups
98.	SESM	State Education Supervision Mission
99.	EST&P	Skills Training & Placement
100.	SHAJ	State Highway Authority of Jharkhand
101.	SKJVY	Saksham Jharkhand Kaushal Vikas Yojana
102.	SLAS	State Level Assessment System
103.	SMC	School Management Committees
104.	SSA	Sarva Shiksha Abhiyan
105.	TET	Teachers Entrance Test
106.	TEQIP	Technical Education Quality Improvement Programme
107.	ToD	Transit Oriented Development
108.	ToT	Training of Trainers
109.	TSP	Training Service Providers

<b>S.No</b>	<b>Abbreviation</b>	<b>Details</b>
<b>110.</b>	UIP	universal immunization programme
<b>111.</b>	USP	Usual Principal Approach

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## **Vision Statement**

***Empowering the people of Jharkhand  
through accelerated, sustainable and  
inclusive economic and social development***

# *1. Acknowledgement*

The Government of Jharkhand, constituted a sub-committee under the State Development Council (SDC) chaired by Sri. T Nanda Kumar , I.A.S (Retd.), Former Secretary to Govt. of India and, Member of SDC with the following as members- (a) Padmashri Ashok Bhagat, Member SDC (b) Sri. Amit Khare, Development Commissioner (c) Special Invitee Member- Dr Ramesh Sharan, Professor Economics and presently Vice-Chancellor (Vinoba Bhave University, Hazaribagh) and (d) Special Invitee Member-Dr Harishwar Dayal, Economist. This committee was authorized to prepare a three year action plan for the development of the state with inputs from all the Secretaries to the Govt. of Jharkhand and supported by a team from PricewaterhouseCoopers.

## 2. Foreword

This document has been prepared keeping in view the growth achieved so far, the inequities observed, opportunities Indian and global economies provide and the State's development needs.

*The initiatives of the last three years and the positive results achieved have given us the confidence to set higher targets and increase the momentum. While doing so, we are conscious of the need to protect the environment and suggest sustainable growth options.*

The Committee has taken the vision of the State government as the guiding principle for prioritizing the development objectives. This Plan is in line with the vision of the State for 2030 and will also lay the foundation for accelerating sustainable growth in the next decade.

The Committee had the benefit of detailed consultations spread over long hours with the Secretaries of all concerned departments, directors and other technical personnel. The committee decided to make a departure from the earlier plan and focussed on outcomes.

*This plan is different from earlier documents:*

- *This plan is citizen-centric*
- *This is not a budget document specifying outlays and targets. It is not a typical five-year plan of yesteryears*
- *The focus of this plan is on outcomes*
- *The outcomes at the end of the three-year period have been defined and articulated clearly under various key initiatives*
- *Most of the outcomes are measurable, either directly or through proxy indicators. Some will be measured through periodic national surveys.*
- *Monitoring indices have been developed and are part of this plan.*
- *This plan goes beyond the resources of the Government and attempts to get better outcomes through a collaborative effort with various stakeholders/partners.*

This document is in three parts:

- Part 1 details the Action Plan,
- Part 2 outlines specific outcome targets and details the monitoring indices,
- Part 3 provides scheme-wise targets and is linked to the thematic objectives.

While measuring *outputs* are necessary to assess the progress on a day-to-day basis; these have been shown as *milestones* to distinguish them from *outcomes*. The monitoring indices have been designed to help the Government in taking mid-course corrections wherever required.

In addition, there are chapters on the enablers, viz., Resources, Convergence and Good Governance.

The Committee recognizes that some of these outcomes depend on the collective efforts of various departments. Therefore, efforts have been made to integrate these under the respective thematic heads. The links are explained in the document.

The above approach envisages *effective convergence* of various development initiatives at the delivery point. While policy convergence is necessary at the State level, effective convergence at the District, Block and Panchayat levels is critical. This cannot be achieved through a conventional 'co-ordination committee'. *This convergence has to be unambiguously driven from the top.*

The Plan takes into consideration the inequities in the historical growth pattern in terms of regions, population groups and other disadvantaged sections. Special focus on these has been recommended in the initiatives.

In keeping with a result-oriented approach, the document is divided into thematic sections reflecting the priorities of the State.





The Committee believes that the plan is not to be constrained by the resources of the Government. Additional resources in the form of institutional credit, loans from multilateral agencies, private investments, Corporate Social Responsibility funds, individual initiatives, Public Private Partnership (PPP) projects, etc. should be optimized.

***This plan is for the people of Jharkhand and is not just a Government plan. The Government, apart from being a key driver of the plan, is responsible for ensuring participation by a large number of stakeholders.***

The Committee believes that the primary focus of this plan is ***the citizen of Jharkhand***. The development expenditure is to be incurred to improve the quality of life of the citizens and to increase their prosperity.

This Plan cannot be implemented in “business as usual” mode. The Government by itself cannot achieve all the desired outcomes. Apart from a change of mindset, this requires commitment, innovation and effective participation of all stakeholders. The PRI, civil society organizations and the stakeholders have to play constructive and significant roles to achieve these outcomes. The Government needs to create an enabling environment to facilitate this transformation.

Effective, result-oriented and transparent governance is the key to achieving these outcomes. This needs to be addressed on priority. While good work needs to be recognized, those who do not deliver must be penalized without any discretion.

This is the first attempt in the State to change the way plans are formulated, implemented and monitored. This document will therefore be dynamic.

The outcomes detailed in this plan are ***achievable***, the programmes are ***implementable*** and the progress can be monitored.

**T. Nanda Kumar**  
**(Chairman, Sub Committee)**

### 3. Economic Review and Developmental Gaps

Jharkhand, at the time of its formation, lagged behind the all India average in many of the key development indicators. It has made impressive progress since then. However, the development gaps, though reduced, still persist. Therefore, to bridge these gaps and to achieve an overall, inclusive and sustainable development, planned efforts are required from all sources – government and non-government.

#### 3.1. The Economic Growth

The Gross State Domestic Product (GSDP) at constant prices of the state was only 1.6% of that of the whole country<sup>1</sup> and its per capita income was about 62% of the per capita income of the country in 2001-02. They have, however, started improving thereafter. The share of Jharkhand in the national income improved to 1.84% and its per capita income became 70% of that of the country over 2015-16.

**Table 1: Income (GSDP/GDP in Rs Crore) and per capita income at constant prices of Jharkhand and India**

Year	Income (GSDP/ GDP) in Rs. Crore			Per capita Income		
	Jharkhand	All India	Jharkhand as a % India	Jharkhand	All India	Jharkhand as a % India
<b>2001-02 at 1999-00 base year</b>	33,043	1,972,606	1.68	10,451	16,764	62.34
<b>2004-05 at 2004-05 base year</b>	59,758	2,971,464	2.01	18,510	24,143	76.67
<b>2011-12 at 2011-12 base year</b>	150,918	8,737,575	1.73	41,254	63,460	65.01
<b>2015-16 at 2011-12 base year</b>	209,137	11,350,962	1.84	54,140	77,435	69.92

Improvement in the share of state’s income in the national income or the reduction in the gap between the per capita income of the state and the country, as mentioned above, is because the economic performance of Jharkhand, since its formation, has mostly been better than that of the country. Between 2001-02 and 2004-05, and between 2012-13 and 2015-16, the growth rates of Jharkhand were approximately 1.7 percentage points higher than that of the country. Between 2005-06 and 2011-12, its growth rate was slightly less than that of the country, but it was mainly because of its poor performance in 2005-06, 2006-2007 and again in 2008-09. If these years are ignored the average growth rate of Jharkhand, in this period, would have been 13.25% against 8.38% of that of the country as a whole.

**Table 2: Rate of growth in income and per capita income of Country and State**

Year	Growth in Income		Growth in Per Capita Income	
	Jharkhand	India	Jharkhand	India
<b>2001-02 to 2004-05 at 99-00 base year</b>	8.14	6.41	6.69	4.58
<b>2005-06 to 2011-12 at 04-05 base year</b>	7.21	8.47	5.11	6.99
<b>2012-13 to 2015-16 at 11-12 base year</b>	8.59	6.76	7.15	5.11

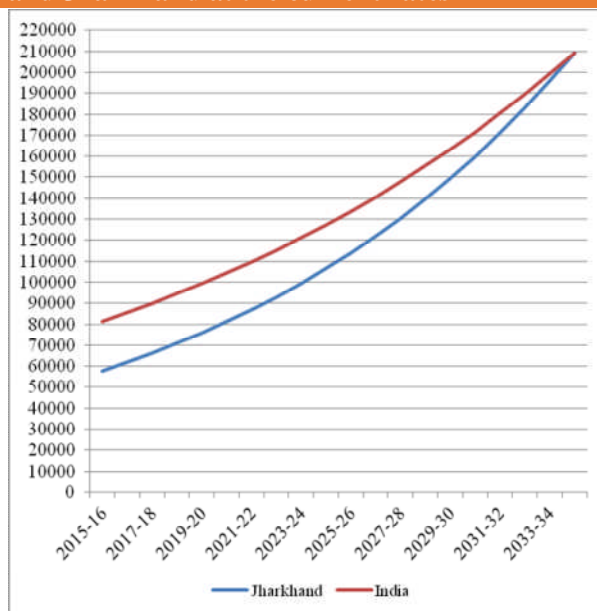
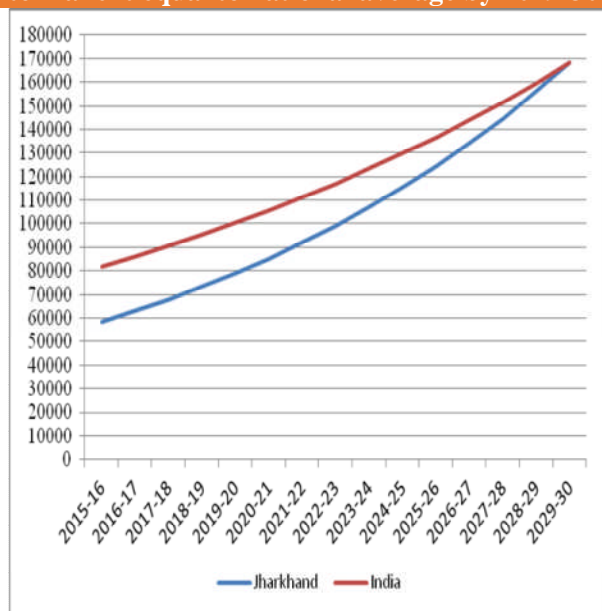
Despite better economic performance than the country, the gap between the income and per capita income of India and Jharkhand persists, and if the two continue to grow at the present rate, that is, India keeps on growing at 6.76% and Jharkhand at 8.59% per annum and their per capita income by 5.11% and 7.15% respectively (average growth rates of 2012-13 to 2015-16), it will take another 17 years for Jharkhand to reach the country’s level of per capita income. It will become equal to the national average by 2034-35. But, if the state has to

<sup>1</sup>It is low in proportion to the area and population of the State. The total geographical area of the State is 2.4% of that of the total geographical area of the country and its population is 2.62% of the population of the country (2001 census)

match with the per capita income of India by 2030 (assuming that the per capita income of India continues growing by the current 5.1%), the per capita income of Jharkhand must grow by 7.85% (meaning GSDP of about 10% per annum). If the economy of the state grows at this rate, the per capita income of Jharkhand will be doubled by 2025 and be about 2.9 times by 2030.

**Table 3: The projected time for per capita income of Jharkhand to become equal to the national average**

**The rate of growth in per capita income required to make it equal to national average by 2029-30**      **The rate of growth in per capita income of India and Jharkhand at the current rates**



Despite good performance, the growth rate of Jharkhand has been more volatile than that of the country. The coefficient of variation of the growth rate of Jharkhand has been consistently higher than that of the country. The fluctuations in its growth rate have mainly been because of the fluctuations in output of agriculture and manufacturing sectors. The agriculture and allied sector, especially the crop and the manufacturing sectors have been more volatile than the other major sectors of the economy. There is a need to take adequate and appropriate steps to stabilize its economy and its sub-sectors.

**Table 4: The coefficient of variation in growth rate**

	2001-02 to 2004-05	2005-06 to 2011-12	2012-13 to 2015-16
<b>Jharkhand</b>	0.65	1.23	0.59
<b>India</b>	0.32	0.15	0.13

There is excessive sectoral difference in productivity of the workers. While agriculture, in which 50% of the workers are engaged, contributes only about 16 % to the GSDP of the State, the mining sector contributes about 12% to the GSDP of the state by employing only 2.3% of the workers and manufacturing contributes about 14 to the GSDP of the state by absorbing only 7.7% of the workers. This sectoral imbalance in income and employment indicates prevailing inequality in the State – while about 10% of the workers (those engaged in mining and manufacturing) have about 26% of the GSDP in their command, about half of the workers (those engaged in agriculture) get only 16% of the income of the State. This also indicates a high incidence of disguised unemployment in agriculture sector on one hand and a very low labour absorptive capacity (low income elasticity of employment) of mining and manufacturing sectors on the other.

**Table 5: Sectoral share in GSDP and employment**

Sector	Contribution to GSDP (%) 2015-16	Proportion of workers (%) (NSS 68 <sup>th</sup> Round)
<b>Mining</b>	12.25	2.3
<b>Manufacturing</b>	14.17	7.7
<b>Agriculture &amp; allied</b>	16.61	50.0

There is a need to promote the rural non-farm sector and less capital-intensive manufacturing sector to reduce the dependence of workers on the agriculture sector and to improve the labourabsorptive capacity of the manufacturing sector. The growth in Jharkhand has failed to resolve the problem of unemployment and poverty. The unemployment rates, according to UPSS criteria in all-India and in Jharkhand were 2.3% and 2.1% respectively in 2004-05<sup>2</sup>. In contrast to the all-India pattern where unemployment rate has declined, it has increased in Jharkhand between 2004-05 and 2011-12. It is mainly because of an increase in unemployment in the rural areas of the State.

**Table 6: Unemployment rate (UPSS) in India and Jharkhand, 2004-05 to 2011-12**

	Rural		Urban		Total	
	2004-05	2011-12	2004-05	2011-12	2004-05	2011-12
<b>India</b>	1.7	1.7	4.5	3.4	2.3	2.2
<b>Jharkhand</b>	1.4	2.1	6.5	5.1	2.1	2.6

Source: National Sample Survey, 2004-05 and 2011-12

Most of those who are employed are either self-employed or are casual workers. The incidence of low productive or low-paid work and seasonal, under-employment or disguised unemployment is highest among these categories of workers. Only about 10% of the workers have regular/salaried jobs, which are considered relatively better quality work.

**Table 7: Status of employment in Jharkhand, 2011-12**

	Rural	Urban	Total
<b>Self-employed</b>	68.6	43.8	64.2
<b>Regular/Salaried</b>	4.2	38.0	10.2
<b>Casual workers</b>	27.2	18.2	25.6
<b>Total</b>	100.0	100.0	100.0

Source: National Sample Survey, 2011-12

Though the poverty in Jharkhand has decreased in this period, the rate of decrease has been very slow. As is evident from the table below in Jharkhand, the percentage of poor has decreased by only about 18% and the number of poor by only about 6% between 2004-05 and 2011-12, while at all India level, they have decreased by about 41 and 34 percent respectively.

**Table 8: Number and percentage of population below poverty line in India and Jharkhand (% and No.), 2004-05 and 2011-12**

	Poverty ratio (%)			Number of poor (million)		
	Rural	Urban	Total	Rural	Urban	Total
<b>All India</b>						
<b>2004-05</b>	41.8	25.7	37.2	326.3	80.8	407.1
<b>2011-12</b>	25.7	13.7	21.9	216.5	52.8	269.3
<b>Change (%)</b>	38.52	46.69	41.13	33.65	34.65	33.85
<b>Jharkhand</b>						
<b>2004-05</b>	51.6	23.8	45.3	11.6	1.6	13.2
<b>2011-12</b>	40.8	24.8	37.0	10.4	2.0	12.4
<b>Change</b>	20.93	-4.20	18.32	10.34	-25.00	6.06

Source: Planning Commission, Government of India, 2012

<sup>2</sup>It does not include the vast number of under-employed, seasonally unemployed and disguisedly unemployed.

The incidence of poverty is high among the casual labour and self-employed and low among the regular/salary earning workers. In rural areas, more than half of the casual labourers are engaged in agriculture and about 46 percent of those engaged in non-agricultural activities are poor. About 45% of those who are self-employed in agriculture and about 33% of those who are self-employed in non-agricultural activities (it includes artisans, traders, etc.) in rural areas are also poor. In contrast, only about 20% of those who have regular/salary earning in rural areas are poor. In urban areas also, more than half of the casual labourers are poor, while only 17% of those who have regular/salary earning are poor.

**Table 9: Poverty in Rural India and Jharkhand by Household type in 2011-12**

	Occupational Categories	Jharkhand
<b>Rural areas</b>	Self-Employed in Agriculture	45.3
	Self-Employed in Non-Agriculture	32.9
	Regular/Salary Earning	20.3
	Casual Labour in Agriculture	54.8
	Casual Labour in Non-agriculture	46.2
	Others	21.6
<b>Urban areas</b>	Self-Employed	23.4
	Regular/Salary Earning	17.1
	Casual Labour	53.3
	Others	9.2

Source: National Sample Survey, 2011-12

The average monthly per capita consumption expenditure (MPCE) in Jharkhand is not only low – less than that of the country on the whole, but has improved at a very slow pace. While average MPCE of India has increased by 51% in urban areas and by about 37% in rural areas between 2005-06 and 2011-12, it has increased by only 19% and 37% in urban and rural areas of Jharkhand respectively over the period. As a result, the gap in the MPCE of Jharkhand and all India has increased over this period. The MPCE of Jharkhand in 2004-05 was about 92% of that of that of the country in urban areas and 76% in rural areas in 2011-12, it decreased to about 72% of that of India in urban areas and 70% in rural areas.

**Table 10: Average MPCE, 2004-05 and 2011-12 (in Rs)**

	Current prices		Constant prices (2004-5)	
	Rural	Urban	Rural	Urban
<b>India</b>				
<b>2004-5</b>	579	1105	579	1105
<b>2011-12</b>	1287	2477	855	1668
<b>% Change</b>			47.5	51.0
<b>Jharkhand</b>				
<b>2004-5</b>	439	1017	439	1017
<b>2011-12</b>	920	1894	604	1211
<b>% Change</b>			37.5	19.0
<b>Jharkhand as a percentage of India in 2004-5</b>			<b>75.82</b>	<b>92.04</b>
<b>Jharkhand as a percentage of India in 2011-12</b>			<b>70.64</b>	<b>72.60</b>

In order to reduce poverty and unemployment and increase MPCE, there is need to improve the productivity of agriculture and enhance the earning of those engaged in this sector, promote rural non-farm sector, make the unskilled casual labour skilled and thus improve their productivity and earning, and create an environment conducive for investment, especially in labour-intensive enterprises.

### 3.2. Development Gaps

In most of the development indicators, related to health, education, gender, amenities and infrastructure, Jharkhand lags behind the achievements made at all India level (see Appendix-1). Between 2005-06 and 2015-16 (NFHS-3 and NFHS-4), the State has made commendable progress in some of these development indicators. In these ten years, indicators like institutional births, percentage of children who are breast fed within one hour of their birth and percentage of women who have a bank account which they themselves use, have recorded more

than 200% growth (NFHS-3 and NFHS-4). In other indicators also, the State has recorded remarkable/appreciable progress. As a result, the gap between Jharkhand and all India, in most of the development indicators, has narrowed down, but the State has to strive hard to bridge this gap completely.

### 3.2.1. Disparity within State

**The Rural Urban Divide:** In almost all the development indicators, the rural areas of the State, where about three-fourths of the population of the State live, are much less developed than its urban areas (see Appendix 2).

**Inter-District Disparity:** There exists a wide regional, inter- and intra-district disparity in Jharkhand. The Santhal Parganas, located in the north-east of the State and Palamau, in the north-west are the least developed regions. A composite index of 17 developmental indicators related with eight major dimensions of development<sup>3</sup> found that generally, the more urbanised and industrialised districts are more developed than the rest. The corridor which starts from the east and ends at the south-east, where the districts of Dhanbad, Bokaro, Ramgarh, Ranchi, Saraikela – Kharsawan and Purbi Singhbhu are located, is more developed than the districts in the north-west and north-east of the State, because, this region is more urbanised than the latter two regions and is the hub of mining, commercial and industrial activities.

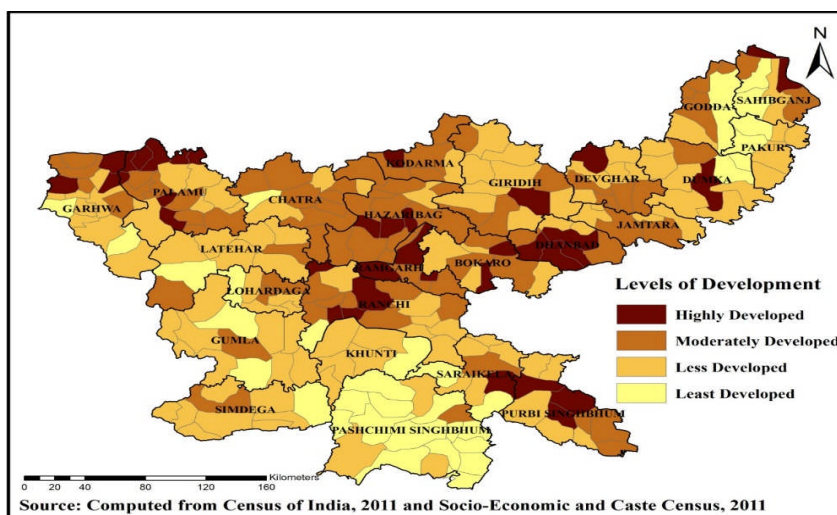
**Table 11: Inter-district disparity in development**

Highly Developed	Moderately Developed	Less Developed	Least Developed
Dhanbad	Kodarma	Lohardaga	Pakur
Ranchi	Deoghar	Sahibganj	Dumka
Ramgarh	Giridih	Jamtara	Godda
Bokaro	Hazaribagh	Latehar	Chatra
Purbi Singhbhum	Pashchimi Singhbhum	Gumla	Palamau
Saraikela-Kharsawan		Khunti	Garhwa
		Simdega	

### 3.2.2. Intra District Disparity

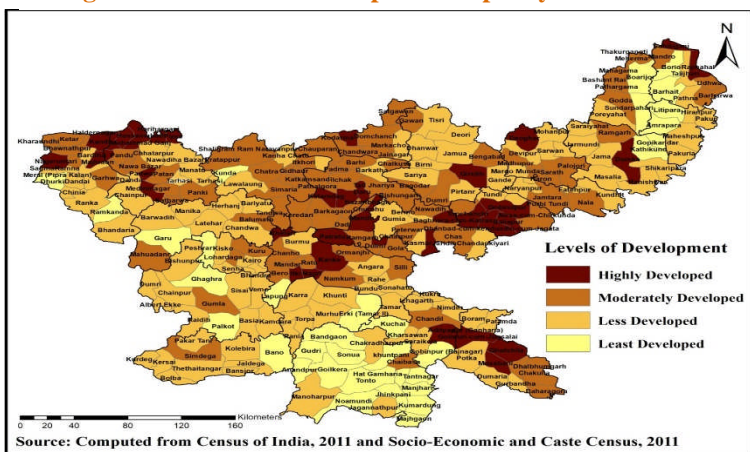
The districts are not uniformly developed. To investigate the intra-district disparity in developing a composite index of development, using Principal Component Analysis (PCA), has been constructed by considering the socioeconomic development, standard of living in terms of income and assets, and availability of physical and social infrastructure and amenities<sup>4</sup>. This index shows that there are pockets of developed areas (administrative blocks)

**Figure 1: District-wise development disparity in Jharkhand**



<sup>3</sup>This composite index has been made by the Institute for Human Development using indicators related with eight dimensions of development, namely 1. Economic wellbeing, 2. Infrastructural development, 3. Asset Ownership, 4. Urbanization, 5. Education, 6. Health, 7. Non-farm sector and 8. Water & sanitation. It has been made using principal component analysis.

**Figure 2: Block wise development disparity in Jharkhand**



Within less-developed districts and less-developed areas within developed districts. For example, Chandankiyari in Bokaro and Tundi in Dhanbad are less developed blocks of highly developed districts of the state. On the other hand, Mohammad Ganj in Palamau and Rajmahal in Sahibganj are the developed blocks of less-developed districts. The index of development of the blocks shows that usually the blocks having district headquarters are comparatively more developed than those having remote or geographically disadvantaged locations (see Appendix 3 for blocks ranking).

**Initiatives to be launched in the next fiscal 2018-19 in line with the Union Budget/State Budget**

Nineteen (19) Aspirational districts have been identified, which will be developed as Model Districts (Centre + State). District level action plan will be prepared

**3.3. Conclusion**

Though the economic performance of Jharkhand has mostly been better than that of the country, its per capita income is less than the all India average. In order to reach the level of per capita income of the country by 2030, the State must accelerate and maintain its growth rate at 10% per annum. In order to maintain consistency in economic performance, there is a need to take adequate and appropriate steps for stabilizing the production of agriculture and other sectors of the state economy.

There is wide sectoral difference in the productivity of the workers and sectoral inequality in the distribution of income in the economy. This is because of a high incidence of disguised unemployment in agriculture sector on one hand and very low labour absorptive capacity of mining and manufacturing sectors on the other. There is a need to improve the productivity of agriculture sector, promote rural non-farm sector and less capital-intensive manufacturing sector, to reduce the dependence of workers on the agriculture sector and to improve the labour absorptive capacity of the manufacturing sector. These developments will also result in the reduction in poverty and unemployment in the State.

Between 2005-06 and 2015-16 (NFHS-3 and NFHS-4), the State recorded impressive improvement in indicators, related to health, education, gender or amenities and infrastructure, but lags behind the national average in most of these indicators. In order to further improve the quality of life of the people, the efforts of the State should be directed towards improving these indicators.

All the areas of the State are not equally developed. The rural areas of the State are less developed than its urban areas. Hence, the districts which are more urbanised are usually more developed than the rest. Among the districts, the corridor which starts from the east and ends at the south-east, where the districts of Dhanbad, Bokaro, Ramgarh, Ranchi, Saraikela-Kharsawan and Purbi Singhbhum are located, is more developed than the districts located in the north-west and north-east of the state. Within the districts, there are pockets of developed areas within the less-developed districts and less-developed areas within the developed districts. Usually, the administrative blocks having district headquarters are comparatively more developed than those having remote or geographically disadvantaged locations. There is a need to pay more attention to the development of its less-developed districts, blocks and villages. To address regional disparities along with raising the level of socio-

economic development and bring about balanced and inclusive growth, focussed attention with convergence and integrative efforts, would be given to the backward districts.

Accordingly special initiatives would be taken to bring about transformation in two most backward (Sahebganj & Pakur), one backward (Godda) and sixteen LWE (Latehar, Lohardaga, Palamau, Purbi Singhbhum, Ramgarh, Ranchi, Simdega, Paschnimi Singhbhum, Bokaro, Chatra, Dumka, Garhwa, Giridih, Gumla, Hazaribag and Khunti) districts of the State as included in the list of 115 backward districts of the country identified by Niti Aayog. Further, as per this macro State Vision and Actoon Plan, all the 24 districts would formulate their own three years Action Plan along with one year roadmap wherein intra district backwardness would also be addressed



## 4. Rural Prosperity and Quality of Life

***Create gainful and diversified livelihood opportunities, ensuring comprehensive inclusion, a robust social protection system and provide basic services to reduce poverty***

### 4.1. Context

With over 75% of Jharkhand's population living in approximately 32,600 villages; and with over 40% of the rural population living Below Poverty Line (BPL) improving the social and economic status of its citizens by developing rural areas has long been a priority for the State Government. To this end, the State has implemented several initiatives aimed at poverty alleviation, strengthening rural infrastructure and providing opportunities to enhance livelihood security of the people living in the rural areas.

In recent years, the State has adopted a more inclusive and results-based approach towards rural development. Some of the major schemes and programmes undertaken in the State are:

- Deen Dayal Antodaya Yojna–National Rural Livelihood Mission (DAY- NRLM) aimed at reducing poverty by enabling poor households to access gainful sustainable self-employment and skilled wage employment opportunities.
- Pradhan Mantri Awas Yojna–Gramin to achieve affordable housing for all by 2022
- Implementing the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) to guarantee the right to unskilled work to all its rural households.
- Mission Antodaya to enable poor households (as per the Socio-Economic Caste Census (SECC) deprivation data) to come out of poverty by 2019.
- “Jharkhand Opportunity for Harnessing Rural Growth (JOHAR)” project–aimed at creating transformative change in the income of rural producers by bringing about a systematic approach for livelihood diversification, introducing a high productivity production system, increased linkage to higher order markets and rural entrepreneurship. The project aims at significantly increasing income of 2 lakhs rural/tribal agriculture and allied producers in 17 districts and 68 blocks across Jharkhand.
- Yojana Banao Abhiyan for increasing the participation of the rural population in designing comprehensive village plans

The vision is to “**create gainful and diversified livelihood opportunities, ensuring comprehensive inclusion, a robust social protection system and provide basic services to reduce poverty**”. In order to achieve the overarching goal of reducing rural poverty, the following goals have been envisaged:

1. Enhancing farm and non-farm livelihoods
2. Financial inclusion
3. Improving access to assets, basic infrastructure amenities (such as affordable housing, road connectivity, sanitation, electrification and health infrastructure) and citizen services
4. Providing social protection and security for all (especially the vulnerable sections)
5. Enhancing literacy, skill development and entrepreneurship
6. Strengthening the local self-governance apparatus

### 4.2. Overarching Goal– Reducing Poverty and Deprivation

Jharkhand is recorded to have 37% incidence of poverty (in terms of the number of BPL households), which is much higher as compared to the national average of 21.9% (as recorded in 2009-10). Additionally in 2011-12, almost 40% of the Scheduled Tribe population of the State fell in the BPL category. The SECC 2011 indicates that around 68% households (34.25 lakh households in numbers) in Jharkhand fall in the “deprived” category and over 80% of such households are in rural areas. While this is lower than its neighboring states, it is still high as compared to states like Kerala (30%) and Punjab (25%). The deprivation criteria considers inadequate shelter, earning members, literacy and other social inclusion parameters.

Through a range of convergent initiatives of various departments, the State aims to achieve reduced income and non-income poverty. Efforts aimed at reducing income poverty pertain to increasing employment opportunities and enhancing existing rural livelihoods. Whereas, non-income poverty interventions include social protection measures for the rural populations, enhancing access to assets, good health and basic citizen services and improving literacy, education and skill development.

**Table 12: Targets for overall poverty reduction**

Indicator	India	Current scenario	Jharkhand target for 2021	Target for 2025	Target for 2030
<b>Total Deprived Households (Any one deprivation + automatically included) %</b>	49.43	54.44	Reduction by 5%	Reduction by 20%	Reduction by 50%
<b>Human Development Index</b>	0.46	0.37*	Among top 10 states of India	Among top 5 states of India	Among top 3 states of India
<b>Workforce Participation Rate</b>	39.79	39.70	42	45	50

\*Jharkhand Fact Sheet- UNDP

The next sections highlight enabling goals that will help the State achieve reduction in poverty and promote rural development in the coming years.

### 4.3. Enhancing Farm and Non-farm Livelihood

#### 4.3.1. Collectivizing rural communities

One of the key interventions planned by the State Government is to promote institutions of the people through mobilizing and collectivizing rural communities. As facilitated by DAY-NRLM, these institutions will support those involved in farm and non-farm activities and enhance their livelihood opportunities through convergence of agriculture, animal husbandry, forest produce based activities and other traditional and non-traditional village based industries. Through collectivization of rural communities, the State aims to increase awareness of alternate livelihood options as well as provide a safety net for poor families.

Communities will be organized in the three-tier structure of Self Help Groups (SHGs), Village Organizations and Federations in order to avail the benefits of livelihoods schemes and programmes as well as undertake economic activity in an organized manner. Additionally, producers and informal producer groups will be aggregated into commercially viable and sustainable Producer Companies and Cooperatives through DAY-NRLM and JOHAR.

**Table 13: Targets for collectivizing rural communities**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Households to be collectivized into SHGs/VO/Federation (in Lakhs)</b>	10.3	30	33	35
<b>Number of SHGs established (in Lakhs)</b>	0.85	2.4	2.8	2.9
<b>Number of producer groups*</b>	100	4,000	15,000	18,000
<b>Producer companies/Cooperatives established</b>	-	40	150	200
<b>Number of beneficiaries undergoing capacity building and training (in lakhs)</b>	8.25	23.5	27	28
<b>Number of community-based service providers trained</b>	3,500	7,500	8,250	9,000

\*These will be federated into larger commercially viable organisations

#### Action Plan 2021

1. Increase in earnings by 50% of at least 18 lakh rural households through agriculture, animal husbandry and forest produce-based activities by 2020-21

2. *Collectivization of rural communities:*
  - a) Collectivization of households in a three-tier community-based organisation structure (SHG, VO, Federation)
  - b) Aggregation of producer households into producer groups and commercially viable producer Companies through JOHAR and DAY- NRLM
  - c) Small Farmers’ Agriculture-Business Consortium (SFAC), National Bank for Agriculture and Rural Development(NABARD) and Rural Development Department will facilitate the establishment of producer companies for economic activities
  - d) Selection and grooming of community-based service providers and resource persons such as barefoot technicians, SHG mates, bookkeepers, masons, etc.
  - e) Training of rural service providers (AKM/APS/AVM/AMM etc.) and linking them with various producers collectives

### 4.3.2. *Enhancing farm-based livelihoods*

Agriculture accounts for a substantially high share in creating employment and livelihood opportunities in the State. Considering that 59% of the workforce depends on agriculture directly or indirectly, investment in agriculture and an increase in farmer’s income will be the backbone for reducing rural poverty and improving the quality of life of people living in rural areas. Farmers/Households would be at the centre of agricultural, and allied sector planning and diversification of livelihoods would be encouraged along with development of support systems for small and marginal farmers.

**Table 14: Targets for enhancing farm livelihoods**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Increase in farmers’ income* (in INR per annum)</b>	Approx. 59,000	1,05,000**	1,47,500	2,36,000

\*Thiagu Ranganathan, “Farmers’ income in India: evidence from secondary data”, page: 28, 2013

\*\* The State aims to double farmer’s income by 2022

### *Action Plan 2021*

1. Doubling offfarmers’ income by 2022 through various activities aimed at improving agricultural productivity, livelihood diversification, capacity building of service providers and farmers
2. Creation of Farmer Producer Organizations and Farmer Producer Companies
3. Enhancing offfarm-based livelihoods through improving land quality and access to technical services
4. Providing better market access for farm produce (through JOHAR and other programmes)
5. Increasing irrigation potential of the State through various interventions

*Detailed targets and Action Plan related to this section are covered in Chapter 4- ‘Doubling the farmer’s income’ chapter of this document.*

### 4.3.3. *Enhancing non-farm livelihoods*

Livelihood diversification and increasing income from non-farm activities is recognized as a key strategy to enhance the rural household income. Major non-farm activities in rural Jharkhand involve dairy, poultry, animal husbandry, sericulture, fisheries, handloom weaving, handicrafts, khadi and village industries and mining and quarrying.

Based on locally available non-timber forest products (NTFPs) (bamboo, lac and leaf, flower, fruit, seed, etc. of many important species) beneficiary-oriented livelihood promotion activities, targeting SC/ST/Other weaker section living in and around forests, has already been a focus for the last few years. The State will strengthen NTFPbased livelihoods and address key challenges pertaining to wages, lack of access to markets, lack of entrepreneurship and business skills among workers.

Jharkhand ranks first in production of tussar silk in the country, employing about 1.25 lakh persons in sericulture. In order to maintain its leading edge, the State aims to rejuvenate the tussar-based livelihoods

including sericulture, handloom, khadi and assist them with/technological upgradation, establish strong market linkages, skill upgradation and capacity building. The State Khadi & Gramodyog Board, established to connect khadi and other village based industries with markets will be strengthened. Similarly, the State will support increased producer linkages to JharCraft, a brand established by the government, links craft persons and micro enterprises with its marketing network to ensure fair price to producer. Additionally, given that access to credit is a challenge in rural areas, the State will ensure a substantial increase in credit linkages for rural households.

Through various programmes such as DAY- NRLM, JOHAR and others, the State will provide strategic and implementation support to support the numerous families in rural Jharkhand depending on animal husbandry, dairy, goat rearing, piggery, sheep rearing, backyard poultry, fishery and others for additional income. Strategies for this have been highlighted in the chapter on ‘Doubling Farmers’ Income’

**Table 15: Targets for enhancing non-farm livelihoods**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Households brought under Livestock, Fishery, NTFP, traditional livelihood interventions (in Lakhs)</b>	5.5	17	25	30
<b>Number of mini lac processing units, tamarind deseeding and brick-making units set up</b>	Mini lac processing unit – 0 Tamarind brick-making unit – 05	Mini lac processing unit – 4 Tamarind brick-making unit - 25	Mini lac processing unit – 8 Tamarind brick-making unit - 35	Mini lac processing unit – 10 Tamarind brick-making unit – 45

### *Action Plan 2021*

1. Strengthening NTFP livelihoods- Minor forest produce collection processing and marketing will be strengthened through inter-departmental convergence, aggregation and appropriate policies on MSPS
2. Increasing tussar and lac host plants plantation activities
3. Establishing mini lac processing units and tamarind deseeding and brick-making units
4. Engaging more than 3 lakh farmers in this sector over 2017-20 with at least 30% to 35% women beneficiaries
5. Creating livelihood-enhancing asset for tribal communities through JTELP
6. Establishing fly-ash brick plants in identified locations to generate local employment
7. Building capacity of handloom and handicraft artisans
8. Connecting handicraft and handloom enterprises to markets through the Directorate of Handloom and Handicraft, Khadi and Gram Udyog Board and JharCraft
9. Developing and providing technical assistance by the State to 56,000 micro enterprises in the farm and non-farm sectors by 2021
10. Leveraging additional skills possessed in the area of handicrafts, tailoring, etc. to develop income generating activities
11. Providing technical assistance and capacity building support to families to undertake animal husbandry, piggery, fisheries, etc.
12. Leveraging national schemes to develop grassroots micro enterprises under Startup India, Standup India, Prime Minister’s Employment Generation Programme (PMEGP)
13. Enabling greater market access to producers
14. Ensuring smooth delivery of schemes, vacant posts of frontline functionaries of all concerned department will be filled up
15. Engaging village/panchayat institutions and Civil Society Organizations (CSOs)/Non-governmental Organizations (NGOs) for effective delivery
16. Organizing decentralized convergent planning exercise similar to Yojana Banao Abhiyan annually for all major programmes

**Detailed targets and Action Plan related to dairy, poultry, animal husbandry and sericulture are covered in Chapter 4– ‘Doubling the farmer’s income’.**

**Detailed targets and Action Plan related to handloom/handicrafts and mining and quarrying are covered in Chapter 12–‘Employment- oriented Industrial Development’.**

#### **4.3.4. Integrated natural resource management**

The State will adopt an integrated natural resource management approach to enhance land productivity, restore ecological balance, ensure food security and enable the availability of fresh water, leading to prosperity of both farm and non-farm livelihoods. Considering the undulating topography of Jharkhand, the State has taken several steps towards conserving and managing water. The State will strengthen its watershed management approach as the predominant strategy to enhance the water availability. The Jharkhand Watershed Mission is the nodal agency implementing the IWMS scheme running 144 project covering an areas of about 300,000 ha., impacting about 5,000 villages across all 24 districts. Additionally, the State is also implementing NABARD supported watershed works that have shifted focus from the regular “saturation” approach to a village-based approach. The project is set to impact over 1,000 village by 2019. World Bank-funded Neeranchal National Watershed Project will undertake research and develop innovative integrated watershed projects aimed at upgrading current projects and ensuring soil conservation.

The State will ensure convergence and efficient implementation of the three core initiatives–Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Integrated Watershed Management Scheme (IWMS) and Pradhan Mantri Krishi Sinchayee Yojana (PMKSY). MGNREGA is critical in developing Natural resource management (NRM) and water conservation related works such as check dams, *dobhas*, wells, etc. In 2016-17, over 2 lakh works were completed in Jharkhand, of which 74% related to natural resource management. IWMS provides considerable support in terms of supplying trained manpower to carry out NRM works based on watershed principle. PMKSY will be strengthened to be the convergence point of all investments in assets related to water management and conservation in rural Jharkhand.

**Table 16: Targets for integrated natural resource management**

<b>Indicator</b>	<b>Current scenario</b>	<b>Target for 2021</b>	<b>Target for 2025</b>	<b>Target for 2030</b>
<b>Total area undertaken for treatment under watershed development (lakh ha)*</b>	8.24	13.74	Not estimated	Not estimated
<b>Irrigation potential utilized (lakh ha)</b>	5.03	Improve by 60%	50% of the potential	80% of the potential

\* Under PMKSY and NABARD-RIDF Watershed Programme

#### **Action Plan 2021**

1. Use watershed approach in area-based development schemes including MGNREGA
2. Provide water assurance by creating several minor, medium and long term irrigation projects
3. Develop community-based irrigation and local watershed management plans
4. Build earthen check dams/ponds and such other assets for harvesting rainwater and treatment of land on watershed principles (to be built through MGNREGS and JOHAR)
5. Construct lift irrigation structures in at least 50 blocks in the State and provide saturation coverage
6. Ensure effective convergence amongst MGNREGS, the Integrated watershed management scheme in rural areas, PMKSY and JOHAR
7. Ensure convergence amongst various departments
8. Ensure completion of all the 144 watershed works currently being built/planned
9. Ensure completion of the 29 watershed projects being initiated through NABARD funding
10. Ensure regular monitoring of the projects underway
11. Establish a new Watershed Commissionerate to ensure building of planned and good quality watershed infrastructure

**Detailed targets and Action Plan related to this section are covered in Chapter 4 –‘Doubling the farmer’s income’.**

## 4.4. Financial Inclusion

As per the RBI report (2015) on financial inclusion, Jharkhand has one of the lowest penetration of bank branches in relation to its population. Additionally, the State has a sparse geographical spread of bank branches. Therefore, in order to ensure extension of financial services (especially those in remote rural areas of the State), the State Government aims to achieve universal financial inclusion of all rural communities beyond basic banking services to all the poor households, SHGs and their federations. This goal will be supported by both Central and State schemes such as the Prime Minister's Jan Dhan Yojna, DAY- NRLM, JOHAR, etc. The State will support setting up of a larger number of rural bank branches as well.

**Table 17: Targets for financial inclusion**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Coverage of households having bank accounts (%)*</b>	100	100	100	100
<b>HH availing banking services (%)*</b>	47*	60	80	100
<b>Number of women with bank accounts under PMJDY (in Lakhs)</b>	53	98	Aim to achieve 100% inclusion	Aim to achieve 100% inclusion
<b>Credit linkage to be provided to the number of SHGs (Lakhs)*</b>	0.22	2.4	2.6	2.8
<b>Number of Business Correspondents</b>	3500	4000	5000	6000
<b>Micro insurance for all under PMJDY and PMSBY (Lakhs)</b>	25	65	To all citizens	To all citizens
<b>Number of new rural bank branches to be opened*</b>	68 (to be opened in 2017)	1600	Will be built as per prescribed norms	

\*Census 2011

### Action Plan 2021

1. Generate awareness drives on financial literacy
2. Develop a cadre of Business Correspondents that will help households located in far-flung areas, access financial services better
3. Ensure access for all to micro insurance and speedy cash transactions through Prime Minister's Jan Dhan Yojna (PMJDY) and Aadhaar
4. Support SHG collectives to access 2,500 crores of institutional credit.
5. Introduce certain new financial products for individuals and SHGs
6. Increase the uptake of basic financial products such as bank deposits, post office savings and LIC policies
7. Regularize State level Bankers' Committee (SLBC) subcommittee meeting on SHGs-bank linkage
8. Ensure financial inclusion of vulnerable households (such as SC, STs, widow or female-headed households, poorest of the poor families, etc.) through outreach of community facilitators like 'Bank Mitras'

## 4.5. Improving Access to Assets, Basic Infrastructure Amenities and Citizen Services

### 4.5.1. Improving access to affordable housing and basic amenities

**Permanent shelter with basic amenities to all rural household by 2022** is one of the ambitious targets set by the State Government. As per the SECC 2011 data, Jharkhand currently has over 8 lakh households living in one- room kuccha house and more than 13 lakh households living in a two-room kuccha house. Therefore, through the Pradhan Mantri Awaas Yojana- Gramin (PMAY-G), the State Government will set up mechanisms to provide hand-holding support to beneficiaries for procuring construction material, house design, and technical aspects and for procuring building materials through vendors available locally, so that they can construct houses of their choice.

Another major priority of the State is to **provide safe drinking water and sanitation facilities to all its citizens**. As per the 2011 Census, only 7.6% of rural household have toilets/latrines, leading to 92% of households to defecate in the open. The present Swachh Bharat Mission (Gramin) envisages providing thrust in achieving the **Open Defecation-Free (ODF) status by 2020-21**.

The State Government has undertaken a target of **100% electrification of households by 2022**. Considering the large rural population, providing connectivity through all-weather roads, upgrading existing roads and building roads and bridges is a key priority of the State Government.

**Table 18: Targets for access to basic amenities**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Percentage of rural households with a pucca house (%)</b>	56*	80	100**	100
<b>Rural road connectivity (km)</b>	32,000	49,200	To be built as per requirement	To be built as per requirement
<b>ODF villages (%)</b>	7.69***	100	100	100
<b>Households with access to Tap Water -for drinking (%)</b>	3.7	Above 10	Above 30	Above 75
<b>% Household electrification (Rural)</b>	43	100	100	100

\*Calculated from SECC 2011 Data [Total Rural households <minus> (758 houseless HH + 3802 living in zero-room kuccha house+ 831,580 living in one-room kuccha house + 1,369,477 living in a two-room kuccha house)]

\*\* The State aims to achieve this target by 2022 itself

\*\*\* India- water MIS, March/April 2017

### Action Plan 2021

1. *Housing for All by 2022:*
  - a) Provide every family with a *pucca* house by 2022.
  - b) Develop a cadre of well-trained masons to help build quality infrastructure, target for capacity building of rural mason will be 7,000 by 2020-21
  - c) Promote area-specific housing design using locally available construction material like, fly ash, cement-stabilized mud cubes, etc.
  - d) Convergence amongst the PRI and schemes such as PMAY-G, MGNREGS, Swachh Bharat Mission for toilet construction, electrification through Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and LPG connection through Ujjawala Yojna
2. Achieve maximum connectivity by road; the State will build 17,200km of road, 10,800 km of repair and 512 bridges in the next three years
3. Ensure all villages are ODF by 2020-21
4. Ensure all rural households to have electricity and receive atleast 22 hours of electricity by 2020-21
5. Enable access of over 75% villages to safe drinking water
6. Ensure convergence amongst PRI and major schemes and departments

*Detailed targets and Action Plan related to this section are covered in Chapter 10–‘Basic Amenities’.*

### 4.5.2. Improving access to and quality of health services

Nationally, Jharkhand falls in the bottom five States, with the lowest life expectancy of 65.6 years in rural areas. However, the State progressed significantly in reducing its Infant Mortality Rate (IMR) of 50 in 2005, to 32 in 2015 as per Sample Registration Survey (SRS) which currently has lesser than the national average of 37. Despite this, the overall access of rural households to any form of health insurance is limited to a mere 13.2% as per NFHS-4(2015). In addition to this, there is significant gap in the availability of health facilities and services at different levels.

In light of this, the State government will prioritize providing health services in deficit regions. The State aims to narrow the gap of the required number of health facilities in rural areas and improve availability by

adding/strengthening Primary Health Centres (PHCs) and Community Health Centres (CHCs) every year; ensure access to critical health care services in rural areas (such as maternal, child and reproductive health, nutrition, addressing challenges posed by communicable diseases and non-communicable diseases (NCD)) and improve the human resource staffing requirements.

**Table 19: Targets for quality health care in rural areas**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Expectation of life at birth in rural areas*</b>	65.6	67	72	75
<b>IMR in rural areas**</b>	35	27	22	18
<b>Percentage of children fully immunized (%) ***</b>	62	100	100	100
<b>Financial risk protection through coverage of government health insurance scheme<sup>&amp;</sup>(%)</b>	65% of BPL	85% of total population	100% of total population	100% of total population
<b>Number of PHCs (Rural)</b>	330	Upgradation of existing facilities as per IPHS norms		
<b>Number of CHCs (Rural)</b>	188	Upgradation of existing facilities as per IPHS norms		

\*Census 2011

\*\*SRS- 2015

\*\*\* MoWCD Rapid survey on children data (2013-14) as on 2016

<sup>&</sup>(RSBY and MMSBY) - BPL+ Those with annual income below Rs. 72,000

### Action Plan 2021

1. Improve the overall maternal health outcomes through various initiatives such as strengthening and expanding antenatal care (ANC) services, setting up referral units with access to the remotest of areas, awareness generation of community members
2. Improve child health through several means such as the availability of neonatal healthcare services; real-time tracking of children in those districts for ensuring all children are covered under universal immunization programme (UIP); expedite coverage of immunization to 30 high-risk blocks in 7 high-priority districts where the immunization coverage is low
3. Create/Expand health infrastructure as per Indian Public Health Standards (IPHS) norms
4. Build capacity of existing medical and paramedical staff and increase staffing at all levels

**Detailed targets and Action Plan related to this section are covered in Chapter 9 – ‘Universal, Affordable and Quality Health’.**

#### 4.5.3. Improving access to citizen services

Strengthening access to basic citizen services is critical in addressing poverty-related challenges in rural Jharkhand. The *Jharkhand Rajya Sewa Dene ki Guarantee Adhiniyam, 2011* (Service Guarantee Act) is promulgated to provide essential services to the common people effectively. The scope of the Act includes citizen services implemented by all departments of the State Government. The State Government is also committed towards enabling access of BPL families to ration cards, bringing its citizens on the digital map so that they can access a range of e-governance services.

### Action Plan 2021

1. Ensure the increased and effective delivery of the Jharkhand state Guarantee of Services Act to its people.
2. Ensure access to ration cards for all BPL and poorest of the poor families through National Food Security Act (NFSA)
3. Ensure access to major e-governance services by the Government through Digital India centres and other mechanisms



4. Ensure **Aadhaar registrations for all citizens** through convergence with major schemes such as MGNREGA, NFSA and financial inclusion schemes.
5. Strengthen the grievance redressal mechanism for citizens by generating awareness on and strengthening the outreach of CPGRAMS (*Jharkhand Samvad evam Samadhan*)

#### 4.6. Provide Social Protection and Security for All

The State Government is committed towards poverty alleviation in rural areas. In light of this, the Government aims to strengthen several social protection programmes currently running in rural areas. Major ones include MGNREGS, Rashtiya Swasthiya Bima Yojana (RSBY), Aam Aadmi Bima Yojana (AABY), Janashree Bima Yojana (JBY), Integrated Child Development Services (ICDS), National Food Security Act, etc. These schemes are universal and can be accessed by all eligible/household citizens. The State also has a large rural population falling in the “deprived” category as per SECC 2011 comprising of vulnerable sections, such as elderly, differently abled, widows and particularly vulnerable tribal groups (PVTGs). Therefore, the State Government is committed to provide social protection and security to these sections of the society.

In order to ensure right to unskilled work as provided for, under MGNREGA, the state has recorded two-fold jump in demand of work in 2016-17, which was about 55% of the rural households demanding more than 14.5 crore person work-days. Besides being a safety net, MGNREGA aims at building quality individual and community-based infrastructure and assets that further improve livelihoods, facilitate access to water and lead to a better quality of life for individuals. The assets developed under MGNREGA in Jharkhand benefit its people in one or more ways. Cluster Facilitation Team (CFT) is another important strategy adopted under MGNREGA to develop technical capabilities to implement the programme at the grassroots level. Currently, there are 29 Civil Society Organisations (CSOs) working in 79 blocks across the State. Convergence across different schemes of various State departments with MGNREGA is essential to develop quality infrastructure, facilitate employment generation and achieve food security. Some of the major schemes that MGNREGS converges within Jharkhand at present are the PMAY-G, IWMS, ICDS, Swacch Bharat Abhiyan and several others.

The State aims to expand the coverage of social security for vulnerable households by providing pension coverage and other benefits through National Social Assistance Programme (NSAP) and other programmes. Another flagship programme of the country that has universal coverage in Jharkhand is the ICDS. The State Government’s aim to reduce malnutrition among children between the ages of 0 and 6 years has reached a new high with the universalization of the ICDS programme. ICDS is implemented through Anganwadi Centers (AWCs). Several other schemes aimed at developing adolescent girls, young women and lactating mothers are implemented through these AWCs. Some of these schemes are – Kishori Shakti Yojna (KSY), Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG), SABLA and Tejaswini. Strengthening of AWCs is critical in ensuring delivery of social security benefits to beneficiaries.

Food security is a major concern for the state of Jharkhand. NFSA 2013 is being implemented in the State since 2015 and covers 86.4% of the rural population. The Government has also taken steps to strengthen the public distribution system (PDS). To overcome the problems of irregularity in distribution of foodgrains and the problems related to defaulters, the State has already computerized PDS. As a result, it has become easier to get updated information on daily transaction and distribution among beneficiaries. The Government of Jharkhand is also making attempts to strengthen the food storage capacity by increasing the number of godowns and expanding the capacity of the existing ones.

**Table 20: Targets for social protection measures**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Average days of employment provided per household (under MGNREGS)*</b>	40.6	Achieve 100 days per household	Achieve 100 days per household	Achieve 100 days per household
<b>Total households worked (under MGNREGS)**</b>	17.43	As per requirement	As per requirement	As per requirement
<b>Coverage of people eligible under</b>	95	100	100	100

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>NFSA (%)</b>				
<b>Coverage under pension schemes*** (%)</b>	Baseline to be established	100% of eligible households	100% of eligible households	100% of eligible households
<b>Beneficiaries outreached through PVTG targeted interventions</b>	-	100%	100%	100%

\*MGNREGA MIS (2016-17 figure)

\*\*MGNREGA MIS (2016-17 figure)

\*\*\*Coverage under Indira Gandhi widow pension Yojna, disability pension and old-age pension Yojana

## Action Plan 2021

1. *Strengthen implementation of MGNREGS:*
  - a) The State Government aims to provide at least 100 days assured employment to an estimated **50 lakh households** in the next three years
  - b) Strengthen demand for MGNREGA and other entitlements through community-based organisations and large-scale awareness-generation activities such as organizing training programmes for community-based organizations on entitlements under MGNREGA; undertaking IEC activities on MGNREGA entitlements and processes on a large scale.
  - c) Ensure robust planning for assets at the village level
  - d) Institutionalize social audit in all programmes such as MGNREGA, IWMP, 14th Finance Commission, NFSA and social pensions.
  - e) Develop incentive-based payment to frontline functionaries for MGNREGA and PMAY
  - f) Pioneer immersion programmes to mobilize committed Rozgar Sevaks
  - g) Scaling up the CFT programme to 187 blocks in the State
2. *MGNREGA convergence with relevant line departments for forward linkage of MGNREGA assets:*
  - a) Formulation of framework for complementary convergence – creation of assets under MGNREGA, forward linkage with relevant line departments, planning, implementation and monitoring by Gram panchayat Community-based Organizations (GP-CBO)
  - b) Setting up of convergence committees at the state, district and block levels
  - c) Linking of MGNREGS workers with Construction Workers Cess Board and rural households with various insurance schemes
3. *Provide food and nutritional security to NFSA beneficiaries and general populace of the state:*
  - a) Development of an Information and Communications Technology (ICT)-based Integrated Nutritional Food Security network to ensure nutritional security in State by 2020-21
  - b) Modernization of Fair Price Shop (FPS) by PPP: Apart from regular Rice, Wheat, Salt, Sugar, K. Oil, FPS can make other consumer goods available to the consumers at a fair price
  - c) Computerization of the PDS operations and use of technology for improving the efficiency and monitoring mechanism.
  - d) Completion of seeding of ration cards with Aadhaar details for all the ration cardholders in the State
  - e) Rectification of inclusion or exclusion error in Antyodaya Anna Yojana (AAY) or Priority Household ration cards through verification
  - f) Grassroots-level transparency that include increased social audits, SMS-like service for dispatch of vehicle, painting of PDS offtake on walls of the FPS, painting of trucks, etc.
  - g) Ensure that rationed articles reaches the eligible without leakage/diversion
  - h) Enhance the efficiency of targeted PDS to ensure food security for all by allocating FPS licence to women SHGs
  - i) Enhance the storage capacity
  - j) Build capacity of the institutions
  - k) Ensure delivery of NFSA entitlements to doorsteps of PVTGs through Dakiya Yojana
4. *Permeate ICDS coverage to marginalized communities:*
  - a) Construction of remaining buildings for AWCs will be undertaken

- b) Ensure outreach of schemes such as Kishori Shakti Yojna, SABLA and Tejaswini implemented through AWCs
  - c) Equip all AWCs with essential supplies
5. Cover all eligible beneficiaries under pension scheme through convergence
  6. Ensure 100% access of PVTGs to identified benefits through various means
  7. Fill up vacant front line staff positions to ensure last mile scheme delivery
  8. Build capacity of stakeholders such as officers, frontline functionaries, Gram Panchayat representatives, community organisations etc. on their roles and responsibilities in various programmes

***Detailed targets and Action Plan related to interventions targeted towards STs and PVTGs are covered in Chapter 5 – ‘Inclusive Growth’.***

#### ***4.7. Enhancing Literacy, Skill Development and Entrepreneurship***

The literacy rate of rural Jharkhand is lower than national average, but significant improvement has been achieved in last decade. The State is committed towards **achieving 100% literacy in rural areas by 2025**. To achieve this target, the State aims to continue existing key interventions and undertake new initiatives for school education through existing schemes like Sarva Shiksha Abhiyan (SSA) for primary level and Rashtriya Madhyamik Shiksha Abhiyan (RMSA), *Sakshar Bharat Mission* and others.

The State Government is committed to enable access to skill-based livelihood opportunities and encourage self-employment. Effective outreach and delivery of Deen Dayal Upadhyay Grameen Kaushalya Yojana (DDU-GKY) scheme – one of the largest skill development initiatives in rural Jharkhand and other schemes such as MGNREGA- LIFE aimed at promoting self-reliance and improving the skill base of the MGNREGA workers and Rural Self Employment Training Institutes (RSETI) – aimed at promoting entrepreneurship amongst rural populations will be ensured.

Promoting self-employment through micro enterprises is an integral aspect of the livelihood strategy under National Rural Livelihoods Mission (NRLM) for poor rural families. Some of the key programmes being implemented by the State are:

- *RSETI* – In Jharkhand, there are 24 operational RSETIs in each district and 1 Rural Development & Self Employment Training Institute (RUDSETI) in Silli Ranchi. A total of 676 trainings were conducted in which a total of 19,605 candidates were trained across Jharkhand. Since inception till FY2016-17, a total of 2,880 trainings have been conducted with 85,030 candidates trained through the RSETI programme.
- *Start-Up Village Entrepreneurship Programme* has been initiated under NRLM in six blocks. It adopts a resource block strategy for promotion of microenterprises with a vision to set up enterprises and provide support till the enterprises stabilize with business skills, exposure, loans for starting and business support during the first critical one year of the enterprises by using the SHGs and their federations network through local CRP-EPs/MECs. 6,791 enterprises would be established/ promoted by 2020-21.
- *Kudumbashree MEC model*- The State is adapting the successful Kerala MEC model to the conditions in Jharkhand. Currently, 850 enterprises have been set up under this project, and a total of 2,400 enterprises are to be promoted by FY2019-20.
- JOHARA aims to identify specific livelihood opportunities first, developing appropriate eco system for higher agriculture and allied production and support enterprises/services and provide skilling assuring 100% placement. The project also envisages developing about 30 Farmer Producer Organizations (FPOs) and 3,400 PGs with entrepreneurs and service providers.

**Table 21: Targets for literacy, skill development and entrepreneurship in rural Jharkhand**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Total literacy in rural areas (%)*</b>	61.11	Above 70	100	100
<b>Number of youth trained**</b>	15,923	79,677	1,79,677	2,79,677
<b>Number of micro enterprises created</b>	1,164	34,000	86,000	1,00,000

\*Census 2011

\*\* Through DAY- NRLM schemes

### *Action Plan 2021*

- 1) Achieve 70% rural literacy by 2020-21 through various initiatives aimed at improving access to insitutations, quality infrastrucure, improved quality of teaching and teacher avaiability
- 2) Overall skilling of 20 lakh youth over 5 years and skilling of 2.8 lakh individuals under DDU-GKY and linking them with dignified employment
- 3) Skill over 90,000 women through various interventions such as DDU-GKY, Tejaswini, JOHAR, etc by 2030
- 4) Train 1,44,500 candidates under RSETI by 2020-21
- 5) Promote self-employment amongst women and build over 77,000 women-based micro enterprises
- 6) Develop a dedicated cadre for skilling and placement personnel known as Job Resource Persons.
- 7) Strengthening of programmes DDU-GKY, PMKVY, RSETI, MRNGREA-LIFE, Kalyan Gurukul, JOHAR, Woman Kaushal College, Nursing College
- 8) Continual implementation of the memorandum of understanding (MOU) with Kudumbshree for the 2nd phase from 2016 to 2019 as part of “Scale-up strategy” in threemore districts.
- 9) Improve training infrastructure and quality of training imparted through various means

*Detailed targets and Action Plan related to this section are covered in Chapter 7- ‘Access to Quality Education’ and Chapter– 8 ‘Skilled Workforce and Growing Entrepreneurship’.*

## **4.8. Strengthening the Local Self-Governance Apparatus**

At a nascent, yet critical stage of development, the State had its second Panchayat elections in 2015 and currently has about 64,000 elected representatives. Recognizing the vital role played by PRIs in decentralized planning and last-mile delivery of various programmes, the State aims to set out a road map to make grassroot Panchayati Raj Institutions the center of convergence and accountability for planning and implementation of programmes of different departments.

The State is currently implementing the *Rastriya Gram Swaraj Abhiyan* (RGSA) focused on strengthening PRIs with adequate trainings, well developed infrastructures for panchayat functioning and human resource support in PESA districts. The State envisions strengthening PRIs by devolving all 29 subjects mentioned in the 11th schedule of the constitution and further building capacity of 64698 elected representatives on diverse subjects of local self-governance.

### *Action Plan 2021*

1. Ascertaining that no elected representatives and functionaries are without induction training.
2. Orientation of Traditional Heads of PESA Gram Sabhas: special provisions in PESA Act 1996
3. To make all GP secretariats functional: adequate infrastructure and facilities for effective service delivery.
4. Effective implementation of RGSA
5. Conduct Social Audits to ensure accountability
6. For holistic development of villages, the State will bring 600 gram panchayats under the Adarsh Gram Yojna/Sansad Adarsh Gram Yojna/PM Adarsh Gram Yojna

*Detailed targets and Action Plan related to this section are covered in Chapter 15-“Transparent and Responsive Governance”.*

## ***4.9. Convergence***

. For the overall success of the strategy, convergence committees will be established and strengthened at the level of the Chief Minister, State departments, as well as the district, block and panchayat level. Community- based platforms such as SHGs will improve convergent planning for livelihood enhancement, strengthening livelihoods through a bottom-up, participatory approach. Considering that PRIs form the base of governance, adequate devolution of powers to these institutions to effective delivery of the envisaged benefits to various segments of the population will be critical in ensuring overall success of the State's vision. The State will conduct social audits and build capacities of PRI stakeholders to ensure regular monitoring of schemes and policies.

## ***4.10. Conclusion***

Mitigating rural poverty is one of the key developmental priorities of the State and the State will address it through a wide range of strategies, including generating livelihood opportunities in both farm and non-farm sectors through collectivization, adopting an integrated natural resource management approach, greater investments in horticulture, enhancing service delivery, creating value chains, developing skills, promoting financial inclusion, including micro insurance, ensuring access to basic services such as affordable housing, drinking water and energy, enhancing access to social protection, convergence of investments and services and finally strengthening local self-governance institutions. The achievement in these areas in a coordinated manner would have beneficial effects on the achievement of several national and state-level goals such as doubling farmer's income by 2022 and halving rural poverty in the next four years. It will also reduce distress migration, trafficking and lead to rural happiness.

## 5. Doubling Farmers Income

**Increase farmer’s income and ensure food & nutritional security through market oriented sustainable agriculture and allied activities**

### 5.1. Context

NSSO data on consumption expenditure survey for year 2011-12 reveals 45.3% of the farm households in the State live under poverty, which is highest in the country. Farmers’ income remained low in comparison with those involved in non-farm sectors. According to estimates based on CSO and NSSO data, non-farm sector provides 2.76 times more productive employment than agriculture sector in rural areas. Focal point of agriculture and allied sector development of the State has shifted from increasing farm output to increasing farmer income. The State plans to “**double farmers’ income by 2022**”, with an increase of around 60% by 2020-21.

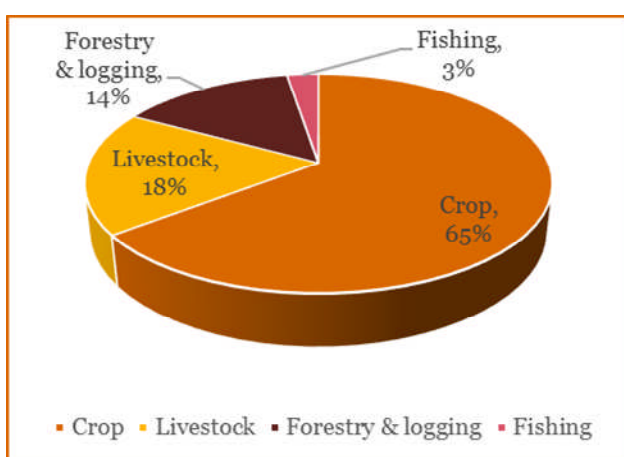
To achieve this goal, the action plan outlines a strong programme for agriculture and allied sector transformation along with specific focus on non-farm activities as well. It includes measures to increase farm productivity, improve price realization to farmers by improving access to markets and appropriate market linkage, shifting to sustainable agricultural practices, strengthening agricultural extension, improving implementation of relief measures and capacity building of farmers to perform non-farm activities. The State thereby aims to transform the scenario of agriculture and allied sectors by technological intervention and application of best practices in the field so as to enhance farmers’ income.

Agriculture and allied activities is the mainstay of the people of Jharkhand with about 75% of State’s population living in rural areas and dependent there on for their livelihood. Agriculture and allied sectors comprise crop production, livestock, forestry and logging and fishing. Among them, crop production has remained the dominant sub-sector with 64.67% share in the sector. Agriculture and allied sectors have recorded an impressive average annual growth of above 5 % between 2011-12 and 2015-16; however, its contribution to the GSDP decreased from 14.8% in 2011-12 to 13.1% in 2015-16.

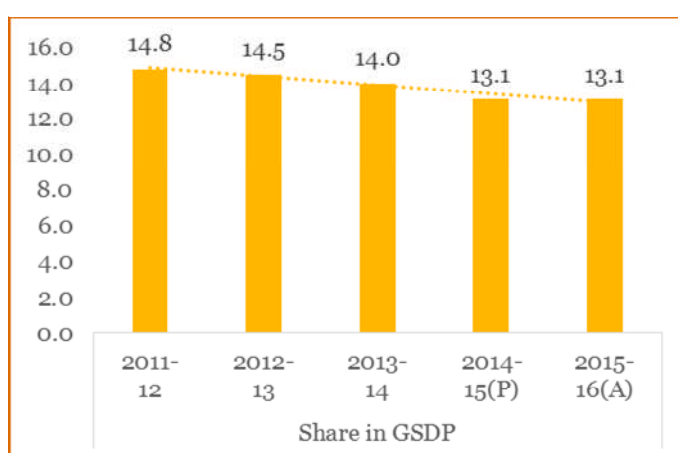
Agriculture accounts for a substantially high share in creating employment and livelihood in the economy of the State. **About 59% of the workforce is dependent on agriculture directly or indirectly.** Agriculture is a focus sector as it brings in price stability, food security, income and livelihood for the majority of the population.

The growth in agriculture sector has a vital impact on the growth of other sectors where the output of agriculture sector is used as input and consequently the GSDP.

**Figure 3: Contribution of different sub sectors in Agri & allied sector**



**Figure 4: Share of Agriculture & Allied Sector in GSDP (% at Constant Price)**



The State Government will focus on the following areas for overall improvement and growth of the sector:

- a) Increasing farm productivity and efficiency to increase farmers’ earning
- b) Enhancing storage and processing capacity for agriculture produce
- c) Improving access to markets and market linkage for farmers to enhance price realization
- d) Shifting to sustainable agriculture practices
- e) Promoting non-farm activities to ensure better livelihood options

**Performance of the State vis-à-vis national average:**

**Table 22: Table showing performance of state w.r.t national average**

Indicator		Jharkhand	National Average
Productivity	Cereal (MT/ha)	2.12	2.33
	Coarse cereals (MT/ha)	1.71	1.70
	Pulses (MT/ha)	1.01	0.74
	Oilseeds (MT/ha)	0.65	1.04
	Fruits (MT/ha)	9.54	13.82
	Vegetables (MT/ha)	13.51	17.59
	Milk (Kg/day/animal)	1.59	2.5
	Inland fish productivity (MT/ha/year)	0.87	1.38
	Goat meat (Kg/animal)	8.64	11.01
	Egg (nos. per bird)	95.14	221.4
Capacity (lakh MT)	Warehouse	2.95	-
	Cold storage	2.22	-
<b>Coverage of population under NFSA-2013</b>		80.16	67.21
<b>Ration card seeded with Aadhaar card (%)</b>		66.94	44.79

Source: FY 2014-15 (Directorate of Economics and Statistics, DAC&FW, GoI) & Indian Horticulture Database, National Horticulture Board, Department of Food and Public Distribution

## 5.2. Improving agriculture productivity

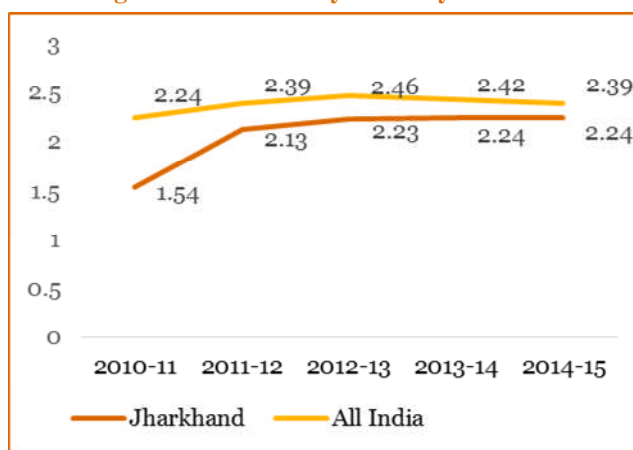
The Jharkhand Government recognizes the need for increasing the agriculture and allied sector productivity as a key factor for the overall increase in farmer earnings and also attain food security for growing population.

The productivity of agricultural crops in Jharkhand has been increasing y-o-y, but the increase has been marginal. Currently, productivity of most of the crops stands below the national average. However, the productivity of pulses is considered to be one of the highest among other States.

Despite good rainfall, state suffers from low productivity due to various factors like low seed replacement rate, low net irrigated area, poor soil health, low farm mechanization, low adoption of technologies, etc.

State is committed to bring in paradigm shift in agriculture sector through various interventions to make farming more profitable and sustainable for all categories of farmers. The State has set specific target for the key indicators in this area in the Table below:

**Figure 5: Productivity of Paddy in MT/ha**



**Table 23: Target for improving agricultural productivity**

Indicator		Current scenario	Target for 2021	Target for 2025	Target for 2030
Productivity (MT/Ha)	Paddy	1.62	2.9	3.5	4.5
	Wheat	1.84	2.2	2.62	4.2
	Maize	1.7	2.2	3.2	6
	Pulses	0.90	1.2	1.7	2.4
	Oilseeds	0.77	1.32	1.86	2.8
	Fruits	10.54	15	20	28
	Vegetables	13.53	19	24	28
<b>Irrigation potential utilized (lakh ha)</b>		5.03	Improve by 60%	50% of the potential	80% of the potential

Source: Annual Plan 2017-18, Department of Agriculture, Animal Husbandry and Cooperation, Govt. of Jharkhand & Jharkhand Economic Survey 2016-17

### 5.2.1. Seed

Quality seed is the most critical for enhancing agricultural production. It is estimated that direct contribution of quality seed alone to the total production is about 15-20%, depending upon the crop and it can be further raised up to 40-50% with effective management using other inputs.<sup>5</sup>

The current **Seed Replacement Ratio** in Jharkhand is **15%** against the national average of **33%**<sup>6</sup>. The State will focus on the areas such as reducing cost of seed and the storage losses, improving on inefficiency of conversion of breeder seed to certified seed and availability of quality seeds, creating awareness about benefits of quality seed, increasing participation of the private seed sector.

**Table 24: Targets related to agricultural marketing**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Seed Replacement Ratio</b>	15	50	To be Decided	To be Decided

### Action Plan 2021

1. Formulate and notify an Agriculture Seed Policy with an objective to attract both public and private sector investments in the areas of seeds by 2018
2. Increase production of certified seed in the State Agriculture Farm and seed villages
3. Operationalize the centralized seed procurement by Jharkhand Agriculture Development Corporation
4. Improve the genetic potential of the various crops by means of releasing new varieties and hybrids in association with Birsa Agriculture University. (2018-2020)
5. Develop and introduce climate resilient varieties for mitigating the risk of climate change (2018-2020)
6. Conduct large-scale front line demonstration to increase adoption and diffusion of new varieties
7. Promote seed cooperatives/seed growers associations, involvement of NGOs, and the establishment of close coordination with input agencies like Krishak Bharati Cooperative Limited (KRIBHCO), Indian Farmers Fertiliser Cooperative Limited (IFFCO), National Fertilizer Ltd. (NFL), NABARD and other agro-input agencies, to reduce the yield gap and quick popularization of new varieties/hybrids. (2018-2020)
8. Strengthen seed distribution system through establishment of agriculture business centres & krishi clinics along with PACS & LAMPS in each district (2018-2020)

### 5.2.2. Irrigation

Crop productivity is critically dependent on irrigation and irrigation application at critical stages of crop is inevitable. The State receives average annual rainfall of 1300 mm and only 20% of the rain water is utilized.

<sup>5</sup>Optimizing Seed Replacement Rates In Jharkhand: Present Scenario, Challenges And Opportunities

<sup>6</sup> Annual Plan 2017-18, Department of Agriculture, Animal Husbandry & Cooperation, Government of Jharkhand



This gives opportunity for better water use through water conservation technologies. Management of rainwater harvesting and storage by construction of runoff management structures, minor irrigation tanks which can be used as providing life-saving irrigation.

**Table 25: Current irrigation potential**

Cultivable area (lakh ha)	27.03
Total irrigation potential created (lakh ha)	9.43
Actual potential utilized (lakh ha)	5.03

Rain fed agriculture is prevalent in the State and it faces the challenge of frequent droughts caused by low and erratic rainfall leading to wide variation in production and productivity. The State looks forward to significantly improve its net irrigated area and move towards irrigated agriculture to decrease the climate dependency of farmers. The State will focus on minor irrigation structure such as check dam, water tank, dobha, renovation of ponds, subsidy on solar pump set, etc. and enhancing water conservation in the forest area, increasing the water use efficiency and improving the quality of water.

In the backdrop of undulating topography of the State and rainfed agriculture, micro irrigation system is the most suited practice. State is promoting micro-irrigation techniques (drip irrigation, sprinklers) to increase water use efficiency and apply water soluble fertilizers (fertigation) efficiently through assistance from Central Government.

**Figure 6: Irrigation Potential Utilized (lakh ha)**



### Action Plan 2021

To increase crop productivity and bringing in more fallow land under cultivation, the State is committed to increase net irrigated area. To ensure national vision of *har khet ko pani*, the State will:

1. Provide water assurance through completion of ongoing minor, medium and long-term irrigation projects
2. Increase area under micro irrigation through effective implementation of PMKSY
3. Construct rain water harvesting structures like farm pond/ dobha and farm bund in all villages
4. Renovate 102 old Major & Medium Irrigation schemes & nearly 1800 Surface Medium Irrigation Schemes by 2020-21 and ensure restoration of lost Irrigation Potential to the tune of 1.36 lac hectare in Major & Medium Irrigation sector
5. Conduct feasibility study for Damodar-Subernarekha link and Subernarekha-Mahanadi link by 2018 with GoI assistance
6. Start construction work for Barakar-Damodar-Subernarekha during 2017-18 to 2019-20 through GoI assistance, which will provide 207 MCM for irrigation
7. Construct piped lift irrigation scheme on Sone river and Command area of Sone lift scheme will be Garhwa, Palamau & Latehar (Dry districts)
8. Construct 1000 lift irrigation schemes (of Rural Development department)
9. Implement Neranchal National Watershed to increase irrigation potential. Soil & Water conservation by “Ridge to Valley approach” under watershed schemes
10. Implement *Tilka Manjhi Agriculture pump scheme* to make available free of cost electricity to small & marginal farmers for irrigation purposes
11. Distribute solar pumps to farmers of non-electrified areas on 90% subsidy basis to promote green energy consumption in agriculture
12. Create awareness about importance of drip and sprinkler irrigation.

### 5.2.3. Farm mechanization

One of the major aspects of agricultural production is the use of agriculture machinery for crop cultivation, harvesting and post harvesting. The use of agriculture machinery brings in increased efficiency in the various agricultural processes such as use of seed sowers, power weeders, rotavator, combine harvesters, Transplanters, crop diggers, etc. The State will focus on increasing the use of agricultural machinery at appropriate

levels to reduce the time spent in various crop cultivation processes and to also bring in increased efficiency in the sector.

Farm power availability in the state is **0.75 Kw/ha against national average of 1.73 Kw/ha**. Small landholding size, undulated topography, low water holding capacity and unawareness among farmers are major reason of low farm mechanization in the State.

Realizing the benefits of farm mechanization in the State started a special scheme under which 1000 SHGs have been helped to establish equipment banks till March'2016.

### *Action Plan 2021*

The state will increase mechanization in agriculture at appropriate level to increase efficiency and to reduce human drudgery. This would be attained by:

1. Establishment of small agriculture equipment bank at panchayat level through Women SHG and large agriculture equipment bank at block level which would act as custom hiring centre.
2. Continuation of distribution of equipment on subsidized rate to promote farm mechanization.
3. Creation of awareness among farmers about importance of farm mechanization large-scale training through ATMA/ JAMTTC (Jharkhand Agricultural Machinery Testing and Training Centre)

### *5.2.4. Cropping intensity*

The State of Jharkhand has a cropping intensity of about 126% against the national average of about 140%. This is attributed to multiple factors as traditional cultivation of agro commodities like paddy by majority farmers, primarily due to lack of availability of assured irrigation, especially during Rabi season and inadequate supply of quality seeds during the Rabi season. State receives about 1200-1300 mm of yearly rainfall, major part of which is lost due to the gradient topography and insufficient water harvesting mechanism. There is an opportunity to convert the non-arable land to arable and ensure the suitable cultivation of crops as suitable to the type of land (example- using upland for pulses and low land for paddy) so as to increase the cropping intensity.

Jharkhand is committed to increase cropping intensity to 135% by 2020-21 and improve further by 2030.

**Table 26: Targets related to agricultural marketing**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Conversion of Fallow land to Cultivable land to increase the net sown area</b>	Baseline to be created	10 lac Ha	12 lac Ha	15 lac HaF

### *Action Plan 2021*

1. Introduction of intercropping and sequence cropping pattern to harvest higher yield and more economic return
2. Growing of low water consuming crops and short duration varieties
3. Water conservation on high priority to minimize runoff of water
4. Promotion of use of mulching practices wherever feasible to grow more than one crop in a year
5. Increase in irrigation potential to provide water at critical stages of irrigation
6. Promotion of usage of Zero till seed drill to save time to utilize left over moisture for cultivation of succeeding crop in Rabi season
7. Introduction of multi cropping with one catch crop/ relay crop between two main crops
8. Selection of short duration crop variety for Kharif as well as Rabi season to accommodate double crop
9. Conversion of fallow land into cultivable land

### 5.2.5. Crop diversification

Demand for high value commodities is increasing rapidly with the rising per capita income, growing urbanization and unfolding globalization. The cultivable land resource of the State has good potential for higher production of horticulture and forest products. Many high value agriculture activities such as horticulture, dairy, apiary, mushroom cultivation and animal husbandry generates good income.

**The State has about 90% cropped area covered under food grains and less than 4-6% of the area is under cash crops<sup>7</sup>.** In order to bring more area under cash crops offering higher price realization, State will encourage farmers for diversification and growing market oriented crops such as fruits and vegetable/ medicinal & aromatic plant/ floriculture, etc. through various State initiatives such as establishment and development of nursery for input subsidy, development of nutritional fruits plant and vegetables, development of quality vegetable and flower sapling and implementation of special crop specific schemes for floriculture and banana, etc.

State plans to provide to the farmers on a large scale for introduction of new crops and hence, State would take required technical assistance from research institute for large-scale high value crop adoption.

#### Action Plan 2021

To promote the cultivation of high value crops and thereby augment in increase in farmer's income, the State will:

1. Formulate new scheme to support commercial agri enterprises in the area of commercial floriculture, apiary, nurseries, etc.
2. Promote high value crops like flowers (gerbera, rose, and marigold), fruits (cashew, papaya, aonla), vegetables (coloured capsicum, broccoli, red cabbage, lettuce, etc.) by supporting farmers under National Horticulture Mission and other State Plan schemes.
3. Promote cultivation of millets, oilseeds and sugarcane through effective implementation of *Vishesh Fasal Yojana*.
4. Promote establishment of hi-tech nurseries by incentivising private players
5. Promote low-cost nursery models for horticultural crops in villages to ensure quality planting material available at affordable prices to the farmers
6. Conduct large-scale front-line demonstration for all identified crops in all districts. Extension officials will play a crucial role in conducting these demonstrations
7. Promote Farmer Producer Organizations and linking farmers to market for high value crops

### 5.3. Improving Animal Productivity

The State Government recognizes the need for increasing the egg, milk, meat and fish productivity to increase farmer income and also attain nutritional security for growing population. One of the basic objectives of increasing animal productivity is to attain self-sufficiency in animal products. The State has set specific target for the key indicators in this area in the table below:

**Table 27: Targets for measuring animal productivity**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Milk productivity (kg/day/animal)</b>	1.59	2.25	2.6	5
<b>Egg productivity (no./bird)</b>	95.1	115	200	220
<b>Meat productivity (kg/animal)</b>	8.64	8.7	10	13.5
<b>Inland fish (MT/ha/year)</b>	0.87	1.28	2.2	3.6

Source: Annual Plan 2017-18, Department of Agriculture, Animal Husbandry & Cooperation, GoJ and Basic Animal Husbandry and Fisheries Statistics 2015

<sup>7</sup> Annual Plan 2016-17, Department of Planning cum Finance, Government of Jharkhand

### 5.3.1. Animal husbandry

In comparison to national average of 65 eggs per capita per annum availability in Jharkhand is only having 15 eggs per capita per annum. Per capita meat availability in Jharkhand is 4 gm per day against the national average of 17 gm per day. **Thus, there is a scope to promote the commercial poultry production to fill the existing gap.** Increasing productivity and production are the major objective of the state to reach to self-sufficiency initially and then to export.

#### Action Plan 2021

As main /subsidiary source of occupation Animal husbandry/fisheries have proved to be important tool of socio-economic change among the rural farming community in Jharkhand. State plans to do the following;

1. Expand and strengthen infrastructure for Artificial insemination across the state
2. Promote backyard and commercial egg production units through various schemes
3. Encourage duck farming along with fish rearing to supplement the egg production in state
4. Strengthen State Poultry Farms and capacity of Layer and Backyard Parent stock
5. Improve genetic potentiality of local goat, sheep and pig by selective breeding and cross breeding programme
6. Strengthen and reorganize existing goat, sheep and pig farms and also to promote private breeders
7. Improve animal health service by strengthening of existing veterinary hospitals mobile polyclinic, referral veterinary hospitals
8. Promote goat and poultry farming in the state through existing SHGs
9. Strengthen skill development programmes of farmers/ Maitri/ Pasu Mitra and others to reduce the incidence of disease

### 5.3.2. Dairy farming

In the agrarian economy of Jharkhand, livestock plays a pivotal role in contribution to income generation, self-employment, tribal development and women empowerment. Milk production activity is an important enterprise to supplement income and reduce under employment of small and marginal farmers and agricultural labourers and it also acts as an important source of nutritional supplement. The agro-climatic conditions of the state are ideally suited for cross-bred milch cattle.

During 2014-15 and 2015-16, the production of milk in Jharkhand increased from **17.34 lakh tons to 18.12 lakh tons**.<sup>8</sup>Per capita availability of milk in the state is 171 gm per day against national average of 322 gm per day. As per ICMR, state requires 28.82 lakh MT of milk against availability of 18.12 lakh MT.

#### Action Plan 2021

1. Promote dairy farming in Jharkhand, good quality cattle will be inducted among the farmers, which will increase their income
2. Provide doorstep services for artificial insemination (AI). Accordingly, a large number of new AI centres will be established in rural areas during next three years, preferably in panchayat headquarters
3. Implement various programmes of fodder and feed development under National Livestock Mission as fodder is a vital ingredient to increase productivity of milch animals
4. Organise frequent animal health & productivity enhancement camps at village level in order to provide doorstep animal health services to the farmers. Also, mobile health facility is to be provided to the farmers for their milch cattle
5. Increase substantially organized milk procurement and area of operations of Jharkhand Milk Federation. Potential villages will be covered under institutional milk procurement network. It has been targeted to bring in 4600 villages under organized milk procurement system by 2020-21
6. Establish Data Processing Milk Collection Unit (DPMCU) at all potential locations in the state within the next three years. Bulk Milk Coolers will be established at strategic locations in all the milk producing clusters of the State within the next three years

<sup>8</sup> Jharkhand Economic Survey 2016-17, Government of Jharkhand

7. Establish milk processing plants of suitable capacity at Palamu, Deoghar, Jamshedpur, Giridih & Sahebganj by incentivizing private players/potential investors
8. Train milk producers and rural unemployed educated youths, Gokul Mitra and Dudh Mitra, as regards improved technologies of dairy farming

### 5.3.3. Fisheries

The State has untapped potential for development of inland fisheries. The State has large number of water bodies developed for multiple purposes supplementing and complementing agriculture and allied activities. *The Fish production, the State has increased from 71.8 thousand MT to 116 thousand MT in last 5 years (2011-12 to 2015-16) at a CAGR of 10%.* However, the per capita fish availability in Jharkhand stands at 2.44 kg/yr. which is lower when compared to national average of 6.31 kg/yr.<sup>9</sup>. In terms of fish seed production, the State has achieved almost self-sufficiency in fry and fingerlings production but it is trying its level best to be self-sufficient in spawn production. In order to support the fish seed production, the State has 14 fish seed hatcheries in government sector.

#### Action Plan 2021

State is well poised for much higher production of fish to attain self-sufficiency in the short term and will aim for becoming a surplus state. State plans to do the following:

1. Promote fish farming in the State by improved practices like rejuvenation of inland water bodies to enhance the fish production, intensive and semi-intensive fish culture in reservoirs through cage and pens system
2. Prepare brood banks for better and scientific management
3. Expand area for seed rearing along with in situ production of seeds near reservoirs and rivers
4. Diversify fisheries through culturing of new species in the State apart from the species cultured in practice
5. Ensure marketing of fish through organization of fishermen cooperatives/ companies
6. Converge fisheries schemes with other Govt. Schemes like MGNREGA (tanks and irrigation wells) and others

### 5.4. Cooperatives

State will strengthen the cooperative structure and collectivization of farmers appropriately to develop socio-economic development of people of the state and to handle this responsibility by providing short- and medium-term production credit through a network of Large Area Multi-Purpose Societies (LAMPS), Primary Agriculture Credit Societies (PACS) and the Co-operative Banks.

The State will facilitate the market linkage activities for agriculture and allied activities, including fisheries, poultry and dairy. The State will focus on appropriate schemes for financial assistance to the societies formed in the State so as to enable them to be equipped with storage facilities. VEG-FED (Jharkhand State Adivasi Cooperative Vegetable Marketing Federation) is working towards uplifting vegetable growers in the State. It is involved in the marketing of fertilizers and vegetables, vegetable seed production, construction of infrastructure for vegetable marketing, etc.

#### Action Plan 2021

1. Construct warehouses/go-downs and cold storages for PACS/LAMPS
2. Computerize 4474 cooperatives headquarters and offices by 2021
3. Create awareness for the crop insurance programme among the stakeholders
4. Create market linkage opportunities in the key markets and significantly enhance the volume of vegetables marketed through VEGFED
5. Create efficient backward linkage and significantly enhance the supply of agri-inputs for the farmer members through cooperative structure

<sup>9</sup> Jharkhand Niti Aayog Vision document. Handbook of fisheries and aquaculture 2011.

6. Plan and implement appropriate capacity building activities for the stakeholders such as beneficiaries under Yuva Kaushal Vikas Yojana (Lac Handicraft) by JHASCOLAMPF (Jharkhand State Cooperative Lac Marketing and Procurement Federation)
7. Create awareness among lac farmers about the value addition opportunities in lac and connecting them to important markets by JHASCOLAMPF (Jharkhand State Cooperative Lac Marketing and Procurement Federation) with an objective to generate additional employment and income generation

### **5.5. Agro forestry**

Jharkhand provides 3.31% of the total forest cover of the country and ranks 10<sup>th</sup> in the country in terms of its forest cover. According to India Forest Survey Report (IFSR) 2015, the total forest cover of Jharkhand is 23478 km<sup>2</sup> with an additional tree cover of 2783 km<sup>2</sup>. Forests form an integral part of Jharkhand's economy covering 32.94% of the state's total geographical area. A significant proportion of the population in Jharkhand depends on forests for their employment. Consequently, the Government of Jharkhand, through its Forest and Environment Department, is focusing on conservation of forests and environment and management of natural resources in a sustainable manner.

There is a great scope for agro forestry in the state as it revives green cover and generates employment. In order to increase the trees outside forests and also to improve the land use by increasing the productivity and income from the farms and other wastelands, the department has come up with scheme, Mukhya Mantri Jan-Van Yojana. Moreover, as the agriculture in the State is mostly dry land farming (especially in the uplands of Chotanagpur), promoting tree species along with indigenous farming systems will help the farmer in times of drought by augmenting the income from farmland.

### **5.6. Storage and Processing Infrastructure**

The development of agricultural marketing infrastructure is the foremost requirement for the growth of a comprehensive and integrated agricultural marketing system in the state. The post-harvest management technology, including cold storage facilities, processing units, etc. has not been commensurate with the vegetable production. The State will focus on improving the processing of agricultural crop within the State. Total cold storage capacity of the State is 2.22 lakh MT.<sup>10</sup> Warehousing capacity has increased from 1.69 lakh MT in 2013 to 2.95 lakh MT in 2015.

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To promote marketing of horticultural and agricultural crops and to minimize post-harvest losses, the State plans to expedite creation of agricultural marketing infrastructure like pack houses, grading and packaging centres, warehouses, refrigerated vans and cold rooms.

1. Promote private sector investments/partnerships in modern storage facilities and processing facilities by formulating enabling policies for private investments
2. Develop integrated storage (dry and cold) network across the State with a common source of information and connecting farms with the storage to ensure minimum wastage
3. Promote construction of cold storages and transportation services such as reefer van
4. Create storage infrastructure for farmers and cooperative societies. There are 3064 newly formed societies across the State out of which only 160 are equipped with go-downs. In 2017-18, requisite amount has been sanctioned for construction of 875 go-downs. Rest of the go-downs will be constructed by 2019-20 by making proper monetary provisions in the coming financial years

### **5.7. Sustainable Agriculture Practices**

Adopting sustainable agriculture practices is key to long-term increase in yield without depleting or disturbing the natural resources of the eco-system. The State has faced occasional water shortages in last few years and this has impacted all the sectors dependent on water. The State Government is committed to adopt available

<sup>10</sup> Agriculture Statistics at a Glance

new technologies and practices to optimize resource utilization and improve the sustainability of the agriculture sector.

In Jharkhand, there is a challenge of soil being acidic in nature (pH is less than 5.5 in 1 million ha of cultivated area) and there is deficiency of sulphur, boron, zinc and copper in 0.15 million ha of cropped area. About 60% of the soil is deficient in phosphorous availability. The sloping landscape of the State, coupled with narrow spread of rainfall, has led to soil erosion and shallow depth of soil.

The State is committed to focus on proper soil management for improving crop productivity and for sustainability. Towards this, GoJ is promoting soil health card scheme, which is a sub scheme of National Mission on Sustainable Agriculture aiming at Integrated Nutrient Management (INM) through judicious use of chemical fertilizers, including secondary and micro nutrients in conjunction with organic manures and bio-fertilizers. As on January 2017, 44,454 Soil Health Cards (SHC) have been printed and distributed in the State covering around 337636 farmers.<sup>11</sup> Consumption of fertilizer in the state is 92 kg/ha as compared to the national average of 140 kg/ha. State is determined to promote judicious use of fertilizer and thus plans to increase fertilizer consumption to 115 kg/ha by 2020-21. The State has established Organic Farming Authority of Jharkhand in 2012. Till April 2016, 30363.73 ha<sup>12</sup> of land have been certified by approved certifying agencies. State will also focus on creating appropriate market linkage mechanism for the organic produce for differential price realization.

**Table 28: Targets related to agricultural marketing**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Distribution of Soil Health Card to Farmers*</b>	Baseline to be created	100	100	100

\*Soil Health Card should be renewed after every three years

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1. Speed up the process of distribution of soil health card so that all farmers comes under its purview.
2. Promote balanced usage of chemical fertilizer by imparting training to farmers
3. Increase the number of LAMPS/PACS for fertilizer handling and distributions
4. Increase the number of private wholesaler/retailers in fertilizer business.
5. Reclaim 5 lakh ha acidic land by 2022;ameliorate acidic soil with adoption of proven technologies developed by the soil scientists and also distribute dolomite & lime for the same;collaborate with steel plants to supply basic slag at nominal rates for amelioration of soil
6. Promote setting up of mobile testing labs by both private and public sector
7. Promote organic adoption under Parampragat Kheti Vikas Yojana, which would lead to increase in soil productivity by usage of natural and organic supplements
8. Promote soil and moisture conservation by way of interventions such as land leveling, bench terracing, retention terracing, field bunding, gully plugging (Upper reaches, Middle reaches and lower reaches).
9. Bring additional one lakh area under organic certification by 2020-21

### 5.8. New technology

Department has established single window system which will act as a one-stop solution for farmers for all its needs. Facilities of information and coordination regarding soil health card, Kisan Credit Card, crop insurance, seed, fertilizer, pesticides regarding information, agriculture implements, details of various ongoing schemes, expert advice of KVK scientists, weather forecast, crop advisory, licence of agricultural inputs, i.e. seeds, fertilizers, pesticides at single point at block headquarters level can be of great importance to farmers welfare.

GoJ plans to leap frog by adopting the practice of Precision Agriculture. Towards this, GoJ plans to pilot the **precision agriculture, an approach to farming which identifies the critical factors to determine the growth of the plan/crop** with the help of State Agriculture University/ private player and then roll out in the State..

<sup>11</sup> Jharkhand Economic Survey 2016-17

<sup>12</sup>Source: Lok Sabha Unstarred Question No. 369, Dated on 26.04.2016.

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1. Promotion of System of Rice Intensification/System of Wheat Intensification for improving yield
2. Awareness creation among farmers about benefits of seed treatment, Integrated Pest Management, Integrated Nutrient Management through strengthening of extension services
3. Creation of soil health profile at village/ GP level. Village/ Gram Panchayat-wise status of NPK and major deficiency is recorded along with recommendation for major crops grown in that village/GP to be recorded
4. Collaboration with SAU (Birsra Agriculture University) for conducting a pilot project on precision farming.

## 5.9. Agriculture Research

Growing population, changing lifestyles, expanding urbanization and accelerated climate changes are creating new challenges for the agricultural research system. Whereas in the past, the challenge was to supply adequate food, but now it is to provide adequate nutrients to promote health. Fortunately, along with challenges, the developments in science are creating new avenues for tackling the challenges.

The State will establish the recently approved **IARI campus** in Hazaribagh. This would possess all the hallmark identities as that of IARI at New Delhi, including all sectors of agriculture like field crops, horticultural crops, agro-forestry, animal husbandry, fisheries, poultry, piggery, silk and lac rearing, honey production, etc.

BAU will focus on the **skill development** in the areas of poultry, fisheries, dairy apart from horticulture and agriculture. BAU will also take up the research works **to solve the major challenges faced by the agriculture sector in the State**, which would include developing improved varieties as per the local conditions, improving the soil and water conditions in the state, effective management of pest and diseases, and improving post-harvest management practices. BAU will also focus on transfer of technologies to the field to enable the adoption of latest available technologies by the farmers.

## 5.10. Agricultural Marketing

Jharkhand State is committed to create an efficient marketing chain and provide technical, storage and other facilities to farmers/farmer groups/producer companies/cooperative societies. This would reduce post-harvest losses and help farmer to take price advantage at a given point of time. The State has set targets for creation of storage capacity and food processing level in the State. The establishment of cold storage will be supported by appropriate measures to ensure the transportation in cold environment to complete the chain (targets are given in the table below).

**Table 29: Targets related to agricultural marketing**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Agri storage capacity (lakh MT)</b>	2.95	6	12	17.5
<b>Cold storage capacity (lakh MT)</b>	2.22	3	7	10.0
<b>Level of food processing (in percentage)</b>	5%	10	26	30

Source: State of Indian Agriculture 2015-16

### 5.10.1. Marketing reforms

The State has 28 identified APMC markets, which covers a total of 603 haats in Jharkhand. The State has focused on integrated development of all the 603 haats. The plan is named as “SAMEKIT VIKAS YOJANA”. In the first phase of development, a total of 65 haats have been identified. The Government of India has launched a scheme for eNAM and 8 mandis are already approved for development in the first phase in Jharkhand. GoJ has reformed APMC Act by including provision for Direct Marketing, Contract Farming and Markets in Private/ Coop Sectors.

Since the State is predominantly agrarian in nature, haats become a major point of sale of harvest of farmers. Providing better infrastructure for handling agri commodities, storages and transportation are paramount for



development of trade. The production of food grain in Jharkhand has experienced a growing trend and so would require a better storage infrastructure for providing food sufficiency.

Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India has identified Farmer Producer Organization registered under the special provisions of the Companies Act, 1956 as the most appropriate institutional form around which to mobilize farmers and build their capacity to collectively leverage their production and marketing strength. The primary objective of mobilizing farmers into member-owned producer organisations, or FPOs, is to enhance production, productivity and profitability of farmers. Department of Agriculture, India, has devised guidelines for the formation of FPOs in the state.

### *Action Plan 2021*

The State Government will undertake the following:

1. Implement market reforms efficiently so as to create congenial environment for all market players
2. Bring all APMC under eNAM and also develop network of State Agriculture Markets in line with the National Agriculture market with a future scope for integration
3. Provide enabling environment for alternative marketing channels for farmers and private player
4. Create FPOs for the benefit of the farmers
5. Develop a well-defined mechanism for dissemination of daily market prices of nearby market yards to the farmers
6. Promote the marketing of the organic produce

### *5.11. Agricultural Extension*

A training Institution (SAMETI) and 24 ATMA district are functional in the State to impart extension services in the State. In the recent years, the Government has prioritized the strengthening of extension services and deployed human resources (*Block Technical Managers, Assistant Technology Managers, Village Level Workers, Kisan Mitras, Matsya Mitras and Bagban Mitras*). Specialized trainingsessions were organized for newly recruited extension staffs. Agriculture Technology Information Centres were set up at all blocks of the State and linked to NeGP programme. The State has started organizing Krushi Mahotsav, a **lab to land programme** which aims at equipping the farmers with the latest technological advancements in the field of agriculture. The State successfully conducted Krushi Mahotsav in 2015 covering about 2.42 lakh farmers in 24 districts of Jharkhand.

### *Action Plan 2021*

The State will undertake the following:

1. Strengthen Extension Training Centre located at Hehal, engaged in imparting training of VLW's and other extension functionaries
2. Promote Krishi Clinics to supplement the extension services, which would provide advisory services to the farmers provide on various technologies, including soil health, cropping practices, plant protection, crop insurance, post-harvest technology and clinical services, for animals, feed and fodder management, market information,etc.
3. Plan and facilitate the capacity building programme for the farmers, including women farmers (about 11,000 farmers including 3500 women farmers in FY 18, 13000 farmers including 3800 women farmers in FY 19 and 14000 farmers including 4200 women farmers in FY 20)
4. Plan and facilitate the capacity building programme for extension functionaries on IEC and management skills (about 600 in FY18, 900 in FY 19 and 12000 extension functionaries in FY 20)

### *5.12. Relief measures*

To mitigate the risk of abiotic stresses like drought and flood State is committed to cover all farmers under crop insurance scheme. The State has set specific target for the key indicators in this in the Table below;

**Table 30: Targets related to crop insurance**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Percentage area under crop insurance schemes to the total area of operational holdings</b>	Baseline to be created	10	60	100

### *Action Plan 2021*

The Pradhan Mantri Fasal Bima Yojana (PMFBM), Central Sponsored Schemes will help in addressing the risks faced by the farmers because of unprecedented environment problems such as floods, droughts, etc. The State plans to do the following:

1. Secure farmers benefits against natural hazards by providing them compensation for the crop loss. This will be achieved by bringing maximum number of farmers under the umbrella of crop insurance scheme
2. Promote the scheme in rural areas by creating awareness about the scheme
3. Enroll more loanee farmers through commercial and co-operative banks

### *5.13. Convergence*

Department of Agriculture, Animal Husbandry and Cooperation works in close collaboration with different departments like Rural Development, Water Resources, and Welfare, etc. Some of the works carried out in convergence include the following:

- Delivery activities have been converged with Jharkhand State Livelihood Promotion Society (JSLPS) like distribution of horticulture crop seeds/sapling
- Agriculture equipment distribution to SHGs formed by JSLPS
- Jharkhand Renewable Energy Development Agency (JREDA) for distribution of solar pumps
- JTDS- sheds will be populated.
- Pump sets for MGNREGA wells

Department is committed to working in close coordination with all concerned departments to optimize benefits and increase effectiveness of operation and reduce duplication of work.

### *5.14. Conclusion*

The State Vision calls for a focused approach to bring in a paradigm shift in agriculture and sector to make farming profitable and sustainable for all categories of farmers. Increasing farm household income through farm and off-farm activities is one of the prime visions of the State. This will be achieved by making timely availability quality inputs at affordable prices to farmers across the state. State will focus on giving water assurance to farmers by creating rain water harvesting structures and promoting micro irrigation in the State. State plans to complete ongoing major, medium and minor irrigation projects to increase irrigation potential. Agricultural extension services will be strengthened for better technology adoption and generation of awareness. Farming will be made more remunerative for farmers by promotion of crop diversification, integrated farming system, crop insurance, etc. by the State. The State plans to strengthen agricultural marketing infrastructures so as to reduce post-harvest losses and to enable farmers to realize better prices of produce on the one hand and providing nutritious food to consumers at stable and affordable prices on the other. The State also aims to create awareness and capacity building activities to promote non-farm livelihood sources like sericulture, NTFP production and value addition, handicraft, etc. There will be focus on evidence based planning for delivering required services in a targeted manner and based on the requirements in the State. Adequate knowledge management will be focused on for which the State will collaborate with reputed institutions in their respective fields, such as State Agricultural University, Indian Council for Agriculture Research (ICAR), Indian Veterinary Research Institute (IVRI), central institutes like Agricultural and Processed Food Products Export Development Authority (APEDA), National Centre for Cold-chain Development (NCCD), National Institute of Agricultural Marketing (NIAM), National Institute of Agricultural

Extension Management (MANAGE) and other technical institutions like World Vegetable Centre and World Fish Centre for agriculture research and promotion.

### **Initiatives to be launched in the next fiscal 2018-19 in line with the Union Budget/State Budget**

- To allow hundred per cent deduction to companies registered as Farmer Producer Companies and having annual turnover up to 100 crores in respect of their profit derived from appropriate/eligible activities for a period of five years from financial year 2018-19. (Centre)
- Government will ensure MSP to all farmers. (Centre)
- Development of existing Rural Haats as Rural Agri Markets with support of MNREGA and other government programmes. (Centre)
- Promotion of organic farming by Farmer Producer Organizations and Rural Production Organizations in 1000 hectare under command. (Centre)
- Development of cultivation of Bamboo (Green Gold) (Centre)
- By identifying suitable places, where fruits and vegetables are produced in sufficient quantity, Food Processing Units will be encouraged so that farmers get fair value by value addition. (State)
- Cold chain facility will be developed for marketing fresh produce. For local storage of vegetables, 100 cold rooms will be built at block level in the state. (State)

## 6. Inclusive Growth

### *Inclusive development with justice and equity for all*

#### 6.1. Context

Jharkhand is home to tribal population of 8.6 million from 32 tribes, having 8.29% of the country's tribal population which comprises over 26% of the state population. The tribal population is distributed across the State with concentration in areas of the South Chhota Nagpur Plateau and Santhal Pargana region. More than 50% of tribal population is below poverty line (BPL) and are dependent on subsistence farming with no secondary source of income. Additionally, these sections of population have been subject to a legacy of underdevelopment. The Government recognizes the need to focus on improving the socio-economic development indicators for this demographic segment.

The key schemes and programmes for the welfare and development of Scheduled Caste (SC), Scheduled Tribe (ST), Particularly Vulnerable Tribal Groups (PVTG) and Other Backward Classes (OBC) are implemented by the Department of Welfare (DoW) in co-ordination with other line departments. The primary focus is on soft interventions related to livelihood and poverty alleviation, school education, referral services for health care, providing land entitlements in the context of Forest Right Act, overseeing implementation of SC/ST Prevention of Atrocities Act, and preserving tribal culture and heritage. Some of the key programmes comprise of Jharkhand Tribal Empowerment and Livelihood Programme (JTELP) covering 1.53 lakh ST families, Agro-based livelihood interventions through Integrated Tribal Development Programme across all tribal districts, operation of 9 MESO hospitals (referral hospitals), 175 residential/day schools (143 residential schools and 32 day schools) for ST with a capacity of about 25500 seats; Pre and Post Metric Scholarship Schemes; skill development through Kalyan Gurukul and Kaushal Kendra, etc. A Tribal Research Institute and Museum for promoting and preserving tribal art and culture has also been established.

Through the various schemes, programmes and inter-departmental convergence, the State is committed to bring about inclusive growth by bridging the development gap existing between tribal and general population. To achieve its inclusive growth agenda, the State will "ensure holistic development of Scheduled area & disadvantage communities, especially ST including PVTG". The focus areas are as follows:

- Improving Quality of Life
- Ensuring delivery of quality education
- Qualitative and sustainable employment and productive livelihood for economic development
- Health for all
- Preservation of Tribal Culture & Heritage
- ST/SC Prevention of Atrocity Act

#### 6.2. Improving Quality of Life

The State strives to provide equitable opportunities and access to basic services for leading a quality life for all citizens, including marginalised and vulnerable communities.

**Universal access to basic services:** The Scheduled Tribes and PVTG communities, in particular, are deprived of several basic services such as durable housing, access to drinking water and sanitation facilities, electricity and access to motorable roads. In case of extremely remote and inaccessible areas, the telecommunication facilities are also not available. Lack of accessibility also impacts provision of other essential services for basic health care facilities, etc. The deprivation ultimately leads to poor quality of life, compared to the other sections of the population who are at the top of the development pyramid. The State plans to reduce the deprivation by saturation of coverage of basic services for all habitations of ST and PVTG by 70% by 2020-21 and 100% by 2030, thereby improving quality of life for the deprived community.

**Targeting the Poorest of the Poor:** The focus is on identifying the poorest of poor households (especially women-headed households) in tribal-dominated districts/blocks and the aim is to enable these beneficiaries to graduate out of extreme poverty.

Additionally, it is also pertinent to strengthen PVTG Authority to render basic services and livelihood opportunities on a priority basis through inter-departmental coordination and convergence.

**Gender Responsiveness in Tribal Development Initiatives:** The development of women within ST and PVTG can help in creating multiplier effect for the development of the ST and PVTG communities. Hence, participation and empowerment of women in economic activities and their mainstreaming will be a focus area for the State.

**Social Mobilization, Financial Inclusion and Livelihood Strengthening:** The approach will be adopted in all tribal districts to enhance community participation and ownership for community assets for sustainability of interventions.

**Table 31: Targets for improving quality of life of SC, ST and PVTGs**

Indicator	Current Scenario	Target for 2021	Target for 2025	Target for 2030
% BPL Population (ST)	73	40	20	Nil
% ST HH with durable housing*	33	80	100	100
% PVTG HH with durable housing	70	90	100	100
% ST HH with access to piped drinking water	69.4	75	100	100
% ST HH with access to sanitation	5.2	100	100	100
% ST HH with access to electricity*	35.10	100	100	100
% SC HH with access to drinking water	70.2	75	85	100
% SC HH with access to sanitation	12.5	15	40	100
% ST HH with access to banking / micro finance	42	50	100	100
% BPL population (SC)	40	38	30	<5
% eligible SC working population undergone skill training	Baseline to be established	20	50	70
% SC HH with access to banking/micro finance	44	50	80	100

\*Source: Census 2011; RSOC 2016

### Action Plan 2021

1. Provide 100% access to housing facilities to all PVTG families under Birsa Avas Yojna in a time-bound manner. Additional budgetary requirement to be met through convergence with Pradhan Mantri Awas Yojna (PMAY)
2. Improve access to drinking water under rural piped water scheme and Solar Based Drinking Water System in the 100 PVTG tola/villages
3. Provide access to electricity (Off-Grid-solar power solutions) facility for PVTG tolas/villages
4. Scale up access to IHHL (Individual Household Latrine) up to 100% SC/ST/PVTG households under Swachh Bharat Mission –Gramin (SBM-G) in PVTG tola/villages
5. Provide access by road to all the inaccessible habitats till 2021
6. 100% coverage of eligible beneficiaries under pension scheme for PVTG and saturating coverage of eligible PVTG population under Dakia Yojna

### 6.3. Ensuring Delivery of Quality Education

Jharkhand as a state has been performing lower than national average in literacy and enrolment, dropout rates at primary and secondary level are higher than national average and gender parity is skewed. The indicators further drop for the ST population. The literacy amongst STs in Jharkhand is 50.6 % as compared to the 66% literacy of the State. Literacy rate amongst female in STs is only 41%.

The State Government is committed to bridge this gap through enhanced adult education programme to target the tribal population and also implement schemes to ensure lower dropouts and higher learning outcomes amongst the vulnerable sections of the society.

Apart from the key interventions already set out in the chapter on education, specific interventions will include strengthening residential schools, interventions to improve attendance and lower dropouts at secondary education level. The provision of vocational education in all the higher secondary schools in tribal districts would be one of the priority areas for the State.

**Table 32: Targets for ensuring delivery of quality education to SC and STs**

Indicator	Current Scenario	Target for 2021	Target for 2025	Target for 2030
<b>Literacy– ST (%)</b>	57.13	65	100	100
<b>Dropout (secondary) – ST (%)</b>	79.8	Below 50	Below 30	Below 10
<b>Dropout (secondary) – SC (%)</b>	30.81	Below 25	Below 15	0
<b>% TSP sub divison having Residential Schools</b>	92	100	100	100
<b>% Secondary schools with vocational education</b>	Baseline to be established	40	100	100
<b>% residential schools with state of art sports facility</b>	Baseline to be established	40	100	100
<b>% residential schools with ICT enablement</b>	Baseline to be established	50	100	100

\*Sources: Census 2011; DISE 2015-16

### *Action Plan 2021*

The specific Action Plan 2020-21 for providing inclusive education and skill development to tribal and vulnerable section of the society are as follows:

1. Reforming Eklavya Model Residential Sschool /Ashram Schools based on Jawahar Navodaya Vidyalaya (JNV) pattern, with provision for quality infrastructure, ICT enablement, state-of-art teaching learning facilities, vocational education, promotion of sports, remedial education and special coaching for competitive exams
2. All residential schools to be provided with Library. Sports Facilities, and functional functional Bio-metric attendance system both for teachers and students
3. Facilitating 100% enrollment and zero dropout
4. Improving teacher-student contact time by deploying full strength of teachers in the residential schools
5. Saturating coverage of all eligible students under Pre and Post-Matric Scholarship; and facilitating Direct Benefit Transfer (DBT) from class II onwards
6. Linking performance of teachers and school grading with learning outcomes of students to enhance accountability
7. Initiating vocationalization in education in 40 residential schools
8. Having functional ICT Lab in 40 residential schools
9. Rationalizing all schools

## **6.4. Qualitative and Sustainable Employment and Productive Livelihood for Economic Development**

The State plans to focus on the sustainable employment and productive livelihood opportunities for the tribal and the vulnerable section for their sustainable economic development. Some of the key initiatives planned includes the following.

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1. All districts of Jharkhand having atleast 1 Kalyan Gurukul, 1 nursing college at Chanho and 1 Women Kaushal college at Ranchi to be made functional with an objective of annual skilling and placement of 7500-10000 youth
2. Graduating 2000 hardcore poor from Dumka (Dumka Sadar & Masalia blocks) and West Singhbhum (Tonto and Jhinkpani blocks) from poverty under targeted interventions of THP project
3. Undertake THP approach (targeting the hardcore poor) to graduate 10000 PVTG families out of poverty in the selected districts
4. 30,000 households to be covered under livelihood intensification programme (livestock & vegetable intensification, pig breeding center, nutrition garden, horticulture etc) in the JTELP project villages
5. More than 100 Lift Irrigation Points to be developed for increasing the irrigation coverage in Raidih block of Gumla district
6. About 680 farm ponds and 230 shallow wells to be developed to improve the irrigation facilities in the project villages of JTELP

### 6.5. Health for All

At present, only 25% of tribal population of the state has access to primary health care, 90% of households do not have access to IHHL and 98% don't have access to closed drainage. The child health indicators for ST population are highly skewed compared to state level and indicators for ST at national level, characterized by high Under-five Mortality Rate. Every second tribal child is malnourished, 53% are stunted and 51% are underweight (RSOC, 2015). Immunization coverage is about 60%.

The Maternal Mortality Ratio and lifetime risk for ST is higher, while institutional deliveries are extremely low (~47%) as compared to the State and national averages. Apart from this, prevalence of Sickle Cell Anaemia and incidence of communicable diseases is very high among ST as compared to the general population. This is a very challenging situation since there is no definitive treatment for curing the ailment.

The State Government is committed to enhance access to health services and bridge the gap between various segments and districts in the States. The vision is to provide "quality and affordable health services to all citizens by 2030". In addition to the overall targets envisaged in the health chapter, the following targets are set especially for the tribal and other weaker sections of the society.

**Table 33: Targets for ensuring health for SCs and STs**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
% Full ANC check- up (ST)	6.6	40	60	100
% Institutional delivery (ST)	46.7	55	80	100
% Children with full immunization (ST)	59*	70	100	100
Underweight children (weight for age below - 2SD) (ST)	51.1	40	30	<5
% Full ANC check- up (SC)	3.6	40	60	100
% Institutional delivery (SC)	50.8	55	80	<95
% Children with full immunization (SC)	56.8	70	100	100
Underweight children (weight for age below - 2SD) (SC)	43.8	40	30	<5

\*Source: RSOC 2016

The convergent action plan developed in conjunction with the collectivized entities in rural areas will focus on key interventions to improve the health indicators. Additional 5 MESO hospitals to be made functional in the scheduled areas of the State. There will be a focus on strengthening of services through enhancing outreach activities at community level through para-medical staff. The State will also focus on the increase in the coverage of institutional delivery in the scheduled areas of the State.

### *Action Plan 2021*

The specific interventions planned by State Government till 2020-21 are as follows:

1. Improving coverage of health service delivery through operationalisation of 5 additional MESO hospitals (currently 9 MESO hospitals are functional) in the scheduled areas of the state
2. Equipping paramedics of 18 Paharia Health Centre with Swasthya Facilities backed by Tele-medicine facilities to improve primary health care service delivery
3. Screening of Sickle Cell Anaemia for all students studying in the residential schools and referral to hospitals for treatment, along with coverage under health insurance
4. Reducing the cases pertaining to tuberculosis and malaria by saturating coverage for curative services and awareness generation in the community through Community-based Organisations (CBO), SHGs, Youth Groups, etc.
5. Observing 100% VHND at AWC level for improving coverage of routine immunization, health check-up and referrals
6. Saturating coverage of complete immunization (BCG, measles and 3 doses of DPT & OPV) amongst children in the age group of 12-23 months in the scheduled areas of the state as per the target set by Department of Health & Family Welfare
7. Promoting kitchen garden/nutrition garden practices in about 20,000 households for enhancing nutrition of tribal communities in the project villages of JTELP

### *6.6. Preservation of Tribal Culture and Heritage*

Committed towards preserving tribal art, craft, culture and heritage, the State established the Tribal Research Institute (TRI), which undertakes research in the themes related to tribal culture and development and has also set up tribal museum for popularizing tribal culture and heritage. Apart from this, the State provides support for infrastructure upgradation of places of worship and cremation of tribal communities. The State government will further strengthen the initiatives as elaborated below.

### *Action Plan 2021*

1. Develop 9 Tribal Martyr's villages as "Model Villages" to provide all basic services, quality health and education with spaces and facilities for promoting tribal art, craft, culture and heritage using the resource gap funding under Shaheed Gram Vikas Yojna
2. Construct need-based boundary wall of SARNA/MASNA (places of worship and cremation) in all tribal habitations
3. Undertake documentation of indigenous medical practices through Tribal Research Institute and take initiatives to preserve and promote the scientific practices among these through health professionals
4. Upgrade Tribal Museum to make it more interactive, informative and engaging for the general masses
5. Preserve and promote tribal art forms through art-based livelihood models for select tribal communities

### *6.7. Implementation of ST/SC Prevention of Atrocities (PoA) Act*

The Scheduled Castes and Tribes (Prevention of Atrocities) Act, 1989 was enacted by the Parliament of India to prevent atrocities against scheduled castes and scheduled tribes. The Jharkhand State government is committed to strengthen the effective implementation of the Act. To this effect, the State undertakes capacity building and sensitization of officials from relevant line departments headed by Development Commissioner Office. State and District Level Monitoring cum Vigilance Committee has been constituted under the Act for processing and disposal of compensation claims of the affected persons.

### *Action Plan 2021*

1. Regularise monthly meetings of the State and District Level Monitoring cum Vigilance Committee constituted under ST/SC PoA Act



2. Set up exclusive courts in the select districts with high incidence of cases under PoA to expedite the processing of claims

## ***6.8. Convergence***

For promoting inclusive growth the Department of Welfare will work in coordination with various other departments including Rural, Health and Education. Further, the State Government recognizes the need for convergence of various initiatives at panchayat and local self-government level to enhance the efficiency and effectiveness of the interventions. The collectivized entities in the rural areas will play a key role in managing the convergent action with frontline staff and officers from the respective departments.

## ***6.9. Conclusion***

The low development among the ST and PVTG impacts the overall human development of the State. Hence, the State intends to take a targeted approach for saturating the interventions for livelihood, improving quality of life, health care and education. Infrastructure upgradation for better access and quality service delivery will be accorded priority since this is a prerequisite for enhancing access to basic services. Greater convergence with related departments will be facilitated for saturating provision of basic services in the scheduled areas. Also, monitoring mechanisms and governance will be strengthened for effective monitoring and facilitating effective service delivery. It is envisaged that the integrated approach will lead to a reduction in disparity in the State and promote more inclusive development.

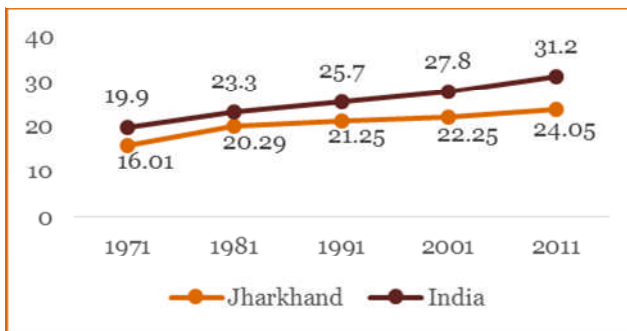
## 7. Improved Urban Living

*To provide 100% basic infrastructure to urban population, thereby making cities efficient, productive and inclusive for better quality of life by 2030*

### 7.1. Context

Urbanization is strongly correlated to economic development and is viewed as a positive indicator while evaluating the overall development of the State. Recognizing urban areas as “engines of growth”<sup>13</sup> the Government of Jharkhand is committed to development of inclusive cities on parameters of Spatial Inclusion, Social Inclusion and Economic Inclusion. Specifically, the State Government is focused on improving the socio-economic conditions of its cities and strengthening urban infrastructure through provision of basic services such as affordable housing, water and sanitation, access to opportunities for economic development

**Figure 7: Trend of urban population (% of total population)**



and all round well-being of the residents, with a view to creating an environment for dignified living, leisure, health and recreation. Additionally, there is also an increased focus on taking corrective actions for tackling city level pollution of ground, air, sound and water to ensure a cleaner and greener future.

A comparative analysis of the trend of urban population as a % to the total population of Jharkhand vis-a-vis the national average is reflected in Figure 10<sup>14</sup>. The State has witnessed a decadal growth in urban population of 32.6 % during 2001-2011 census and is cognizant to the reality of an ever-increasing urban population in the years to come. As a consequence,

sustainable urban development has been recognized as a critical factor to achieve growth and the Sustainable Development Goals (SDGs) for 2030.

The key focus areas identified by the State of Jharkhand are as follows:

1. Access to safe drinking water supply
2. Improving urban sanitation infrastructure
3. Universal access to affordable housing for urban residents
4. Urban Poverty alleviation under National Urban Livelihood Mission
5. Universal access to good quality public transport facilities
6. Tackling city level pollution of ground, air, sound and water
7. Solid waste collection, treatment and recycling (including safe disposal)
8. Strengthening Urban Governance

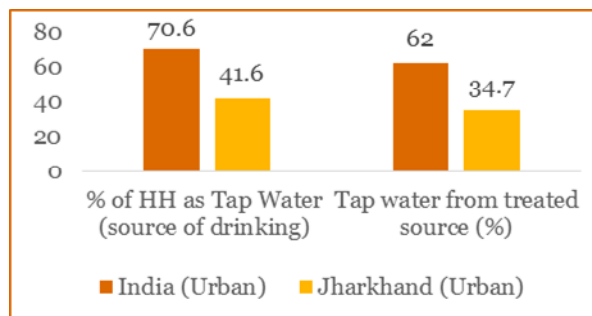
<sup>13</sup> Jharkhand Economic Survey 2016-17

<sup>14</sup> Annual Plan 2016-17 Department of Planning-Cum-Finance; Urban Development Department

## 7.2. Access to Safe Drinking Water Supply

The State Government recognizes that access to safe and clean drinking water is one of the basic provisions fundamental to making an urban centre livable. According to 2011 census, in the urban areas of Jharkhand, around half of the population use tap water as the main source of drinking water and have these within their premises. The State has decadal increase of only 6% on the main source as tap water and only 2% in availability of drinking water within their premises.

**Figure 8: Comparison of Jharkhand with national average on key indicators for drinking water in urban areas (Census 2011)**



The State recognizes the need to augment its efforts on certain key indicators of access to safe drinking water supply.

The State is committed to providing access to safe drinking water supply to all urban households. The State intends to augment its efforts through the central scheme of Atal Mission for Rejuvenation and Urban Transformation (AMRUT).

The specific targets which Jharkhand has set to achieve by 2030 are provided in table below:

**Table 34: Targets set for providing access to drinking water**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
Households having tap water as source drinking water (%)	59.1**	75	90	100
Households having main source of drinking water as <i>treated</i> tap water (%)	34.7#	45	80	100
Per capita supply of water (lpcd)	39.2#	50	80	>135
Continuity of water supply in urban areas (hours)	2.4#	4	15	24
Non-revenue water in urban areas (%)	40.5#	35	25	<20
Coverage of wards under water quality testing at household level	Baseline to be established	Increase by 25%	Increase by 80%	All
Surface/Source water covered under water quality testing (%)	Baseline to be established	Increase by 25%	Increase by 75%	All

# Census 2011

\*\* Service Level Benchmark, Dept. of UD & H, GoJ 2015-16

### Action Plan 2021

#### 1. Augmenting water availability in urban areas:

- Focus on expediting the laying of pipelines for providing drinking water supply within all premises
- Provide uninterrupted availability of safe water to meet the per capita norms of water supply, the State will focus on well-managed water supply systems/schemes
- Maximize use of surface water for drinking purposes through strategies aimed at promoting wider adoption of rain-water harvesting system, etc. For instance, providing tax incentives to complexes which adopt rain-water harvesting (it has recently been started in Ranchi, scaling up of this proposal will be considered by the State), formulation of a policy and action plan for having rain-water

harvesting structures in all commercial, public buildings and new buildings on plots of 300 sq. m and above

- d) Focus on augmentation and strengthening of water supply system of Ranchi, Dhandbad, Chas, Hazaribag and Giridih under centrally sponsored AMRUT scheme
- e) Complete the ongoing state-sponsored water supply schemes by 2020-21. The schemes cover Bundu, Ranchi (missing links), Chirkunda, Manago, Garhwa, Saraikela and Godda
- f) Completenew water supply schemes by 2020-21. These schemes cover Chakulia, Bishrampur, Koderma, Adityapur, Ramgarh, Latehar, Chatra, Manjhiaon, Khunti, Simdega, Basukinath, Deoghar

2. *Providing safe water through quality assurance:*

- a) Enhancecapacities of existing water treatment plants or establishment of new water treatment plants by government or through PPP/community ownership model for supply of clean and treated water for every household
- b) Conduct periodic water quality testing of all source points and water testing of consumption level on a sample basis

3. *Measures for reducing non-revenue water:*

- a) Install Smart consumer meters, train officials on meter calibrations and regular meter testing & calibrations in all 7 AMRUT cities. After the successful implementation in Phase I, it will be replicated in other ULBs as well
- b) Improve data capture for new commissioned connections and reduce data loss

4. *Developing a system for continuous monitoring:*

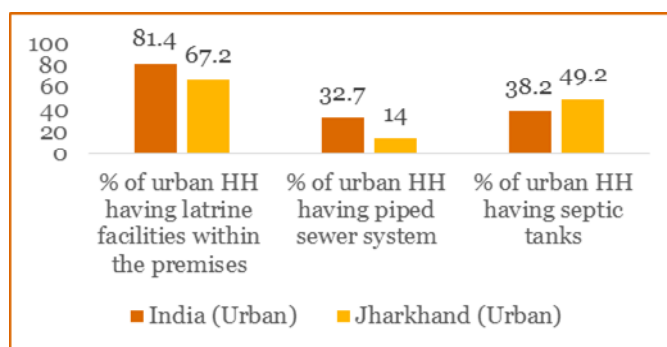
- a) Install SCADA System for all piped water supply system
- b) Develop a state-wide MIS for water quality testing of piped water supply

### 7.3. Improving Urban Sanitation Infrastructure

The status of Jharkhand on key indicators of sanitation as per the census 2011 reports are shown in figure 12. With JNNURM and later Swachh Bharat Mission (Urban), renewed emphasis has been given to improve the status of sanitation in urban areas.

The Government of Jharkhand is focused on implementing proper sanitation practices, sewerage systems and drainage networks for the purpose of not only achieving its the objective of sustainable urban development but also for strengthening the environment and health indicators in the State. The existing Sewerage network in the State is limited to the households residing in the township managed by Govt. PSUs/ Private Companies. The State has envisaged to construct the Integrated Sewerage System in Class-I cities as well as in the cities situated in the bank of river Ganga.

**Figure 9: Comparison of Jharkhand with the national averages on key indicators**



With respect to the storm water drainage systems, most of the Class-I cities of Jharkhand have a combination of both open and closed drainage system with the exception of Adityapur which has provision of only open drainage network. For the Class-II towns, more than half of them currently have open drainage networks.

The specific targets for sanitation in urban areas, which Jharkhand has set to achieve by 2030, are provided in table below:

**Table 35: Targets for enhancing sewerage network**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Coverage of individual household latrine (IHHL)(%)</b>	84.64*	100	100	100
<b>Coverage of community toilets in urban areas (%)</b>	41.36*	100	100	100
<b>% of households having piped sewer system</b>	14**	50	55	60
<b>% of HH having septic tanks</b>	57.39**	65	50	40
<b>% of urban households going for open defecation</b>	17.94*	0	0	0

\*\* Census 2011

\* SBM MIS May 2017

### Action Plan 2021

1. The Government will target completion of 231,018 individual household latrines, 8,106 (no. of seats) for community toilets and 4,260 (no. of seats) under the Swachh Bharat Mission (Urban) by 2019.
2. The State will develop an integrated sewerage system in the towns of Jamshedpur Urban Agglomeration consisting of the areas under Jamshedpur, Mango, Adityapur and Jugsalai.
3. The State has also initiated the integrated sewerage system in convergence with Namami Gange Program in Sahibganj, Rajmahal and Dhanbad. The State is targeting completion of the Sahinganj Sewerage & STP project by 2018 and Rajmahal project by 2019. The integrated sewerage project for Zone – 1 of Ranchi city has been targeted for completion by 2019.
4. The State will undertake septage management in Chas, Giridih, Hazaribag, Ramgarh, Phusrao, Dhumka, Medininagar, Chaibasa, and Deogarh and partly in Ranchi and Dhanbad under AMRUT and other schemes.
5. For tackling the problem of storm water drainage system in various ULBs, the State will undertake the projects to construct Drainage System under different schemes in 12 towns namely Dhanbad, Jamshedpur, Mango, Jugsalai, Adityapur, Giridih, Chas, Hazaribagh, Chaibasa, Medininagar, Dumka and Deoghar.

## 7.4. Universal Access to Affordable Housing for all Urban Residents

The State Government recognizes that with growing urbanization, the growth of slum settlements is inevitable unless appropriate measures are taken for provision of basic infrastructure and housing facilities. Accordingly, the Government of Jharkhand has taken up access to affordable housing particularly for the urban poor who live in informal settlements as a priority mission.

The State has already made considerable headway in its commitment to provide affordable housing for the urban poor. Some key measures which have been undertaken include:

1. Formulation of Jharkhand Affordable Urban Housing Policy 2016 which will be effective from April 2016 and provides for mandatory development of EWS housing, development of affordable housing projects, in-situ development, relocation and rehabilitation, implementation of a credit-linked subsidy scheme amongst others
2. Preparation of Housing for All Plan of Action (HFAPoA) for all cities of Jharkhand
3. Geo-tagging and MIS systems for all dwelling units constructed

The progress and status of the State under one of the major components of the Pradhan Mantri Awas Yojna,<sup>15</sup> Beneficiary Led Construction (BLC), is reflected below:

**Table 36: Progress of the Pradhan Mantri Awas Yojna in Jharkhand (Urban)**

<b>Total No. of approved projects</b>	<b>220</b>
<b>Number of beneficiaries till date</b>	<b>77,688</b>
<b>Total project cost</b>	<b>INR 28130.8 mn</b>

<sup>15</sup> Status as on 21 June 2016, source: Urban Development & Housing Department, GoJ

Based on a primary survey undertaken by the Department of Housing & Urban Development, the total demand for housing has been estimated at ~ 218,000 dwelling units till 2022.

The State Government has set an ambitious target of providing housing to all by 2022. The specific targets which Jharkhand has set to achieve by 2030 are provided in table below:

**Table 37: Targets for access to affordable housing for urban residents**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Population without pucca house</b>	2.18 lakhs	75,000	0	0
<b>No. of EWS houses constructed as a % of total demand projected for 2022</b>	1%	66%	100%	100%

\*MIS Report, July 2017 of UD&HD

### Action Plan 2021

#### 1. Enhancing Supply of Affordable Housing:

- In accordance with the Jharkhand Affordable Urban Housing Policy 2016, the State will mandate the provision of EWS & LIG housing in all housing projects in urban areas for both private developers and project development agencies, except for projects below 3000 sq. m of plot area, which are exempted from reservation of built-up areas /number of units for EWS and LIG
- Under the Pradhan Mantri Awas Yojna, the State will implement the construction of around 90,000 houses under beneficiary-led individual construction and construction of around 51,000 dwelling units under slum redevelopment and relocation
- The State intends to promote innovative technology and building materials for low-cost and mass housing. The State has already approved use of new and emerging technologies in the construction of 40,000 EWS dwelling units under hybrid annuity model on a PPP basis under vertical-3 (affordable housing through partnership) and has floated a global tender for the same
- The State will implement the Jharkhand Affordable Housing Policy 2016 which provides for (1) mandatory development of EWS housing, (2) development of affordable housing projects, (3) in-situ slum development, (4) relocation and rehabilitation, (5) beneficiary-led housing construction and enhancement and (6) implementation of a credit-linked subsidy scheme, amongst others.

#### 2. Increasing transparency in allocation:

- The State will ensure transparent processes for identifying beneficiaries for the projects
- Under the Direct Beneficiary Transfer (DBT), the State will target that 100% beneficiaries get funds under DBT

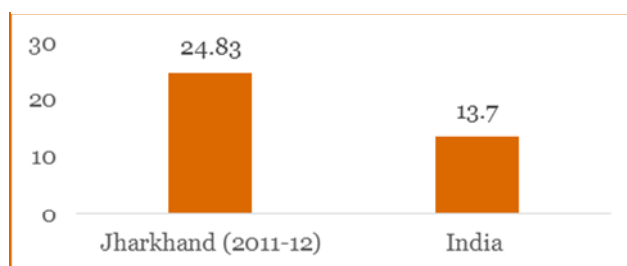
#### 3. Creation of Land Banks:

- An inventory of land holding in cities would be constituted as land bank and an asset management plan would be prepared for better management of the available land and targeting its supply to create affordable housing dwelling units.

## 7.5. Urban Poverty Alleviation

The State is committed to creating opportunities for skill development, leading to market-based employment and self-employment ventures through access to easy access to credit facilities. Comparison of urban poverty to the national average is reflected in Figure 13.<sup>16</sup> Under the centrally sponsored scheme of Deendayal Antyodaya Yojana - National Urban Livelihood

**Figure 10: Status of Urban Poverty (%)**



<sup>16</sup> Annual Plan 2016-17 Department of Planning –Cum-Finance, Government of Jharkhand; Progress Reporting of Urban Development and Housing Department

Mission (DAY- NULM), the State has achieved the following<sup>17</sup>:

1. Vocational training and skill training are being undertaken in all 43 ULBs. Approximately, 100,000 beneficiaries have completed training till July 2017
2. As part of the social mobilization and institution development component, 4554 SHGs have been formed till date
3. In 28 ULBs, total 28,317 street vendors have been identified till date. Allied activities such as formation of town vending committee, issue of identity cards, capacity building to street vendors, linkages with social security schemes and identification for development of vending zones are in progress
4. Under the scheme of shelters for urban homeless, construction of 18 new shelter homes and refurbishment of 12 existing shelter homes are in progress

The specific targets which Jharkhand has set to achieve by 2030 are provided in table below

**Table 38: Targets for urban poverty alleviation**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Cumulative Number of people skilled</b>	100,000*	300,000	800,000	1,500,000
<b>% of certified skilled beneficiaries placed/self-employed</b>	47.82%*	70%	75%	80%
<b>ULB coverage with minimum one shelter for man and woman each</b>	27.27%**	100%	100%	100%
<b>Total number of SHGs formed</b>	4,554	20,000	45,000	70,000

# Census 2011

\*Source: Monthly Progress Report for FY 2016-17

\*\* MIS report May 2017

### **Action Plan 2021**

1. The State will focus on creating industry tie-ups and placement of skilled manpower with NSDC partners
2. A ULB-wise needs/skill gap assessment will be conducted to identify the sectors where skill training is required. The State is committed towards formation of 20,000 SHGs and 250 area-level federations
3. The State will undertake development of new vending zones in remaining ULBs and coverage of vendors under financial and social security schemes
4. The State will endeavor to construct shelter houses in all ULBs on a priority basis

## **7.6. Universal Access to Good Quality Public Transport Facilities**

Increasing urbanization has also resulted in rapid rise in motorized transport in Jharkhand. It is estimated that daily trips in Ranchi alone will increase from around 11.6 lakh trips/day to around 31.6 lakhs by 2037<sup>18</sup>. There is also currently a high level of dependence on personal transport (~85%)<sup>19</sup>.

The Government of Jharkhand recognizes the need for transforming the present operations of the public transportation system to support growing urbanization, including modification of routes, operators, contractual systems, etc. Moreover, there is a need to focus on providing a superior public transportation system, including providing last mile connectivity to provide rapid, comfortable and dependable connectivity and reduce reliance on personal vehicles. In addition to increasing convenience for citizens, it will help reduce pollution as well.

The State has a vision of developing a healthy and liveable city providing its inhabitants safe, accessible, affordable, environmental friendly transport system which results in increasing mobility and accessibility, improving environmental quality of city, improving road safety, developing cost-effective transport system and

<sup>17</sup> Annual Plan 2016-17 Department of Planning –Cum-Finance, Government of Jharkhand

<sup>18</sup> Annual Plan 2016-17 Department of Planning –Cum-Finance, Government of Jharkhand

<sup>19</sup> Annual Plan 2016-17 Department of Planning –Cum-Finance, Government of Jharkhand

social inclusion. The State for this purpose has developed a Comprehensive Mobility Plan (CMPs) for specified cities, including Ranchi, Dhanbad, Jamshedpur, Phusrao, Chaibasa and Chaas, Mango, Adityapur and Jugsalai.

Targets for the cities for which the CMPs have been undertaken have been set with the objective to improve the modal share of public transport and support non-motorized transportation. However, state-wide level indicators and base-lines are yet to be established.

The specific targets which Jharkhand has set to achieve by 2030 are provided in table below:

**Table 39: Targets for urban transportation**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>% of cities for which comprehensive mobility plan is developed</b>	6 cities	100%	100%	100%

\* Town Planning office

The State will focus on strengthening the following indicators:

**Table 40: New indicators for urban transportation**

Indicator
% of cities for which comprehensive mobility plan is developed
Service coverage of urban transport in cities
Availability of urban transport per 1000 population
% of roads having dedicated NMT lanes
% of roundabout crossings with traffic lights
Average distance between zebra crossings/footbridges on trunk roads

### *Action Plan 2021*

#### 1. Reducing the demand/necessity for private vehicles:

- a) The State will develop a comprehensive mobility plan for each city to analyze urban transport status in detail and make appropriate long-term plans for creation of an efficient public transportation system that ensures multi-modal linkages and provides last mile connectivity
- b) Development of metro rail project in Ranchi: The project is currently under approval process with the Government of India
- c) The State proposes to provide grants to ULBs for improving the urban transportation system viz. roads, bridges, public transport, bus stand, bus stops, etc.
- d) A PPP model will be identified for development of busstands
- e) The State will also increase the frequency of local buses, especially on routes connecting residential areas (specifically where affordable housing units are being built) with business districts/market areas
- f) Public transport for women will be increased through provision of a separate assigned space within existing vehicles/routes
- g) A public bicycle share system will be developed in all ULBs and municipalities with a population of 1 lakh and above as per the provisions of the Jharkhand Transit Oriented Development Policy 2016-2026. The system will include a touchscreen kiosk, map of service area and neighborhood, docking system releasing rental bikes for a card or key. Initially it will be launched in Ranchi

#### 2. Adoption of Transit Oriented Development (TOD) Concepts:

- a) The State will develop a BRT and a public bus service by using Intelligent Transport System (ITS) on the buses and centralized control system, including vehicle tracking system, crew scheduling, automatic fare collection system, etc.
- b) Improve walkability within the cities and encourage mixed-use developments that shorten travel distances for access to amenities; the State will introduce several measures such as creation of pedestrianized areas, increase of crossings, introduction of marked maps and improvement in size and quality of pavements
- c) E-shuttle comprising minibuses will be operated on a fixed loop with higher frequency during peak hours and reduced frequency at other times



### 3. Focus on citizen safety:

- a) Kerb ramps will be constructed to ensure accessibility for the differently-abled.
- b) Segregation of bikers, pedestrians and moving traffic with both physical design and traffic light timing cycles will be undertaken
- c) Surveillance through police patrolling, CCTV cameras at important junctions and easy access to integrated Mobile Apps will be increased
- d) The State will provide high mast lights across the city in all ULBs by 2019

## 7.7. Tackling city level pollution of ground, air, sound and water

The State recognizes that urbanization has enormous environmental consequences. Sprawling urban development consumes arable land and vital green spaces. Given the scarcity of land at urban areas and high opportunity cost, it has become increasingly difficult to develop open/green spaces in urban areas. A growing urban population will put immense pressure on the existing resources and also result in a spike in pollution levels. To combat this, the State recognizes the need to adopt various measures to increase the availability of land parcels for development of green spaces in urban areas.

The specific targets which Jharkhand has set to achieve by 2030 are provided in table below:

**Table 41: Targets for curbing pollution**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Percentage of open spaces/green spaces as a proportion of total city space</b>	Baseline to be established	15% of urban areas to be developed as open public spaces	15% of urban areas to be developed as open public spaces	15% of urban areas to be developed as open public spaces
<b>% level of pollution – comprehensive environmental pollution index for urban areas established in 2018</b>	Baseline to be established	-	10% reduction in index	20% reduction in index

The State will focus on strengthening the following indicators:

**Table 42: New indicators for curbing pollution**

Indicator
% of low emission vehicles plying on the road as a proportion of total vehicles
% of green (eco-friendly) buildings in the urban areas as compared to the total buildings
% of total energy consumed in the urban areas that come from renewable energy sources

### Action Plan 2021

1. *Identifying new spaces and enhance supply of land for development of open spaces:* The State is committed to progressively increase the green cover in cities to 15% in five years and for this will develop an action plan which will include measures involving:
  - a) Reservation of 5%-15% of new developments for open spaces to be developed as community greens, neighborhood parks, etc.
  - b) Development of at least one children's park every year in each city. Construction /redevelopment of children friendly parks in all AMRUT cities
2. *Other steps:*
  - a) The State will create and promulgate local level regulations (by ULBs) for overall pollution reduction and prevention of over-exploitation of natural resources

- b) The Government will undertake maintenance of parks, playground and recreational areas through development of People Public Private Partnership (PPPP) mode
- c) A state-level policy will be developed to implement the parameters given in National Mission for Sustainable Habitat<sup>20</sup>
- d) Promoting energy audits and energy performance standards
- e) Establishing and implementing protocols for traffic signal system settings that result in reduced exhaust emissions

## 7.8. Solid Waste Collection, Treatment and Recycling (including Safe Disposal)

Solid waste generation and urbanization are intimately related. A growing urban population means more solid waste and higher impact on environment and health, thus, necessitating the establishment of appropriate waste management practices. In 2016-17, out of a total 828 urban wards, the door-to-door waste collection has been facilitated by the State in 243 urban wards.<sup>21</sup> The State in FY 2016-17 has taken several initiatives for improving the solid waste management system and infrastructure viz. 15 SWM schemes have been approved by the Cabinet at a project cost of Rs.2182.21 cr, 4 DPRs are under administrative approval and 21 DPRs are being prepared. Concessionaire has been appointed in 5 ULBs on PPP model. A levelized tariff has been approved by Jharkhand State Electricity Regulatory Commission to support Waste to Energy project for 11.5 MW Ranchi Municipal Corporation.

City sanitation plans for 24 ULBs have been prepared and uploaded. Despite the progress, the Government of Jharkhand recognizes the scope to further improve and strengthen the infrastructure given the comparative performance of the State vis-a-vis the national average on key indicators of percentage of total solid waste collection and percentage of solid waste treatment<sup>22</sup> (reflected in figure 14).

In order to keep the city clean and pollution free, the State is prioritizing collection, transportation, treatment and disposal of household waste in a scientific and systematic manner.

The specific targets which Jharkhand has set to achieve by 2030 for this goal are provided in table below:

**Table 43: Targets for solid waste management**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Cities/Towns (ULBs) having scientific solid waste management (SWM) system (%)</b>	0*	50	100	100
<b>Household level solid waste collection (%)</b>	30*	100	100	100
<b>Solid waste treated (%)</b>	<6*	70	100	100

\* SBM MIS, May 2017

### Action Plan 2021

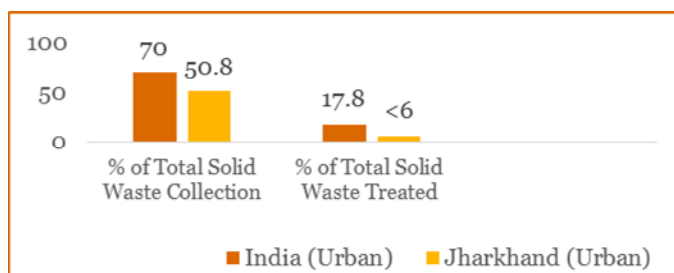
1. **Institutional strengthening:** The State will focus on strengthening municipal corporations and urban local bodies for developing solid waste management system in their respective cities and towns.
2. **Solid Waste Management:**

<sup>20</sup> The National Mission for Sustainable Habitat is a component of the National Action Plan for Climate Change. It covers (1) Extension of the energy conservation building code, (2) Better urban planning and modal shift to public transport, (3) Recycling of material and urban waste management etc.

<sup>21</sup> Jharkhand Economic Survey 2016-17

<sup>22</sup> Annual Plan 2016-17 Department of Planning –Cum–Finance, Government of Jharkhand

**Figure 11: State Indicators in Comparison to India**



- a) The State will design a policy to incentivize resident associations to ensure 100% door-to-door collection of solid waste, treatment and recycling (including disposal)
- b) A PPP model will be identified for the development of a waste to energy conversion plant to ensure 100% waste to energy conversion
- c) Complete the centrally sponsored Sahibganj & Rajmahal Solid Waste project by 2019
- d) Target establishing onsite compost treatment machines in urban areas.

## **7.9. Strengthening Urban Governance**

The State is focused on strengthening governance through capacity building initiatives and providing more power to the ULBs. Some of the measures that have been undertaken entail:

1. Professionals have been recruited at State and ULB levels under different projects like NULM, AMRUT, Namami Gange and SBM for effective implementation and monitoring. City managers have been recruited and placed in all ULBs to assist executive officers
2. Municipal cadre have been notified and 1,242 posts of Technical/non-technical positions have been sanctioned. The recruitment is currently under process
3. Augmentation of double entry accounting system and appointment of internal auditor in all urban local bodies
4. Jharkhand Urban Planning and Management Institute is being set up for capacity building and training of the technical and management officials of the ULBs. It is aimed to promote excellence in urban governance among other aspects
5. Credit rating of 41 ULBs has been completed. The State is targeting to enhance the credit worthiness of the ULBs. Value Capture Finance (VCF) tools are being implemented in Ranchi. This will help in mobilization of external funding
6. Governance through electronic medium is proposed for prompt, transparent, leakage free and effective delivery of services particularly in the field of building permission, different licences being issued by ULBs, certification, revenue collection, expenditure and resource mobilization. Various online services are functional and being used by the citizens and many ICT-based solutions have been proposed for the coming years
7. The concept of performance budgeting is proposed to be introduced to empower the ULBs financially

## **7.10. Convergence**

Inter-sectoral and inter-departmental convergence is a critical component for achieving sustainable urban development. The State recognizes that to successfully achieve its vision and deliver on its targets, seamless functioning across the departments will be critical. For instance, to achieve the target for affordable housing, a cohesive action is required from the housing department, department of drinking water and sanitation (to provide access to safe drinking water and adequate sanitation facilities for making the dwelling units liveable), transport department (to provide inter- and intra-city linkages which would make such dwelling units accessible) amongst others for attaining success of the project. Further, even some of the schemes such as AMRUT (centrally sponsored scheme being implemented by the State) themselves are designed for achieving convergence. For a more effective resource utilization, convergence of central and state programmes and schemes is essential.

It thus becomes imperative that all departments involved are collaboratively invested in the goals and visions. The State intends to achieve the same through a formal convergence mechanism and through frequency in interaction, common platforms and collaborative monitoring and reporting.

## **7.11. Conclusion**

The Vision calls for expediting sustainable urban development and management to provide basic infrastructure to the urban population with a view to make the cities efficient, productive and inclusive for a better quality of life. The State aims to achieve this through a set of targeted actions in the key focus areas of (a) access to supply of safe drinking water; (b) collection, disposal and reuse of treated sewage water; (c) urban poverty

alleviation through skill training; (d) provision of high-quality public transportation; (e) affordable housing for all; (f) tackling city-level pollution; and (g) solid waste disposal and treatment.

In order to achieve its goals and ensuring a sustainable impact, the State will focus on creation of an enabling environment with specific emphasis on greater accountability measures, capacity building of ULBs and elected representatives and strengthening inter- and intra-departmental convergence of the various central and state-sponsored schemes pertaining to water availability, access to sanitation facilities, housing facilities and urban poverty alleviation. The State will also focus on leveraging resources for urban development through public and private partnership.

## 8. Access to Quality Education

*Holistic, inclusive, quality and child-centric school education for all*

### 8.1. School Education and Literacy

#### 8.1.1. Context

Education is a key enabler for human development, as also iterated in the Constitution of India, which considers right to education to be a fundamental right. The Sustainable Development Goals also place significant emphasis on providing universal access to quality and inclusive education at all levels.

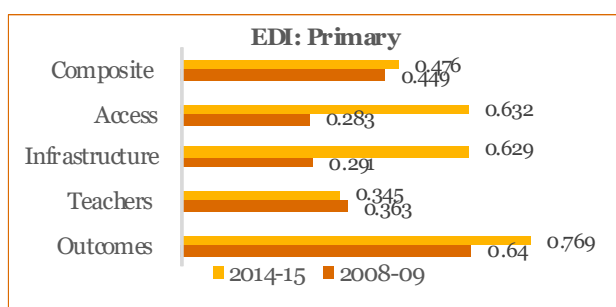
School education in Jharkhand is imparted through 47,441 primary and 4,601 secondary schools, where the total student enrolment is 81 lakh students. At present, a total 1.95 lakh teachers and 70,000 para teachers are employed in the system. The State has already achieved universal access to elementary education as per Right to Education norms (one primary school within 1 km radius and 1 upper primary school within 3 km radius of every habitation). Over last few years, significant improvement has been registered in infrastructure and quality of primary education. The State is now focusing on strengthening education at secondary level and addressing the challenges related to equity and inclusion.

Going forth, the key focus areas for the State for improving school education are as follows:

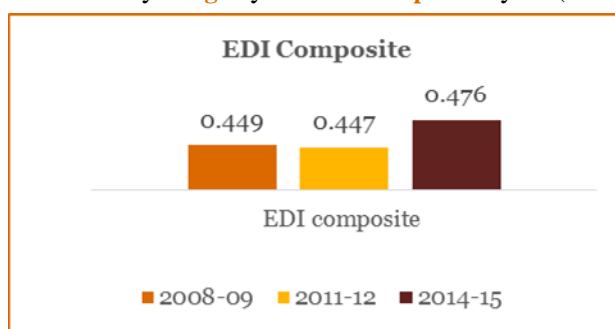
1. Improving the quality of education and learning outcomes
2. Improving enrollment and reducing dropout at secondary level
3. Addressing regional disparities in terms of enrollment, access and learning outcomes with special focus on marginalized communities and underserved areas
4. Strengthening access and infrastructure and vocationalisation at secondary level
5. Strengthening monitoring and governance

Over the next three years, the State Government plans to continue the existing key interventions and take new initiatives for school education through existing schemes like Sarva Shiksha Abhiyan (SSA) for primary level

**Figure 12: EDI Primary**



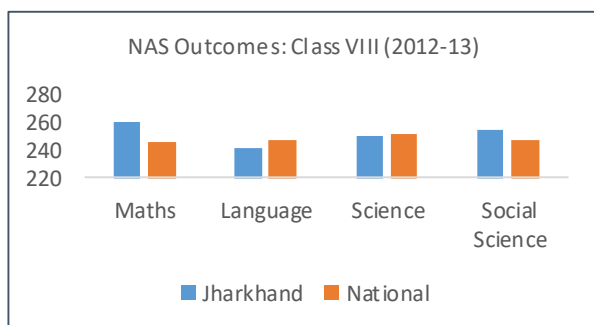
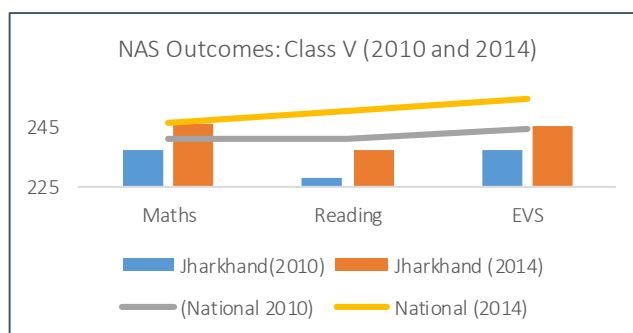
and Rashtriya Madhyamik Shiksha Abhiyan (RMSA)



for secondary level. Other major schemes which would be implemented are Kasturba Gandhi Balika Vidyalaya (KGBV), Jharkhand Awasiya Balika Vidyalaya (JABV), Mid-day Meal and Mukhaymantri Vidyalaxmi Yojna. In addition, new initiatives will be launched for enhancing community participation and promoting life-long learning. The targets and action plan for the same are further elaborated in the following sections.

The overall quality of education at primary level has improved significantly as indicated by Education Development Index (EDI) over a period of seven years. This is mainly attributed to the thrust on enhancing access, upgradation of infrastructure, introducing and developing cadre of 70,000 parateachers.

In case of learning outcomes measured by National Achievement Survey (NAS) for primary and elementary, Jharkhand has consistently performed better than national averages. However, the scores are comparatively lower than more progressive states such as Kerala and Tamil Nadu, indicating need for significant improvement in terms of overall quality of education.

**Figure 14: NAS Outcomes: Class VIII****Figure 15: NAS Outcomes Class V**

Considering the overall performance of school education, the State plans to focus on concrete measures for improving quality of education at all levels through provision of better infrastructure, ICT enablement, vocationalization at secondary level and capacity building of teachers.

The specific targets which Jharkhand has set to achieve by 2030 to improve overall quality of education and learning outcomes are provided in the table below:

### 8.1.2. Improving overall quality of education

**Table 44: Targets for improving overall quality of education**

Indicator	Current Scenario		Target for 2021	Target for 2025	Target for 2030
	India	Jharkhand			
<b>Composite education development index (EDI - Primary)</b>		0.476	0.550	0.800	1
<b>Composite education development index (EDI - Elementary)</b>		0.485	0.500	0.800	1
<b>PTR (Primary)</b>	23	27	30	30	30
<b>PTR (UP)</b>	19	17	30	30	30
<b>PTR (Secondary)</b>	27	62	45	35	35
<b>PTR (H.Sec)</b>	37	78	50	40	30
<b>% Teachers trained</b>	NA	83	100	100	100
<b>% Secondary schools with ICT</b>	NA	22	70	100	100
<b>% Secondary schools vocationalized</b>	NA	9	20	70	100
<b>% hostels upgraded to provide facilities for learning and life-skills education</b>	NA	New Indicator	20	50	100

Source for current scenario: DISE 2015-16;

Note: EDI is computed by NEUPA using data from DISE; EDI comprises of 24 indicators in 4 categories, i.e. Access, Infrastructure, Teachers and Outcome.

### 8.1.3. Improving learning outcomes - Achievement in National Achievement Survey (NAS)

Table 45: Targets for improving learning outcomes

Indicator	Current Scenario		Target for 2021	Target for 2025	Target for 2030
	India	Jharkhand			
Mean Achievement in NAS scores for class III: Language (%)	48	48	53	56	60
Mean Achievement in NAS scores for class III: Maths (%)	54	50	55	60	65
Mean Achievement in NAS scores for class V: Language (%)	48	46	50	55	60
Mean Achievement in NAS scores for class V: Maths (%)	48	47	52	58	65
Mean Achievement in NAS scores for class V:EVS (%)	49	47	52	58	65
Mean Achievement in NAS scores for class VIII: Language (%)	49	48	53	60	65
Mean Achievement in NAS scores for class VIII: Maths (%)	49	52	57	65	70
Mean Achievement in NAS scores for class VIII: EVS (%)	50	50	55	60	65
Mean Achievement in NAS scores for class VIII: Social Science (%)	49	51	56	65	70

\*NAS Class III, 2012; NAS Class V, 2015; NAS Class VIII, 2012; National Centre for Education Research and Training (NCERT)

#### Action Plan 2021

1. Textbook development/revising curriculum content with local context and activity-based learning for classes VI to IX: The State has already revised curriculum content to incorporate local context and activity-based learning upto class V. Revision for class VI, VII and VIII has been completed in 2017-18 and class IX revision will be completed in 2018-19
2. Teacher recruitment: Total 18,068 TET (Teachers Entrance Test) qualified teachers were recruited during 2016-17 to meet the shortfall in the number of teachers. 16000 teachers are being recruited during 2017-18 at secondary level so that the PTR can be maintained. If there is any left over against the set target, that will be met during 2018-19.
3. Early Grade Learning to be strengthened: Activity Based Learning (ABL) has been made operational for classes I and II across all primary schools during 2015-16 to 2016-17. This practice will be further strengthened through teacher training and handholding of teachers through Parivartan Dal.
4. Introduce and strengthen Pre-School Education: "Shishu Sadan", i.e. pre-school classes has been introduced in schools from academic year 2017-18 with 40 seats per school for providing school readiness programme for age group 5. This will be continued and strengthened in subsequent year. It is expected that this would further help in enhancing learning outcomes at primary level.
5. Strengthen monitoring for improving quality of education and learning outcomes: The specific interventions envisaged are as follows:
  - a) Effective implementation of Continuous Comprehensive Evaluation (CCE) by scaling up State Level Assessment System (SLAS) up to secondary level comprising of Formative, Mid-year and Summative assessment of competency-based learning assessment (currently implemented upto elementary level) and linking it with performance of teachers.
6. Continue State Education Supervision Mission (SESM) to review interventions for improving quality of education, identify gaps, suggest measures for strengthening and provide technical support for implementing corrective measures.

7. Scale up coverage of all schools upto higher secondary level under eVidyavahini (currently only upto elementary level) to enable real-time monitoring of attendance of students and teachers, infrastructure upgradation, training-sessions for teachers and learning outcomes of students
8. Facilitate school grading based on 61 parameters for school management, including learning outcomes
9. Introduce online grievance redressal system for registering and facilitating addressing of grievances across all interventions for school education
10. Involve effectively development partners for facilitating School Audit, SMC Sammelan, RTE Stocktaking, SMC training, preparation of School Development Plans, etc.
11. Strengthen pre-service and in-service training and continuing education: The State has already initiated measures in 2016-17 plans to strengthen these measures on an ongoing basis as given below:
  - a) Establishment of Jharkhand Council for Education Research and Training (JCERT); operationalise one Institute of Advance Studies in Education (IASE) at state level and three Centres for Teacher Education (CTE) at regional level; establishment of four new DIETs in Khunti, Dumka, Pakur and Kodarma and establishment of Block Institute of Education and Training (BIET) in selected districts. All new institutions will be provided with requisite infrastructure and qualified staff
  - b) Promotion of Maths. Edu through Maths Labs in two DIETs

## Access and Infrastructure

Although the State has achieved universal access to elementary education as per norms of Right to Education Act, 2009, improvement in access and infrastructure at secondary level is comparatively lower, and there is a shortage of secondary schools (4,600 available against requirement of ~ 6500 schools). Regional disparity is also observed, wherein the remote areas are comparatively underserved, further leading to early dropout, especially among the tribal students and girls.

Considering the shortage of schools at secondary level and low access in remote areas, the State plans to upgrade the infrastructure of existing schools to improve access to upper primary and secondary level, in compliance with RTE norms. The targets for upgradation are as follows:

Figure 16: Density of Schools per 10 sq. km

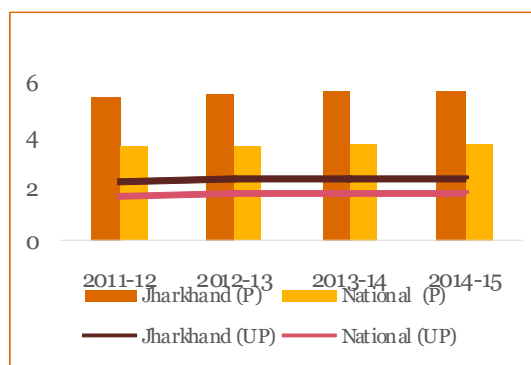


Table 46: Targets for upgradation of secondary schools

Indicator	Current scenario*		2021	2025	2030
	India	Jharkhand			
% habitations with upper primary school within 2 km	New indicator	New indicator	100%	100%	100%
% habitations with secondary school within 5 km	New indicator	New indicator	100%	100%	100%
% habitations with higher secondary school within 7 km	New indicator	New indicator	100%	100%	100%

\*UDISE 2014-15

### Action Plan 2021:

1. Providing universal access to secondary education by 2020-21: The State has planned to provide upper primary schooling facility within 2 km; secondary school within 5 km and higher secondary school within 7 km of habitation across the State to enable universal access to all levels of school education by 2020-21. Setting up of new 189 secondary schools and 280 new higher secondary schools is in progress and expected to be completed by 2017-18. The remaining will be set up by 2020-21 to achieve the target
2. Upgrading facilities of all schools by 2020-21:
  - a) The schools with deficit in facilities will be upgraded by providing bench and desk for all classes, electricity, laboratory, library, kitchen sheds and boundary wall



- b) Maintenance of toilets for girls and boys will be given attention and “Swacha Vidyalaya, Swastha Bacche” (Clean School, Healthy Students) campaign for sanitation will also be continued.
  - c) The upgradation of the schools and appropriate usage will be monitored through “Partivartan Dal” (Team of Teachers at cluster level for monitoring schools in the cluster) and “Hamara Vidyalaya Kaisa Ho” campaign.
3. Strengthening and continuing infrastructure – based initiatives for promoting equity and inclusion for differently-abled children and out-of-school children on an ongoing basis:
- a) Provision of ramps at all schools for facilitating mobility of differently-abled children
  - b) Sevenseasonal hostels set up for the children from migrating families will be continued and scaled up as per requirement
  - c) Drop-in Centres i.e. 26 “Utpreeran Kendra” for out-of-school children and 10 “Indradhanush” Schools for orphan children and children in need of care and protection will be continued.

#### 8.1.4. Enrollment and dropout

Since last four years, the net enrollment ratio (NER) has improved and is higher than national average at primary and upper primary level. At secondary level, the NER has been comparatively low at both national and state levels. However, the State has been improving faster than the national average, primarily due to focused initiatives for increasing enrollment and reducing dropout.

Key challenges being faced are with respect to high dropout at all levels, especially among girls and ST students. In order to resolve the issues related to enrollment and dropout, the state plans to scale up and saturate the ongoing community-based measures with special focus on areas with low enrollment and high dropout and setting up of seasonal hostels. The targets for these interventions are given below.

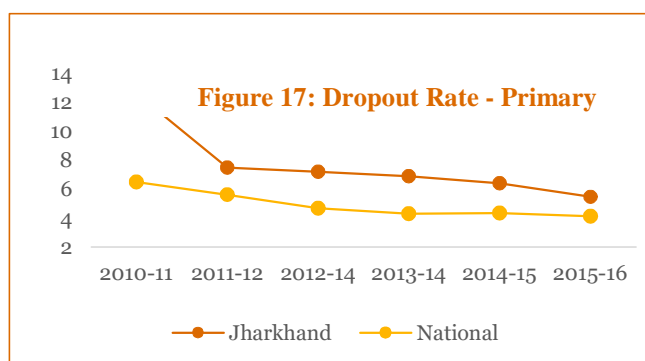


Table 47: Targets for Enrollment and Dropout

Indicator	Current scenario*		Target for 2021	Target for 2025	Target for 2030
	India	Jharkhand			
Net enrolment ratio (NER) - elementary	88.94	99.72	100	100	100
Net enrolment ratio (NER) – Secondary	51.26	49.61	60	80	100
Net enrolment ratio (NER) - higher secondary)	32.30	28.43	40	60	100
Dropout rate –elementary	4.10	5.50	3	0	0
Dropout Rate - secondary	17.06	22.50	20	12	0
Dropout Rate – higher secondary	-	2.50	0	0	0
% SMCs trained	NA	100%	100%	100%	100%

\*DISE 2010-11 to 2015-16; SEMIS 2012-13 to 2014-15

#### Action Plan 2021

1. Strengthening the present initiatives for increasing enrollment and reducing dropout: The present initiatives of “Vidya Chale Chalaye Abhiyan” will be continued with the support of School Management Committees (SMC), PRI and CSO. In addition, the campaign “Pehle Padhai, Phir Bidai” for promotion of education of girl child will be continued since these have consistently contributed towards raising awareness in the community, increasing enrolment and reducing dropout. The Bal Samagam programme, an event for all students of elementary level organized at school, block, district and state levels will be promoted further. Further capacity enhancement of Kasturba Gandhi Balika Vidyalaya will be undertaken, and initiatives such as

- “Kasturba Sangam” for facilitating cross learning and showcasing talent of students and “Akansha” for coaching and career counselling will be promoted
- Promotion of “Zero Dropout Panchayat” initiative: Total 460 Gram Panchayats have been certified as “Zero Dropout Panchayats” in last six months. This initiative will be promoted to achieve 100% zero dropout by 2020-21
  - Improving attendance and reducing absenteeism: The initiatives of Bal Sansad (Child Cabinets) and “Prayas” will be further continued since it has helped in improving attendance by 10% last year. The initiatives will be further strengthened for greater improvement. Also, Biometric Attendance has been initiated in all Kasturba Gandhi Balika Vidyalaya (KGBV) and high schools. This will be further scaled up to all schools by 2020-21
  - Continuing entitlement for students for School Kits, Girls’ Kit and uniform: The initiative for direct cash transfer to all students of government schools from I to VIII for school kit and uniforms will be continued
  - Continuation of Midday Meals (MDM): The centrally sponsored MDM for class I to VIII will continue to be supplemented by additional nutrition through State budget for providing eggs and fruits thrice a week. Gas cylinders are being supplied to schools in 2017-18 for cleaner cooking environment and left over will be covered during subsequent years
  - Infrastructure-based initiatives for promoting equity and inclusion –The initiative of special allowance and facilities for girl students such as free cycles in class VIII, Girls Kit and uniforms for class IX to XII will be strengthened and continued on an ongoing basis. Further, the State also intends to set up hostels in remote areas and set up JBAVs in areas which are underserved through KGBVs. Thus, substantial expenditure is being channelized towards reducing regional disparities in terms of both access and infrastructure

### 8.1.5. Enhancing literacy

The literacy rate in Jharkhand at the State level has been lower than the national average, but significant improvement has been achieved in the last decade. Low literacy rate among female and ST population in

Figure 18: literacy rate in Jharkhand

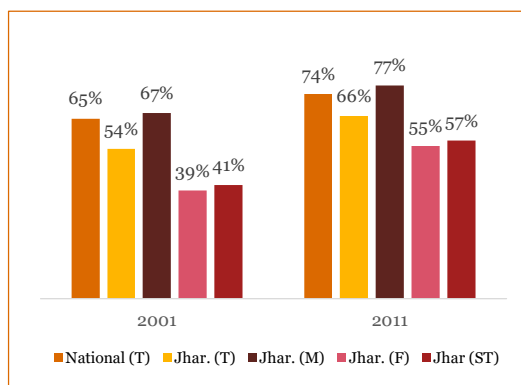
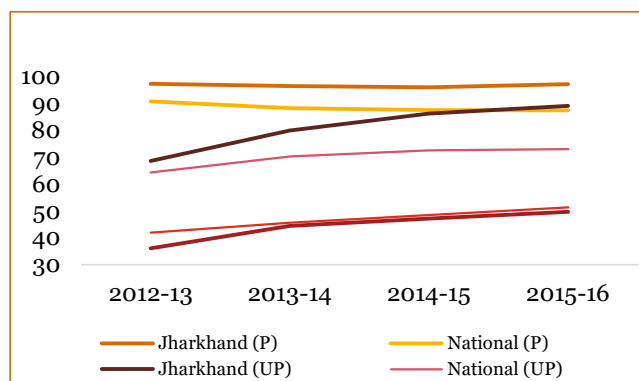


Figure 19: Trend in NER: primary, upper primary, secondary



particular is extremely low, i.e. just above 50%.

In Jharkhand, initiatives for enhancing literacy are undertaken in the State mainly through Sakshar Bharat Mission. The initiatives focus on imparting functional literacy in the age group of 15 years and more through 4,100 Lokshiksha Kendra (LSK), i.e. Adult Education Centres. The initiative also aim to cover adults under basic education programme and impart vocational education. The mission emphasizes the segments women, SC, ST, minorities and other disadvantaged groups, and low literacy areas.

During last two years, literacy has been achieved for 32.9 lakh persons, and 28 lakh learners passed basic literacy assessment exam of National Institute of Open Schooling (NIOS).

The specific targets which Jharkhand has set to achieve by 2030, are provided in table below:

**Table 48: Targets for improving literacy**

Indicator	Current scenario*		Target for	Target for	Target
	India	Jharkhand	2021	2025	for 2030
<b>Total literacy (%)</b>	74.04	67.63	85	100	100
<b>Male (%)</b>	82.14	78.45	100	100	100
<b>Female (%)</b>	65.56	56.1	80	100	100
<b>ST (%)</b>	73	67	80	100	100

\*Source: Census 2011

### *Action Plan 2021*

1. Saturation through Basic Literacy Programme: The State plans to achieve 80% literacy, i.e. cover 50.3 lakh people at the state level by 2020-21. For this, the interventions for literacy through LSKs will be intensified and saturated through targeted approach, with emphasis on low literacy pockets and literacy of women and disadvantaged population. “Shiksha Akhra” awareness drives will also be conducted at community level for intensifying the programme.
2. Introduction of restructured Functional Literacy Programme: Structured instructional learning of 300 hours will be introduced in 2017, and conducted through LSK.
3. Expansion of “Basic Education Programme” for imparting education equivalent to Class XII: To enable neo-literates and school drop-outs to continue their learning beyond basic literacy and acquire equivalency to formal education upto Class XII, Basic Education Programme will be designed in collaboration with the NIOS and State Open Schools upto the end of 2018.
4. Promotion of vocational education and skill development: The framework of the skill development programme will be broadened from livelihoods perspective and self-employment. Jan Shikshan Sansthan fully financed by National Literacy Mission Authority (NLMA) and skill development programmes will be linked with LSK to impart demand-driven skill development programmes to eligible candidates undergoing literacy programmes under Sakshar Bharat Mission. Vocational education which has already been already introduced in 160 high schools across 7 trades will be further promoted and implemented in over 510 schools

### *8.1.6. Convergence*

For further strengthening the initiatives of Department of School Education and Literacy (DSEL), convergence will be sought with various departments. Wherein the focus of convergence with Department of Higher and Technical Education (DHTE) will be towards scaling up vocational education in schools up to the H.Sc. level, the key focus with Department of Welfare (DOW) will be towards opening/upgrading schools in tribal areas. Similarly the prime area for convergence with Department of Social Welfare (DSW) will be towards extending life-skill education in day schools and residential schools adopting curriculum from Sabala and Tejaswini schemes.

### *8.1.7. Conclusion*

The Vision and Action Plan for School Education and Literacy largely focuses on improving quality of education, access and equity, reduction in dropout and creation of multiple pathways for lifelong education opportunities for all. Community participation has been recognized as a catalytic factor in accelerating initiatives for equity in school education.

Increasing access to secondary education, scaling up of vocational education, enhancing the quality of teacher education, ICT enablement and governance are the key thrust areas for achieving the overall goal for improving quality of school education and literacy. With their sight on ambitious growth, the State plans to attain parity with national averages on key indicators by 2020-21 and aim to surpass the national averages by 2025.

## 8.2. Higher and Technical Education

### *Quality Higher and Technical Education of global standards for all*

#### 8.2.1. Context

At present, the Higher and Technical Education in Jharkhand is delivered through 14 universities, 328 colleges, with 9 colleges per Lakh population, and an average of 1,716 students enrolled per college. The total number of teachers was 11,178 in 2015-16. Although, several progressive measures have been taken up by the Government to improve the quality of higher education, the State recognizes the need to address the key challenges of low enrollment (partly on account of high dropout at school level), high incidence of poverty and migration, lack of industrialization leading to low employment opportunities, inadequate access and infrastructure, etc. to achieve its vision and growth for the education sector. Accordingly, various initiatives are already underway to implement reforms and improve the quality of education through technology-enabled means, participation of private sector universities and industry collaboration for promoting research.

Going ahead, the key focus areas for advancement in Higher and Technical Education identified by the State are follows:

1. Compliance with norms and regulations for higher education
2. Enhancing governance at the institutional and systemic level
3. Promotion of industry-relevant research through industry – academic collaborations
4. Enhancing of employability of students by integrating skill development and certifications through massive open online course (MOOCs).

#### 8.2.2. Access and quality of Higher and Technical Education

In the context of access to higher education, Jharkhand has significant shortage of higher education institutions (HEIs), compounded by regional disparities in the availability of infrastructure. About 13 districts in the State have less than 10 colleges each. There is also a lack of research infrastructure in universities and HEIs.

So far, only one Centre of Excellence (CoE) for Bio-resources and Bio-prospecting has been sanctioned by MHRD under Technical Education Quality Improvement Programme (TEQIP) in 2014. It is estimated that to match the national average and meeting the local demand, 692 national colleges, 80 polytechnic colleges and 26 engineering colleges need to be set up.

In order to meet the deficit, the State is encouraging private sector investments and varsities to have campuses in Jharkhand. Attempt is also made to increase intake capacity of existing colleges by having 2<sup>nd</sup> shift in the campus. In addition, the State also plans to set up 100 new institutions in the near future.

The State also plans to introduce industry-responsive, demand-based skill development courses in general higher education institutions with provision of hands-on experience in collaboration with industry for enhancing employability of the students.

Figure 20: Colleges per lakh population

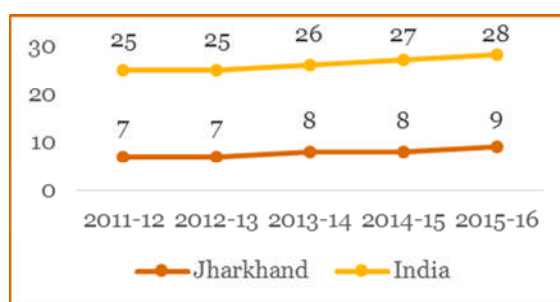
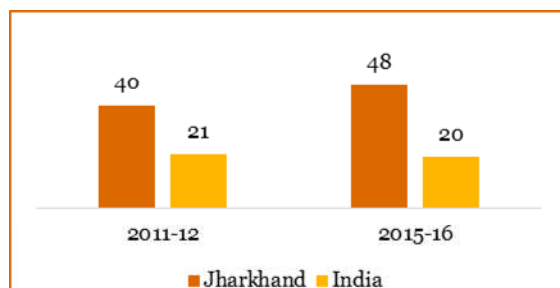


Figure 21: Pupil teacher ratio



MoUs have been signed in 2016 with CISCO, TCS and Oracle to provide appropriate education technologies for providing quality higher education. The states plans to have Wi-Fi-enabled campuses for all HEIs in a phased manner. In Phase I, 5 universities and 30 government colleges will be provided with the Wi-Fi facilities. E-Library is also being planned. Model guidelines have been issued in 2015 for setting up private universities to help in improving both access and quality. With such initiatives in progress, it is expected that the gap in access will gradually lower and there would be improvement in the overall quality of higher education.

The State is also developing an integrated portal for facilitating common admission for both general and technical higher education, monitoring and enhancing governance at the institutional level.

Availability of adequate and qualified faculty is considered as one of the parameters for quality education. In this context, shortage of faculty is also observed in the HEIs in Jharkhand. The PTR has increased in last 4 years by 20%, more than the double of national average. This also has implications on the quality of teaching, and consequently, on overall quality of education.

*The state has set ambitions targets for improving the overall status of higher education.*

**Table 49: Targets for improvement of higher education**

Indicator	Current Scenario*		Target for 2021	Target for 2025	Target for 2030
	India	Jharkhand			
<b>Total number of colleges per lakh population</b>	28	9	12	20	35
<b>Number of engineering colleges</b>	2505	14	22	35	50
<b>Number of polytechnic colleges</b>	3867	32	40	55	80
<b>Pupil-teacher ratio</b>	27	48	45	40	30
<b>% General Higher Education Institutions with CBCS-compliant courses</b>	NA	NA	50	100	100
<b>% Technical Education Institutions with CBCS-compliant courses</b>	NA	NA	100	100	100
<b>% Higher and Technical Education Institutions (HEI) ICT enabled</b>	New indicator	New indicator	50	100	100
<b>% Higher and Technical Education Institutions upgraded with research facilities</b>	New indicator	New indicator	30	100	100
<b>Setting up Centres of Excellence (CoE)</b>	103	1	5	10	20
<b>% HEIs NAAC Accredited</b>	3	1	20	70	100
<b>% Faculty covered through Continuous Professional Development (CPD)</b>	New indicator	New indicator	30	80	100

\*AISHE, 2015-16; MHRD 2016

### **Action Plan 2021**

1. Improving access to higher education through infrastructure upgradation of existing colleges and setting up of new colleges:

- a) The intake capacity of existing colleges will be increased considering the overall demand in the catchment area, coupled with requisite infrastructure upgradation. The State also plans to set up new colleges through private sector participation. Priority will be given for opening new colleges in underserved areas.

The colleges will also be provided with ICT-enabled technologies supported with e-learning portal for facilitating delivery of MOOCs and helping in meeting the shortage of faculty, until the recruitment of vacancies is completed. The ICT enabling will be undertaken in a phased manner to cover all the HEIs upto 2020-21.

2. Setting up of CoE through industry collaboration: The State plans to set up CoEs especially in IT, metronics, mining, agriculture, bio-technology, energy, etc. The state has presence of large-scale industries which can be leveraged for setting up the CoEs as well as introducing industry-relevant and demand-driven

technical education and promotion of research and development in these areas. This will be achieved by 2020-21.

3. Aligning of Higher and Technical Education with progressive academic reforms: The following measures will be undertaken for compliances, which are also associated with quality of education:
  - a) The academic courses will be made CBCS (Choice-based Credit System) compliant in phased manner. The Jharkhand State Higher Education Council will have a key role in facilitating implementation of CBCS across the HEIs.
  - b) SSC Certified, National Skill Qualified Framework (NSQF) aligned and demand-driven skill development courses will be introduced in general higher education across all institutions by 2020-21. For this, linkages will be established with Jharkhand Skill Development Mission and industry to design and provide technical assistance in delivering quality skill development courses. Simultaneously, a pool of trainers will be developed at the State level to meet the increasing demand for trainers at the institutional level.
  - c) Research and development will be integrated with the curriculum, and promoted in collaboration with industry, both in general and technical higher education especially in the areas of local relevance. Initially, the research facilities will be provided in larger institutions to serve as ‘Hub-and-Spoke’ model upto 2020-21. Thereafter, effort would be made to set up basic R&D facilities at HEI level upto 2025 in all the institutions.
4. Faculty development through Continuous Professional Development (CPD) and total performance management:
  - a) Structured approach will be adopted for faculty development especially from the perspective of implementing reforms and promoting industry-relevant research. This will be done in collaboration with select universities and institutions of international repute.
  - b) A web-based system will be introduced for monitoring the performance of faculty linked with quality of teaching, research and learning outcomes of the students. This will enable in identifying scope for further strengthening the faculty development programmes and incentivising high-performing faculty through awards/recognitions, fellowships, opportunities for participating in exchange programmes, etc.

### 8.2.3. Enrollment and equity

Trends in enrollment for higher education in Jharkhand indicate lower Gross Enrolment Ratio (GER) compared to national average. However, the rate of

Figure 22: Trends in GER

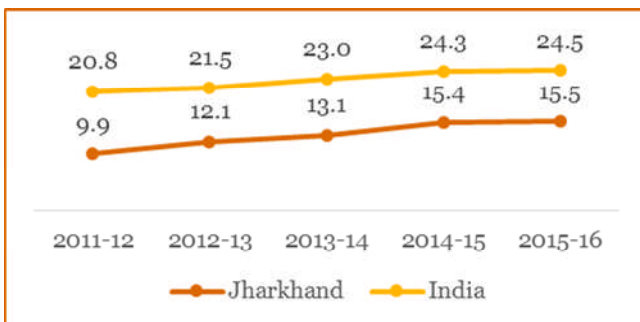
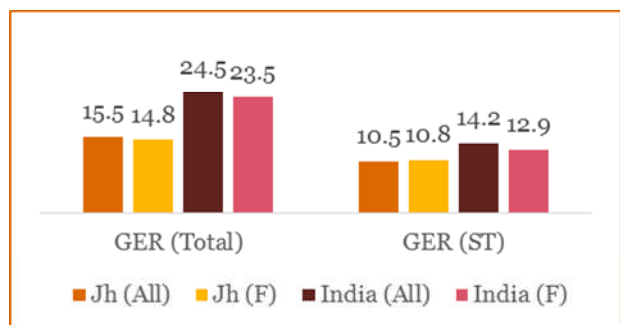


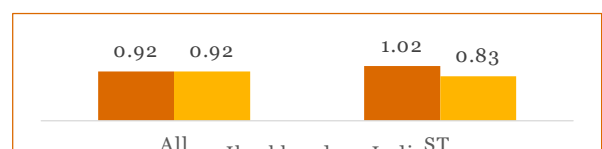
Figure 23: Variation in GER



improvement in GER is faster (9.38% CAGR) than the improvement in national average (3.3% CAGR). However, this is half of the average national target of 32 to be achieved by 2022 as per Rashtriya Uchchar Shiksha Abhiyan (RUSA). Further, the variation between enrollment of girls and tribals indicate fewer enrollment compared to general population. This is compounded by regional disparities, since the remote areas and blocks with predominant tribal population have lowest GER, and the improvement is abysmally low. This is mainly attributed to high dropout at school level itself, poverty and migration.

The State has taken aggressive targets for enhancing improvement in GER and GPI. The targets and strategies are further elaborated.

Figure 24: Trend in GPI



In terms of Gender Parity Index (GPI), Jharkhand shows performance at par with the general population, while in case of GPI in ST community, it is significantly higher than the GPI for ST at national level as well as state average. It reflects that the girls among ST communities aspire for higher education and need to be provided adequate opportunities and support to pursue higher education. Some of the major constraints towards higher and technical education include (a) limited infrastructure which hinders the opportunities and quality of education (b) high dropout at the secondary level itself leads to low enrollment in general/technical higher education (c) high incidence of poverty, high distress migration making students enter the informal sector at an early stage instead of pursuing higher education and (d) low level of industrialization also results in low employment opportunities in the State, further making the general higher education opportunities less lucrative to pursue as careers instead of technical education, which comparatively has higher employability. The following are the interventions planned to resolve these issues:

### *Action Plan 2021*

1. Setting up adequate hostels/increasing capacity of the existing ones for students pursuing higher education and providing stipend: Such provision will not only enable students from rural and tribal areas to avail opportunities for quality education facilities in urban areas, but also reduce dropout due to migration and the need for earning in the family.
2. Continuing financial support through scholarship: The Centre and State-sponsored scholarships will be further revised considering current financial requirement and continued eligibility of candidates. This will also require inter-departmental convergence to eliminate duplication and the outreach of benefits up to the last mile.
3. Promoting MOOCs and distance education for students who cannot pursue regular mode of education: The MOOCs will be promoted in multi-lingual mode in a phased manner, with priority to the courses in demand, supported by study centres with ICT facilities. This will help in continuing education of the students unable to continue education in regular modes.

### *8.2.4. Convergence*

The critical areas of convergence for DHTE shall merge with initiatives and schemes with DOW for enhancing enrollment and reducing dropout of the students from SC and ST communities, and with Department of Labour (DOL) in the areas of sharing resources (in terms of infrastructure and faculty) for promoting skill development and facilitating horizontal and vertical mobility among students.

### *8.2.5. Conclusion*

The State is focusing on improving access, equity and excellence in Higher and Technical Education. So the stakeholders are taking pragmatic steps for promoting research, increased industry participation in academic areas, etc. At the same time, the State plans to support the interventions with strong e-Governance system both for monitoring and identifying areas for strengthening.

## 9. Skilled Workforce and Entrepreneurship Development

*To catalyze skill development initiatives in Jharkhand that aim at empowering individuals by equipping them with industry-d demanded skills, leading to sustainable livelihood opportunities and economic growth of the State*

### 9.1. The Context

Skill development stands as one of the key pillars of the growth and development of any economy, and hence has emerged as one of the key focus areas of the both Central and State government. The Government of Jharkhand in line with the national focus towards skilling including the “Skill India” and “Make in India” missions, have taken various initiatives for accelerating and enhancing the quality of skilling and vocational education in the state. Jharkhand with roughly 60% of its population below 30 years of age, aims to leverage its demographic dividend and has undertaken a target to skill-train 20 lakh youths over the next five years. To achieve this vision and strengthen the overall skill eco-system, it has also constituted Jharkhand Skill Development Mission under the chairmanship of Honourable Chief Minister, to emerge as a nodal agency for all the skill development activities in the State. The percentage of people having received vocational training in the age group 15-59 is at 2.1% for Jharkhand compared to the national average of 11.7% for India.<sup>23</sup>

During the last few fiscal years, the State, through its 18 departments, has been able to provide skill education and vocational training to around 1 lakh youth per annum under various Central and State-sponsored schemes. While DOL, Employment and Training is the largest contributor, Jharkhand Skill Development Mission and department of Rural and Urban has also contributed significantly to these training achievements. Some of the key skill training schemes in the state include (a) the long-duration technical courses under Craftsman Training Scheme (CTS), and Apprentice Training Scheme (ATS) being implemented through ITIs and (b) short-term skill training programmes under SJKVY, PMKVY, DDU-GKY and Skills Training & Placement (EST&P).

The department-wise target is provided in the table below.

**Table 50: Training targets for Skilling**

Training Targets (Department/Scheme wise) <sup>24</sup>	Y1	Y2	Y3	Y4	Y5	FY 17 to 21
	FY 17	FY 18	FY 19	FY 20	FY 21	Total
<b>JSDMS Training Target</b>	90,000	1,35,000	2,10,000	3,15,000	4,50,000	12,00,000
<b>Target to other departments</b>	1,20,000	1,40,000	1,60,000	1,80,000	2,00,000	8,00,000
<b>DDU-GKY</b>	25,000	30,000	35,000	35,000	35,000	1,65,000
<b>NULM</b>	25,000	30,000	35,000	35,000	35,000	1,65,000
<b>Other departments (break-up below)</b>	70,000	80,000	90,000	1,10,000	1,30,000	4,80,000
<b>Labour</b>	40,000	45,000	50,000	60,000	70,000	2,65,000
<b>Industries</b>	10,000	11,000	12,000	15,000	20,000	68,000
<b>Secondary education</b>	8,000	9,000	10,000	12,000	15,000	54,000
<b>Higher and Technical Education</b>	5,000	5,800	6,500	8,000	10,000	35,300

<sup>23</sup>Unit level data NSSO 68<sup>th</sup> Round, JSDMS report on Jharkhand 3 Years Action Plan

<sup>24</sup> JSDMS report on Jharkhand 3 year Action Plan



Training Targets (Department/Scheme wise) <sup>24</sup>	Y1	Y2	Y3	Y4	Y5	FY 17 to 21
	FY 17	FY 18	FY 19	FY 20	FY 21	Total
<b>Social welfare</b>	2,000	2,700	3,500	4,500	5,500	18,200
<b>Tourism, health, others</b>	5,000	6,500	8,000	10,500	9,500	39,500
<b>TOTAL JHARKHAND</b>	2,10,000	2,75,000	3,70,000	4,95,000	6,50,000	20,00,000

To achieve this target, the strategy will differ across skill training and vocational training respectively. The following chapters detail out the various areas.

## 9.2. Skill Development

For skill training, the following are the key priorities and action plan for the state of Jharkhand.

### 9.2.1. Scale, access and inclusivity

The population of Jharkhand is estimated to be about 372 lakhs in 2017 and about 411 lakhs in 2032 with an estimated working age population of 237 lakhs 271 lakhs respectively. The estimated incremental manpower supply between 2017 and 2032 is estimated to be around 46 lakhs. In addition, considering a substantial dropout of 53 (Class 1 to 10 cycle), and high unemployment rate of 7.4% compared to the 4.9% at the national level under the UPS (Usual Principal Approach), it is imperative that the skill development should be accessible to all. Further, the overall Labour Force Participation Rate (LFPR) in Jharkhand at 48.9% is lower than the India average of 52.5% with a substantial disparity in the female LFPR which stands at 15.6% in Jharkhand compared to the 25.8% at the national level, indicating a need for a focus on gender equality and skill training of female youths.

**Table 51: Targets in for Scale, Access and Inclusivity**

Indicator	Current Scenario	Target for 2021	Target for 2025	Target for 2030
<b>Cumulative no: of beneficiaries skill trained (inclusive of vocational education) in Lakh numbers</b>	1.2 lakh	11.4	50	100
<b>Proportion of girls in aggregate skill training</b>	New Indicator	40%	50%	50%
<b>Proportion of marginalized/vulnerable group (SC, ST, BPL and PBTG)</b>	New Indicator	40%	50%	50%
<b>Presence of Skill Training Centre in each of the 264 blocks</b>	New Indicator	100%	100%	100%
<b>Presence of Deen Dayal Upadhyay Kaushal Kendra DDU KK Mega Skill Training Centre (MSTC)<sup>25</sup> / (CoE in each of the 24 districts)</b>	45%	100%	100%	100%

### Action Plan 2021

1. All the line departments engaged in skill training will converge and work collaboratively to achieve the skill training target for the state and to address other key areas including training coverage, quality assurance procedures, TSP empanelment, etc. Jharkhand Skill Development Mission Society (JSDMS) will be the nodal agency to undertake and organize all convergence-related activities.
2. Special state schemes such as Saksham Jharkhand Kaushal Vikas Yojna (SJKVY), will be formulated and implemented to cater to different skill training needs. 6.60 lakh youths are expected to be trained under SJKVY between 2017 and 2020-21. The coverage of SJKVY will be expanded to include at least one degree college per assembly constituency.

<sup>25</sup> Deen Dayal Upadhyay Kaushal Kendra (DDU KK) (Mega Skill Centers) is being defined as a skill training institute with a minimum 15000 sq.ft., with a capacity to train 5000 people per year

3. To support the target of 11.4 lakhs, a mobilization drive will be undertaken by JSDMS to identify a minimum of 15 lakh potential beneficiaries across all the districts, with a special focus on coverage of females and beneficiaries from the marginalized groups.
4. Employability of above 50,000 students from 5 State Universities and 100 affiliated colleges will be enhanced through courses on soft skills, language and communication skills, computer and management skills.
5. A State-specific guidelines on candidate selection and enrolment for all the Training Service Providers will be prepared by JSDMS to promote gender and marginalized group parity
6. JSDMS has already initiated the process of establishing MSTC/COEs in the State in 11 districts. 50 Mega-skilling centers of 15,000 sq ft. area and above, with capacity of training more than 3,000 persons per year per centre will be opened to meet the aspirational value of the people of Jharkhand. One in each district and two in Ranchi, with total 25 heavy motor and commercial vehicle driving school is also under implementation in collaboration with NSDC. The presence of MSTC/CoEOEs will be extended to all the districts. Similarly, Skill Training Centre will be established under various State and Central schemes in all the 264 blocks across the state. Private sector will be engaged actively to establish and operate these centres. Utilization of the existing government infrastructure will be made for higher access to skill training.

### 9.2.2. Alignment to national standards and initiatives

On the occasion of World Youth Skills day in 2015, the Honorable Prime Minister of India unveiled the national policy on Skill Development and Entrepreneurship to promote quality- and outcome-based skill training, with a focus on “One Nation One Standard” to ensure that the country national standard and quality for skill are consistent to meet the local, national and international job opportunities. The introduction of NSQF complements this mandate. The policy is also aligned to promote entrepreneurship culture through making it aspirational, facilitation in entrepreneurship development through mentorship and incubation centre.

To skill train the workforce of different categories, various initiatives have been taken such as vocationalization of school education and recognition of prior learning which may be further strengthened. Also, to have vertical and horizontal mobility in Technical and Vocational Education, Bachelors of Vocational Education (B.Voc) has been introduced nationally in compliance with norms of CBCS and NSQF.

**Table 52: Targets for compliance with national standards**

Indicator	Current Scenario	Target for 2021	Target for 2025	Target for 2030
<b>Percentage of skill training courses in compliance with NSQF</b>	New Indicator	100%	100%	100%
<b>Compliance to National Quality Assurance Framework</b>	New Indicator	100%	100%	100%
<b>Percentage of schools offering vocational education</b>	9%	20%	100%	100%
<b>Percentage of skill training under Recognition of Prior Learning (RPL)</b>	0.6%	20%	20%	20%
<b>District level presence of institutions offering B.Voc</b>	0	50%	100%	100%

### Action Plan 2021

1. As per the national guidelines, it will be mandatory that all skill training/educational programmes/ courses needs to be aligned to NSQF by December 2018. Under the current scenario in the state, a substantial number of the skill training is not in compliance with NSQF and hence in lines with the above notification, all departments engaged in the skill training should be NSQF-compliant.
2. Guidance on various areas including quality norms, cost norms, etc. is being notified by Ministry of Skill Development and Entrepreneurship and other central agencies from time to time. All line departments will comply with the same. JSDMS will play an active role in creating awareness and do the necessary capacity building.

3. The vocational education has already been initiated in Jharkhand for the secondary and H Sc. students in more than 400 schools for the secondary and H Sc. students. The number of schools which offer vocational education will be expanded from the existing 9% to around 20% by 2020-21.
4. RPL has emerged as one of the great avenues to skill train a large scale of unorganized sector and at the national level comprise of a significant contributor of the overall targets. In the past, JSDMS has organized RPL training for around 3,000 beneficiaries in the construction sector. This will be further enhanced and diversified into other sectors.
5. B.Voc will be introduced and implemented in the colleges. Vertical and horizontal mobility will be provided to the students.

### 9.2.3. Strengthening of skill eco-system

To achieve the skill training target of 20 lakhs youths over five years, a strong skilling eco-system is required. The State Government is committed to strengthen various areas including strong understanding of skill gap areas, active collaboration with the industry, engagement with the training service providers, development of qualified trainers, robust operational systems and processes, strong monitoring and evaluation framework, certification and assessments, placement support, etc.

**Table 53: Targets for strengthening skill eco system**

Indicator	Current Scenario	Target for 2021	Target for 2025	Target for 2030
<b>District Level Skill Gap Assessment</b>	No	Yes	Yes	Yes
<b>Number of Qualified Training Service Providers Empanelled</b>	82	120	300	500
<b>Number Institution for Training of Trainers</b>	New indicator	3	10	20
<b>Percentage of skill training operating through Labour Market Information System (LMIS)</b>	New indicator	100%	100%	100%

### Action Plan 2021

1. Training on market-relevant courses is critical for the overall success of the skill training programme, which can be identified through a comprehensive skill gap analysis. Further, these assessments need to be conducted regularly over every three to five years to keep it relevant to market conditions. The existing skill gap assessment of the state undertaken by NSDC is dated and JSDMS will undertake the same.
2. To obtain inputs from the industry, Skill Development Committee for more than seven sectors have already been constituted by JSDMS. This will be strengthened further and additional relevant sectors will be added. Local Industries will be encouraged to participate and support the customization and development of course curricula in consultation with the SSC, provision of specific equipment, delivery of the instructional material, On the Job Training (OJT) and Apprenticeship, develop assessment standards to suit the industry requirement. This will make the skilled personnel “industry ready” for employment and will provide “value for money” to the industries.
3. Presence of qualified training service providers (TSPs) is extremely critical to achieve the set targets and hence state level empanelment of TSPs will be conducted by JSDMS which may be leveraged by other line departments for skill training.
4. As like the national level, the state also suffers a challenge in terms of the availability of the qualified trainers. Hence, the state will open a Training of Trainers (ToT) academy and establish training institutes for trainers. Appropriate partnership with industries and private sector will be sought to develop and operate these institutes. Further collaborations will be sought with qualified national and international agencies to strengthen the quality and standards.
5. To create the awareness and make the skill training aspirational, ICT activities will be implemented on a regular basis.
6. To standardize the skill training processes, operational guidelines and quality assurance processes will be implemented.
7. For maintaining the skill repository of the state and to provide a platform to integrate various stakeholders including beneficiaries, training service providers, industries/employers and the state line departments, a

Labour Market Information System – HUNAR (Hallmarking of Unrecognized Novice and Amateur Resources) is already implemented in the state. The HUNAR will be strengthened, and it will be ensured that all the skill training in the state across any line departments will be operating through it. HUNAR will also be integrated with the national level LMIS.

8. JSDMS has signed MOU with Knowledge Partners IIM Ranchi and BIT Mesra to enrich the skill ecosystem and strengthen the ongoing and future skill development programs.
9. JSDMS intends to sign MOU with leading industry players in each of the Skill Sector under which training is being provided in the state, to improve placement of skilled manpower and promote internship with industries within Jharkhand. In this regard, MOU has already been signed with Radisson Group and Capitol Hill group in Hospitality Sector.

### 9.2.4. Promotion of entrepreneurship

The State Government recognizes the need for developing MSME sector through promoting entrepreneurship development. Apart from introducing specialized entrepreneurship programme other initiatives such as development of incubation centers, awareness and promotion of entrepreneurship schemes and programs such as PMEGP, Startup India, Stand-Up India are being undertaken. The Mudra scheme wherein beneficiaries can take loans up to Rs 10 lakh to start businesses will be promoted further. Focus will also be given to create a conducive ecosystem through easy access to credit and strong market linkages. Further, under the national mandate, a network of Entrepreneurship Hubs (E-Hubs) will be established under which 1 national, 30 state, 50 Nodal and 3,000 college-based E-Hubs will be set up. As part of this mandate, the State will also develop an E-Hub.

**Table 54: Targets for promotion of Entrepreneurship**

Indicator	Current Scenario	Target for 2021	Target for 2025	Target for 2030
Number of incubation centres	New indicator	24	48	96
Entrepreneurship hubs	0	1	3	10

#### Action Plan 2021

1. Special courses on entrepreneurship will be developed and implemented by JSDMS and other line departments.
2. Awareness programmes on entrepreneurship-related schemes and programmes will be conducted by JSDMS and other line departments.
3. Incubation centres will be developed across all the districts in the State. These centres will also emerge as the specialized centre.
4. Focus will also be placed on encouraging women entrepreneurs through appropriate incentives for women-owned businesses.

## 9.3. Vocational Education

In Jharkhand, ITIs had been set up as part of a skill development initiative to fulfill the growing need of skilled manpower across sectors in Jharkhand as well as India and reduce the existing gap between demand and supply of skills. There are around 59 government-run ITIs with a training capacity of around 17,200 seats, and more than 100 private ITIs spread across all the districts of Jharkhand. The following are the key focus areas.

### 9.3.1. Scale, access and inclusivity

The ITIs are being operated by the training wing of the DoL Employment & Training and contribute to around 50% of the existing skill training achieved in Jharkhand. Going forward, with a vision to skill train 20 lakh youths over next five years, the capacity of the ITIs is required to increase multifold. The state is already implementing its plan to establish additional 105 ITIs and is also envisioning to have an ITI established in each of the 264 blocks of Jharkhand in the near future.

Further considering women being almost half of the potential workforce with a substantially low LFPR of 15.6%, makes the case of an immediate need of focus towards Women's Vocational Training Programme. Also, the vulnerable and marginalized group needs more focus.

**Table 55: Targets for Vocational Education**

Indicator	Current Scenario	Target for 2021	Target for 2025	Target for 2030
<b>Total number of ITIs</b>	59	200	Depending on requirement	Depending on requirement
<b>Presence of ITI in each of the 264 blocks</b>	22%	65%	100%	100%
<b>Proportion of girls in aggregate skill training in it is</b>	New indicator	40%	50%	50%
<b>Proportion of marginalized / vulnerable group (SC, ST, BPL, PBTG)</b>	New indicator	40%	50%	50%

### *Action Plan 2021*

1. The total number of government ITIs needs to be increased from the existing 59 to 200 over the next few years.
2. A minimum of 1 ITI in each of the 264 blocks
3. A new women ITI will be established in the state with a presence of at least 1 ITI in every district. The state is aiming to bring the gender parity index to appropriate levels.
4. Also, training to the marginalized and socially vulnerable group will be enhanced.

### *9.3.2. Enhancing quality*

The current utilization of the ITIs is close to 60%. Various factors contribute to this, including the lack of good infrastructure, lack of skill training on market-relevant courses and low placement ratio. Hence, there is a renewed focus on enhancing the quality standards of the ITIs.

Students in the ITIs prefer to take up courses which have National Council on Vocational Training (NCVT) accreditation as they are perceived to have a wider recognition outside the State and also have a higher probability of placement as compared with State Council for Vocational Training (SCVT) courses. Currently, only 14 ITIs are being covered under the NCVT module and rest 45 are administering the SCVT module. Going forward, the Directorate of Employment & Training has decided to shift maximum of its ITIs to NCVT module.

The standard pupil-teacher ratio for an ITI batch is around 21:1. Due to the paucity of trainers, the current pupil-teacher ratio of the state is very low and there's an urgent requirement to deploy adequate and qualified teachers/instructors for each trade.

The State Government plans to revamp the infrastructure of the ITIs. Currently, there are four CoEs in the state which specialize in Production & Manufacturing, Electrical and IT. Further model ITIs are being planned to be established in each of the districts.

**Table 56: Targets for enhancing quality**

Indicator	Current Scenario	Target for 2021	Target for 2025	Target for 2030
<b>Accreditation of ITIs to NCVT</b>	20%	100%	100%	100%
<b>Studentpupil ratio</b>	36	21	21	21
<b>Total number of Model ITIs</b>	NIL	24	48	96
<b>Total Number of CoEs</b>	4	10	20	30

### Action Plan 2021

1. Accreditation of all the ITIs to National Council on Vocational Training (NCVT)
2. Establishment of Training of Trainer institutes to address the paucity of trainers
3. Recruitment and deployment of principals and trainers to maintain the appropriate student-pupil ratio
4. Revamping the workshops and machine labs with the new modern technologies of all the ITIs
5. Making all the ITI campuses Wi-Fi enabled
6. Establishment of Model ITIs in each of the districts of Jharkhand and establishment of CoE for the top 10 trades.

#### 9.3.3. Engagement with industry

The State Government recognizes that the industry engagement is very critical to the overall success of the ITI programme. The industry engagement is not important only for providing inputs to the required course curriculum but is even more important for apprenticeship and deployment of resources.

The Apprenticeship Act, 1961 was enacted with the objective of regularizing the programme of training of Apprentices in the industry by utilizing the facilities available therein for imparting OJT and engage apprentices in designated trades to impart Apprenticeship Training on the job. Currently, Jharkhand has around 2,100 (approx.) seats for Apprenticeship Training Program against which more than 3,500 applications were received. Further, these are highly concentrated in few parts of the state including Jamshedpur and Dhanbad.

The state plans to leverage the new Apprenticeship Act and plans to increase the coverage to more local industries. The state has created four separate zones each headed by an Assistant Director Training; situated at Ranchi, Jamshedpur, Dumka & Adityapur to further enhance the coverage of apprenticeship.

The Ministry of Labour & Employment scheme on ‘Demand Responsive Vocational Training’, under which any Industry can sign a Flexi MoU with DGT to conduct training programmes to meet specific skill requirement of the industry is one of the most appropriate ways to engage industry as this ensure 80% employment of the trained candidates. The Directorate of Employment & Training, Jharkhand has entered into MoU with JSPL and TATA Steel for running ITIs under PPP mode at Godda & Tamar (Ranchi) of which ITI at Godda is already operational and 49 more are under process. The State has also joined hands with industries like BCCL, CCL, SAIL, ACC & ECL under CSR operating ITIs.

**Table 57: Targets for engagement with industry**

Indicator	Current Scenario	Target for 2021	Target for 2025	Target for 2030
<b>Apprenticeship ratio</b>	New indicator	100%	100%	100%
<b>Coverage of flexi MoUs in all the ITIs</b>	New indicator	100%	100%	100%

### Action Plan 2021

1. Stronger engagement with the industry to promote apprenticeship. Leveraging the new Apprenticeship Act and the scheme of Apprenticeship Protsahan Yojna, wherein government shares a part of the stipend expenses.
2. Execution of more Flexi MOUs in the state with a minimum of one Flexi MoU being executed by each of the ITIs

#### 9.4. Convergence

A Governing Body headed by the Development Commissioner has already been constituted to oversee the policy formulation, implementation programme and provide resources from the state. JSDMS will continue to focus on a cohesive approach of skill development by the 18 departments of the Government of Jharkhand. Regular review meetings, on annual and monthly basis will be conducted. All skill-related monitoring will be conducted through the HUNAR portal.

## **9.5. Conclusion**

The Action Plan 2020 -21 calls for expediting the skill development and vocational education initiatives being planned by the Government of Jharkhand. These initiatives will not only lead to development of human resources in the state but will eventually contribute to the economic growth at the state and national level. In order to achieve the targets being set, commitment of all key stakeholders will be ensured.

### **Initiatives to be launched in the next fiscal 2018-19 in line with the State Budget**

Start-Up Cell will be established in all Universities. (State)

# 10. Universal, Affordable and Quality Healthcare Services

*Universal access to quality and affordable health care services*

## 10.1. Context

Health including nutrition is a key sector that contributes to the overall socioeconomic development of any state. Compared to other states of India, Jharkhand is lagging behind in terms of key health and nutrition indicators. The State Government realizes the need for concerted effort to improve the health status of citizens in order to harness the State’s growth potential in sustained manner and contribute to the national effort to achieve Sustainable Development Goals (SDGs) for 2030.

The key focus areas identified by the State of Jharkhand are:

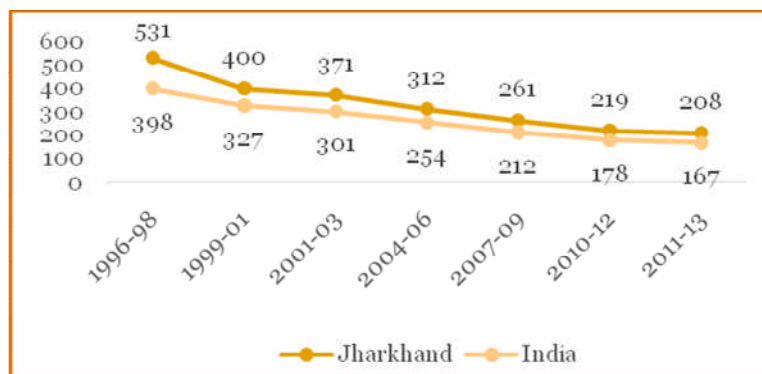
1. Maternal, Child and Reproductive Health
2. Nutrition
3. Communicable Diseases
4. NCD
5. Health Infrastructure and Human Resources

## 10.2. Maternal, Child and Reproductive Health

### 10.2.1. Maternal health

The Maternal Mortality Ratio (MMR) has been decreasing steadily at the rate of 6.03% since 1996-98 as per the SRS reports. The regular decrease is due to the impact of RCH-I programme which started in 1998, followed by National Rural Health Mission (NRHM)/Reproductive and Child Health (RCH) - II since 2005. The recent Reproductive, Maternal, Neonatal, Child Health and Adolescents (RMNCH+A) life cycle approach further contributed in reducing the maternal deaths.

**Figure 25 Trend of MMR**



Some of the key contributory factors for high MMR are: low Antenatal Care (ANC) registration in first trimester (52%), very low Full Antenatal Care (ANC) (8%), low institutional delivery (61.9%) and low performance on Post-natal Care (PNC) within 48 hours of delivery (44.4%) (NFHS 4). The State has identified key measures including, enhanced institutional care of pregnant women and new mother for reduction in MMR. This is most likely to succeed by, increasing institutional delivery, increased coverage of full ANC check-ups, increased coverage of PNC check-ups and by preventing anemia among pregnant women. The specific targets which Jharkhand has set to achieve by 2030, are provided in table below:

**Table 58: Indicators for maternal, child and reproductive health**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>MMR</b>	208 *	< 175	< 120	< 90
<b>Institutional delivery (%)</b>	61.9 **	70	90	>95



Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>ANC registration within 1st trimester (%)</b>	52.0 **	62	80	>90
<b>Full ANC check-up (%)</b>	8.0 **	20	55	>80
<b>Post-natal check-up (within 48 hrs. of delivery) %</b>	44.4 **	60	75	90
<b>Pregnant women age 15-49 years anemic &lt;11g/dl (%)</b>	62.6 **	50	30	>25

\* SRS (2014)

\*\* NFHS 4

### Action Plan 2021

There will be focus on implementing maternal health programmes in high priority districts in the first two years for achieving desired outcomes. The districts are: Paschimi Singhbhum, Saraikela, Pakur, Godda, Latehar, Sahibganj, Palamu, Lohardaga, Simdega, Gumla and Dumka. These districts constitute the tribal districts with composite health index below 50%. The focus areas are:

1. To increase the coverage of ANC, the State will:
  - a) Strengthen and expand the ANC services to increase coverage
  - b) Based on the existing antenatal guideline, the State will expand the outreach services through introduction of mobile services, telemedicine and use of handheld devices.
  - c) Ensure introduction of yoga and naturopathy under ANC services across State for healthy lifestyle during pre-natal, natal and post-natal period.
2. To reduce the maternal mortality and increase the institutional deliveries, the State will ensure:
  - a) Functional First Referral Units (FRUs) through government or empaneled private facilities in all high priority blocks and districts of Jharkhand and also ensure rational deployment of requisite human resource or skilled personnel – Emergency Obstetric Care (EmOC), Life Saving Anaesthesia Skill (LSAS), etc.
  - b) Adequate infrastructure, and support services/linkages with private sector where available (e.g. blood bank, blood storage unit, and diagnostics, etc.) and also strengthen referral transport through Global Positioning System (GPS) enabled vehicles, linked to integrated call centre
  - c) Strengthening the existing blood banks and blood storage units for provision at times of obstetrical emergency need
  - d) Ensuring universal coverage for obstetric and new-born emergencies through cross institutional arrangements especially in tribal and hard to reach areas and also co-opting existing healthcare providers to ensure universal coverage of obstetric and new-born care
3. For supportive supervision and enhancing the skills of the frontline workers, creation of opportunities for capacity building through e-classrooms at peripheral level
4. As a cross cutting measure, increased emphasis will be given on involvement of community for generating awareness for services through improved interdepartmental convergence and increased focus on Behaviour Change Communication (BCC) activities for early registration of pregnancy, ANC, identification of danger signs, importance of institutional delivery, post-natal care and essentials for child care, etc.
5. Other focus areas:
  - a) Training of all serving Auxiliary Nurse Midwives (ANMs) as skilled birth attendants
  - b) Increasing the number of level 1 facilities as per time of care approach (A Health Sub-Centre having a delivery load of minimum three deliveries per month is designated as level 1 facility)
  - c) Improving quality of PNC services in health facilities
  - d) Training of medical officers for comprehensive abortion care services to reduce abortion-related maternal deaths and provision of clean and hygienic services at all PHCs, CHCs and district hospitals
  - e) To ensure clean and safe delivery practices, provision of clean and disposable delivery kits

### 10.2.2. Child health

The IMR has been reducing at 0.04% over the last ten years. It has reduced from 50 in 2005 to 32 in 2015 as per the SRS reports. The decline in infant mortality can be credited to the initiation of RCH programme and specific focus on infant and child health interventions for reducing neonatal and infant mortality under NRHM since 2005. Initiatives like full immunization, Janani Shishu Suraksha Karyakaram, Navjat Shishu Suraksha Karyakaram have resulted in reducing mortality and morbidity due to acute respiratory infections and diarrheal diseases. The approach under health programmes has been to strengthen facility and home-based new-born and childcare and integrated management of neonatal and childhood illnesses. However, some key factors for low performance in this area are:

- a) Full immunization (62%); Initiation of breastfeeding within 1 hour of delivery (33%); exclusive breastfeeding till 6months (66%) (NFHS 4)
- b) Within the State, there are 30 high-risk blocks across 7 districts having very low coverage for immunization (NFHS 4)

Some of the focused initiative for better child health outcomes are immunization coverage, feeding practices and home-based care for the newborn. This also includes enhancing the services delivery through outreach programmes and institutional strengthening for child health services. The specific targets which Jharkhand has set to achieve by 2030, are provided in the table below:

**Table 59: Targets for child health**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Still birth rate</b>	1 *	<1	<1	<1
<b>Neonatal mortality rate (NMR)</b>	23 *	21	17	10
<b>IMR</b>	32 *	25	22	18
<b>Under-5 mortality rate (U5MR)</b>	39 *	32	24	15
<b>Children (0-5 years) Severely Malnourished (Weight for height -3 SD) (%)</b>	11.4 **	8	4	<2
<b>Low birth weight &lt;2.5 Kg (%)</b>	14.7 ***	12	6	<3
<b>Full immunization (12-23 months) (%)</b>	61.9 **	70	85	>95
<b>Prevalence of sickle cell anaemia among children</b>	To be established	Reduction by 10%	Reduction by 40%	Reduction by >90%

\*SRS 2015

\*\* NFHS 4

\*\*\* RSOC 2013-14

#### Action Plan 2021

1. Reducing the neonatal mortality, the State in the initial two years will expand its intervention in 5 high-priority districts (those with NMR above 35). The State will ensure the availability of neonatal healthcare services by strengthening existing public health facilities and co-opting private health service providers especially in remote and hard to reach areas.
2. Expediting the coverage of immunization, special attention will be provided in 30 high-risk block in 7 high-priority districts (primarily in Santhal Parganas region – forest, remote areas, primitive tribal group) where the immunization coverage is low. The State will undertake, real-time tracking of children in those districts for ensuring all children to be covered under universal immunization programme (UIP). The system will also promote the use of electronic vaccine management and tracking systems for ensuring vaccine availability and minimal wastages during immunization sessions.

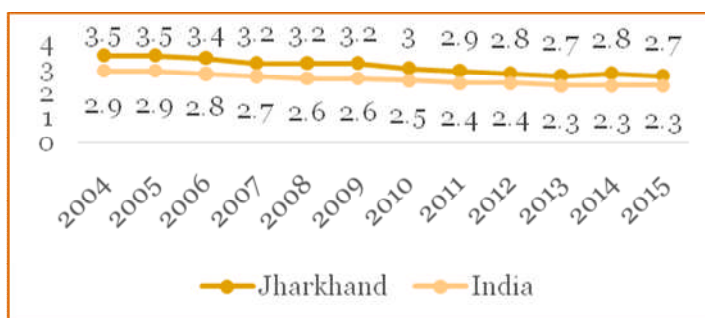
**Figure 26: Trend of IMR**



3. Inter-sectoral convergence for effective implementation of Pre-Conception and Pre-Natal Diagnostic Technique (PCPNDT) Act will need to be promoted in order to check the declining sex ratio in the State. Focus districts will be Ranchi, Dhanbad, Bokaro and Purbi Singhbhum.
4. The State will focus on management of acute malnutrition in children through community engagement through involvement of civil societies and other groups i.e. social/women groups and in collaboration with programmes such as ICDS, drinking water and sanitation schemes.
5. Availability of primary, secondary and tertiary level of care to all newborns in public and private institutions, by tracking of high-risk children, communication for home-based newborn care, building responsive referral system, and better leveraging of Janani-Shishu Suraksha Karyakram (JSSK).
6. Community-level behaviour change communication for infant and young child feeding practices, essential newborn care and kangaroo mother care practices.
7. Integrated action plan for prevention of pneumonia and diarrhoea (IAPPD) with support from other line departments.
8. Screening and managing children with sickle cell anemia in tribal and primitive tribal community. Essential and additional vaccination to be provided to such children to protect them from any form of infection.
9. Strengthening Essential Newborn Care and Resuscitation services at all delivery points and ensuring continuous availability of commodities.
10. Providing fully functional New Born Care Corner (NBCC) at health facilities conducting deliveries.
11. Establishing fully functional Special New Born Care Units (SNCUs) with the requisite skilled human resource in blocks/districts with focus on High-Priority Districts (HPDs).
12. Counselling for breastfeeding, postnatal care, entitlements, and home care practices using counsellors.
13. Training all levels of service providers engaged in screening of birth defects and developmental delays including ANMs and Sahiyas.
14. Scaling up, functionalize and monitor mobile health teams for screening and effective referral to fully functional District Early Intervention Centers (DEICs).

### 10.2.3. Reproductive health

Though the Total Fertility Rate (TFR) has decreased at the rate of 0.23% over the last 10 years from 3.5 in 2005 to 2.7 in 2015, the rate is still higher than the required TFR to stabilize the population i.e. 2.1. Nine districts have TFR of  $\geq 3$ .



The attributable social and service delivery reasons for high TFR could be - high unmet need of 18.4%, early marriage- 38%, early pregnancy- 12% women (aged 15 -19 years) are already mother or pregnant. (NFHS 4).

To reduce the TFR and achieve good health among adolescent and reproductive age group, the State needs to focus more on the districts with high TFR and also address the social norms, causing poor health outcomes in this age group. The specific targets which Jharkhand has set to achieve by 2030, are provided in table below:

**Table 60: Targets for reproductive health**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>TFR</b>	2.6 *	2.5	2.2	<2.1
<b>Total unmet need (%)</b>	18.4 **	17	15	10
<b>Women aged 20-24 married before 18 years of age (%)</b>	38.0 **	35	30	<20
<b>Women aged 15-19 years who were already mothers or pregnant (%)</b>	12 **	11	10	<8
<b>Anaemia among adolescents 10-17 years (%)</b>	78.5 ***	70	55	<40

\*SRS 2015

\*\*NFHS 4  
 \*\*\*CAB 2014

### Action Plan 2021

1. Reduce the TFR of the State to 2.5, the State will increase the focus in 9 high-priority districts where TFR is more than 3. To reduce the total fertility rate, it is essential to provide basket of family planning services. The State will enhance the following services to achieve the target:
  - a) Focus on adoption of temporary contraceptive methods - introducing and expanding the use of injectable contraceptives as a spacing method
  - b) Post-partum family planning services (PPIUCD) in order to capitalize on the opportunity provided by the increase in institutional deliveries
  - c) Increasing demand among male members for family planning services through appropriate Social and Behavior Change Communication (SBCC)
2. Expand service delivery for reproductive health through network of healthcare service providers (private and public) to increase the availability and access to quality contraceptive products through innovative approaches (e.g. social marketing)
3. Increase awareness among adolescent on reproductive health through:
  - a) Implementing Adolescent Education Programme in all public and private schools to build knowledge on life skills, sexual and reproductive health, HIV/AIDS and NCD
  - b) Expanding institutions and community level coverage of Rashtriya Kishor Swasthya Karyakaram (RKSK) in all districts.

#### 10.2.4. Nutrition

The nutritional status of children, adolescent and women in the State is quite low. Around 11.4% of children (0-5 years) are severely malnourished (under -3SD in) 2015-16 as compared to 11.8% in 2005-06 as per the NFHS reports. The comparison between the nutritional status of women and children over 10 years is shown the table below:

**Table 61: Targets for ensuring nutrition**

Indicators	NFHS 4 (2015-16)	NFHS 3 (2005-06)	Change (%)
Children under 5 years who are underweight (weight for age) (%)	47.8	56.5	-15.4
Children under 5 years who are stunted (height-for-age) (%)	45.3	49.8	-9.0
Children age 6– 59 months who are anemic (< 11 g/dl) (%)	69.9	70.3	-0.6
Women of 15 – 49 years of age with low BMI (%)	31.5	42.9	-26.6
Women age 15 – 49 years who are anemic <11g/dl (%)	65.2	69.5	-6.2
Pregnant women age 15 – 49 years anemic <11g/dl	62.6	68.5	-8.6

The specific targets which Jharkhand has set to achieve by 2030, are provided in table below:

**Table 62: Specific targets for ensuring nutrition**

Indicators	Current Scenario*	Target for 2021	Target for 2025	Target for 2030
Children under 5 years who are underweight (weight-for-age) (%)	47.8	40	20	< 10
Children under 5 years who are stunted (weight-for-age) (%)	45.3	40	20	< 10
Early initiation of breastfeeding (within 1 hour of birth) (%)	33.3	55	85	>95
Children on exclusive breastfeeding (up to 5 months) (%)	64.8	75	90	>95

Indicators	Current Scenario*	Target for 2021	Target for 2025	Target for 2030
<b>Children aged 6 – 8 months who were fed complementary foods (%)</b>	47.2	55	80	>95
<b>Children age 6 – 59 months who are anemic (&lt; 11 g/dl) (%)</b>	69.9	55	25	< 10
<b>Prevalence of anemia among girls aged 10 – 17 years (%)</b>	83.1	70	40	< 15
<b>Girls aged 15 – 18 with Body Mass Index less than 18.5) (%)</b>	43.3	40	15	< 5
<b>Women of 15 – 49 years of age with low BMI (%)</b>	31.5	25	< 10	< 10
<b>All women age 15– 49 years who are anemic &lt;11g/dl (%)</b>	65.2	55	25	< 20

\*NFHS 4

### Action Plan 2021

1. Increase the overall nutritional status of children and women by 2020-21; the State will focus on enhanced service delivery of nutrition services in the 12 nutritionally high-burden districts (Kodarma, Dumka, Giridih, West Singhbhum, Danbad, Chatra, Garhwa, Godda, Lohardaga, Latehar, Pakur and Palamau):
  - a) Child nutrition: Early initiation of breastfeeding, exclusive breastfeeding till six months after birth, complementary feeding practices, home based care, full immunization, services for children at AWCs and health facilities, schemes for girl child. Medical Treatment Centre (MTC) will be ensured in all districts
  - b) Nutrition services for adolescents and pregnant and lactating women: Lifecycle approach on importance of nutrition among adolescent girls, pregnant/lactating women, and nutrition services at AWCs targeting adolescents, pregnant and lactating women
  - c) Nutrition for women: Focus on dietary diversity and use of locally available nutritious food, and to educate the women about these and the importance of good nutrition

This will need to be done through active engagement of local public leaders and periodical special drives/campaigns in the select priority districts. The Panchayat Raj Institution members will be engaged in community mobilization, decentralized planning and community scoreboard for monitoring of service delivery under nutrition programs.

- a) Increased use of modern information technology based management information system (MIS) for tracking of children for ensuring immunization and nutrition
- b) For improving the nutritional status of children and supporting better health outcomes, the State will strengthen convergence mechanism among health, nutrition, drinking water and sanitation programmes
- c) Focus will shift from facility-based nutrition services to community-based nutrition assurance initiatives.

### 10.3. Communicable Diseases

Key communicable diseases affecting the State's population, and their current status include:

- **Tuberculosis (TB)**
  - a) Incidence rate: 82 per lakh population; treatment success rate: 88%
  - b) There is a gradual decline in reported cases. Significant patient delays, self-medication (predominantly among tribal community) and seeking care from traditional healers (quacks), leads to high patient load
- **Malaria:** Annual Parasite Incidence (API) 3.78. Low awareness about breeding sites for mosquitoes, low use of bed-nets and low knowledge about disease symptoms are some key challenges resulting high incidence of malaria.
- **Leprosy** prevalence rate 1.26 per 10,000 population

The specific targets which Jharkhand has set to achieve by 2020-21 and subsequently to 2030, are provided in the table below:

**Table 63: Targets for prevention of communicable diseases**

Program	Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>State AIDS control programme</b>	<b>Adult HIV prevalence rate:</b>	0.19*	0.14	0.12	<0.10
<b>Revised National Tuberculosis Control Programme (RNTCP)</b>	<b>TB - total incidence rate (per lakh):</b>	82**	65	20	<5
	<b>TB - treatment success rate of notified cases (%):</b>	88**	90	95	>95
	<b>TB - mortality among notified cases (%):</b>	4**	3	2	<1
	<b>Notified TB cases with documented HIV positive (%):</b>	0.8**	0.5	0.3	<0.1
	<b>Multi-Drug Resistant (MDR) TB cases with recurrent TB (%):</b>	5.4**	4	2	<1
<b>National Vector Borne Disease Control Programme (NVBDCP)</b>	<b>Malaria API</b>	3.78***	2	1	<1
	<b>Micro-filarial rate</b>	1***	<1	<0.5	0
	<b>JE Mortality per 1000 cases</b>	42***	32	20	<10
	<b>Kalaazar incidence per 10,000 Population</b>	2.29***	<1	0	0
<b>National Leprosy Eradication Programme (NLEP)</b>	<b>Leprosy prevalence rate per 10,000 population</b>	1.26***	<1	<0.5	0
	<b>Grade-2 disability per Million population due to leprosy</b>	2.14***	<1	<0.5	0

\*NACO Annual Report 2015

\*\*State TB Division Report 2015

\*\*\*State MIS 2015

### Action Plan 2021

Key action areas consist of:

- Strengthen diagnostic and treatment services for communicable diseases for early diagnosis and treatment and reducing morbidity/mortality. Diagnostic and treatment for TB, vector borne, leprosy and HIV/AIDS will be made available in all public health facilities. Co-opting private facilities will be used as alternative to ensure early diagnosis and treatment. The key focus districts for vector-borne disease control are:
  - Malaria (15 districts) - Ranchi, Gumla, Simdega, East Singhbhum, West Singhbhum, Saraikela, Sahibganj, Godda, Dumka, Latehar, Pakaur, Lohardaga, Jamtara, Garhwa and Dhanbad
  - Kala-azar (3 districts): Sahebganj, Dumka and Pakur
- Increase use of entomological data to strengthen the planning process for control of vector-borne diseases
- Promote greater use of new approaches, including:
  - Shifting TB treatment from alternate regime to daily regime for reducing the defaulters and relapse cases
  - Initiating prophylactic treatment for prevention of HIV infection
  - Eradication of malaria and other vector-borne diseases through genetic engineering
  - Introduction of advance vaccines for control or eradication of tropical diseases
- Increased use of ICT will be encouraged in awareness generation. Use of mobile technology for information, education, communication (IEC)/BCC (messages, voice calls) will be tried to spread awareness on factors

responsible for the spread of communicable disease (HIV, TB, leprosy, etc.). Intensive mass media and mid-media campaign will also be conducted.

Specific actions for:

**TB**

- a) Providing sub-district patient supervision and monitoring for patients both in public and private health sector and to take the necessary action to improve the quality of Directly Observed Treatment, Short Course) DOTS and treatment adherence
- b) Intensifying supportive supervision, patient counselling and retrieval to minimize the default rates in districts with high default rates among new and retreatment cases.
- c) Death audit for each and every patient having died due to TB
- d) Training medical officers on RNTCP to increase TB symptomatic referrals and TB case management.
- e) Functionalizing and optimally utilizing sanctioned Designated Microscopy Centres (DMCs) and Cartridge-Based Nucleic Acid Amplification Test (CBNAAT) laboratories. X-ray facilities in diagnosing smear negative TB cases.
- f) Organizing mass campaign and engaging Community Volunteers in TB symptomatic referrals from periphery health camps and intensified case finding (ICF) among key population
- g) Providing patient care and support to successfully treat the patients and provide long-term follow-ups
- h) Linking TB patients with social security schemes and developing strategy for nutritional support

**Malaria**

- Active screening for all fever cases suspected for malaria
- Classification of areas as per local malaria epidemiology and grading of areas as per risk of malaria transmission followed by implementation of tailored interventions
- Special interventions for high-risk groups such as tribal populations and populations residing in left-wing extremist (LWE) areas/ hard-to-reach areas
- One-stop centres or mobile clinics on fixed days in tribal or LWE areas to provide malaria diagnosis and treatment, and increasing community awareness with the involvement of other agencies and service providers as required
- Timely referral and treatment of severe malaria cases to reduce malaria-related mortality
- Strengthening of all district and sub-district hospitals in malaria endemic areas as per Indian Public Health Standards with facilities for management of severe malaria cases
- Equipping of all health institutions (primary health care level and above), especially in high-risk areas, with microscopy facilities and rapid diagnostic tests (RDTs) for emergency use and injectable artemisinin derivatives for treatment of severe malaria

**10.4. Non-communicable Diseases**

Changing lifestyles, habits and environment has brought about more diseases classified as NCD. The State is focusing on these, but the relevant approaches and programmes are quite nascent and need to be intensified further. The current status in some key areas is:

- Prevalence of diabetes is >140 mg./dl – 7.7% men, 4.9% women
- Prevalence of hypertension: 9.3% men, 5.9% women
- Prevalence of tobacco use : 48.6% men, 5.8% women

The specific targets which Jharkhand has set to achieve by 2020-21 and subsequently up to 2030, are provided in table below:

**Table 64: Targets for NCD**

Indicator	Current Scenario *	Target for 2021	Target for 2025	Target for 2030
<b>Eligible people screened for early detection of diabetes, hypertension and common cancer (%)</b>	Baseline to be established	20%	>55%	80%

Indicator	Current Scenario *	Target for 2021	Target for 2025	Target for 2030
<b>Prevalence of diabetes &gt;140mg/dl (%)</b>		Reduction by 10%	Reduction by 25%	Reduction by >50%
<b>Men:</b>	7.7			
<b>Women:</b>	4.9			
<b>Prevalence of hypertension [systolic 140-159 / diastolic 90-99 mm of Hg] (%) –</b>				
<b>Men:</b>	9.3			
<b>Women:</b>	5.9			
<b>Prevalence of common cancer (%)</b>	Baseline to be established			
<b>Prevalence of mental disorder (%)</b>	Baseline to be established			
<b>Prevalence of tobacco use (%) -</b>				
<b>Men:</b>	48.6			
<b>Women:</b>	5.8			

\*NFHS 4

For some of the above-mentioned indicators, the baseline of which is not available will be established. Appropriate measures/target to counter these challenges will also be set out.

### *Action Plan 2021*

Some key focus areas for the State are:

1. Expediting the implementing of the National Programme for Cancer, Diabetes, Cardiovascular Disease and Stroke to all districts, though adequate infrastructure and deployment of health human resources.
2. Focus on establishment of psychiatric care centre and geriatric care centre/out-patient department (OPD) services up to CHC level, in order to reach out to the existing cases, which require such services.
3. PPP will be promoted in district hospitals and tertiary care health facilities for diagnosis and treatment of NCD
4. Creating demand for services and then providing adequate and quality assured services in the above areas at all levels. This will involve promoting public-private partnerships for health promotion, early diagnosis and treatment of NCD at district and below level, and provision of drugs and supplies for treating such cases.
5. Introducing mobile and wearable technology for dealing with anxiety, depression and other mental conditions.

Other focus areas:

- a) Completion of recruitment for vacant posts of skilled human resources under the program
- b) Health promotion, awareness generation and promotion of healthy lifestyle through active counseling and IEC at field level and NCD clinics
- c) Training of all health personnel concerned with health care provision and promotion
- d) Stepping up of screening of target group (all persons above 30 yrs and pregnant females of any age) and early detection of suspected cases of diabetes and hypertension
- e) Setting up of health and wellness centers
- f) Setting up of fully functional de-addiction centre at Ranchi Institute of Neuro-Psychiatry and Allied Sciences (RINPAS) focusing on long-term case management



## 10.5. Health and Wellness

The specific targets for promoting health and wellness to be achieved by 2030, is provided in table below:

**Table 65: Targets for health and wellness**

Indicators	Current Scenario*	Target for 2021	Target for 2025	Target for 2030
<b>Transforming health sub-centres to health and wellness centres (%)</b>	0	25	75	100

### Action Plan 2021

1. Transforming 25% Health Sub-centres (HSCs) to Health and Wellness Centers (HWCs)
2. Institutionalizing the HWC by deploying trained human resource for providing health and wellness services (12 services<sup>26</sup>).
3. Providing appropriate training to nurses/Ayurveda staff for leading the HWCs
4. Integrate AYUSH with the overall health care plan for the State

## 10.6. Human Resource for Health, Infrastructure and Financing

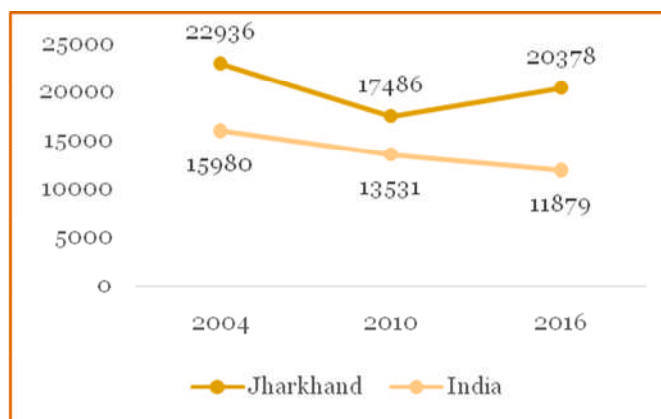
### 10.6.1. Human resource for health

While the PHCs in the State are staffed with medical

officers, there are major gaps in the availability of specialists. At CHC level, only 17% Specialists are in position. Among para-medicals, there is wide gap in availability of radiographers, pharmacists and laboratory technicians, with presence of 31%, 59% and 58% respectively.

Inadequate availability of skilled health personnel is a major challenge for delivering quality healthcare in the State. However, over the years, the State recorded gradual progress in increasing its doctor to population ratio. According to the National Health Profile, (from CBHI) the ratio has improved to 1:20,378 in 2016 from 1:22,936 in 2004. At national level, the ratio is 1: 11,897. The launch of NRHM in 2005 provided additional resource to the State to increase the health personnel; however, the World Health Organisation (WHO) recommends 1 doctor per 1,000 population, which is still a long way for the State to achieve.

**Figure 28: Doctor Population Ratio**



<sup>26</sup> List of services:

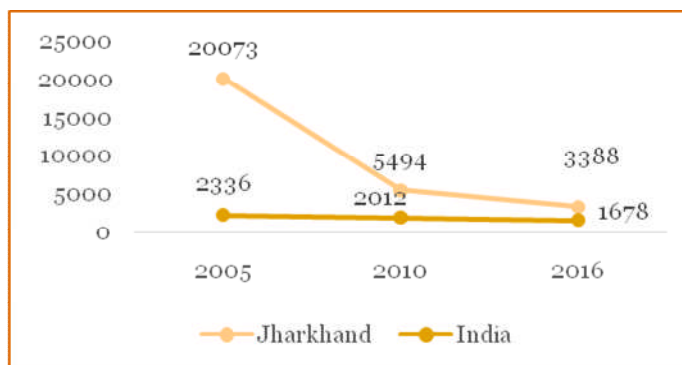
1. Comprehensive maternal health care services to be provided at those sites equipped to serve as delivery point
2. Comprehensive neonatal and infant health care services
3. Comprehensive childhood and adolescent health care services
4. Comprehensive contraceptive services
5. Comprehensive reproductive health services
6. Comprehensive management of communicable diseases
7. Comprehensive screening and management of non communicable diseases
8. Basic ophthalmic services
9. Basic ENT care services
10. Screening and basic management of mental health ailments
11. Basic dental health care
12. Basic geriatric health care services

### 10.6.2. Infrastructure

There is significant gap in the availability of health facilities at different levels. The availability status of health facilities are: sub-centre (65%), PHC (34%), Urban PHC (27%), CHC (78%), UCHC (13%). The State is making effort to narrow gaps of the required number of health facilities in rural areas and improve the availability by adding new PHCs and CHCs every year.

The State has progressed significantly in improving its beds strengths in public healthcare institution in the last decade. As per the National Health Profile (from CBHI), in 2005, the bed population ratio was 1:20,073, which has been brought down to 1:33,88 in 2016, although, the figures are still above the national average of 1:1,678 in public health institutions. The progress has been due to the centrally sponsored schemes like PMSSY launched in 2003 and NRHM in 2005 which led in providing capital inputs to the State for strengthening its public healthcare facilities.

Figure 29: Bed Population Ratio



The specific targets for improving the human resource, infrastructure and health financing to be achieved by 2030, is provided in table below:

### 10.6.3. Health Care infrastructure

Table 66: Targets for healthcare infrastructure

Type of Area	HSC**			PHC / UPHC**			CHC / UCHC**		
	2021	2025	2030	2021	2025	2030	2021	2025	2030
<b>Tribal</b>	*	2622	3200	*	393	480	*	98	120
<b>Rural (non-tribal)</b>	*	3438	4194	*	573	699	*	143	175
<b>Rural (total)</b>	*	6060	7394	*	966	1179	*	241	295
<b>Urban</b>				59	159	194	6	32	39

\* Upgradation of existing facilities as per IPHS norms

\*\* RHS 2016, State PIP 2016-17

### 10.6.4. Medical education

Table 67: Targets for medical education

Indicator	Current scenario*	Target for 2021	Target for 2025	Target for 2030
<b>Number of doctors (MBBS) graduating every year</b>	350	350	600	>1000
<b>Number of nurses (ANM &amp; GNM) graduating every year</b>	390	1020	4200	>8100
<b>Medical colleges</b>	3	4	9	>12
<b>Dental colleges</b>	1	2	3	6
<b>Ayurveda colleges</b>	1	1 (Up to PG level)	3	8
<b>Homeopathy colleges</b>	1	Existing up to PG level	3	8
<b>Unani colleges</b>	1	1 (Up to PG level)	2	4

Indicator	Current scenario*	Target for 2021	Target for 2025	Target for 2030
<b>GNM schools</b>	3	8	12	24
<b>ANM schools</b>	9	15	22	>25

\*State MIS 2016

### 10.6.5. Healthcare financing

**Table 68: Targets for healthcare financing**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
Health expenditure as a part of State GDP (%)	0.69*	>1	>1.5	>3
Health budget as a part of State budget (%)	5.75**	6	7	10
Insurance coverage (%)	65% of BPL***	85% of total population	100% of total population	100% of total population

\*State Economic Survey 2015-16, \*\*Annual plan, Govt of Jharkhand 2016-17, \*\*\*State MIS 2015

### Action Plan 2021

- To meet the infrastructure gap, the State will expedite the creation/expansion of health infrastructure, through new construction or capacity augmentation of medical colleges, hospitals and nursing & Paramedical Training Institutes. To ensure time bound and result-oriented action, a dedicated PMU should be set up
- Itki Medico City Project on PPP model is underway; more such initiatives will be planned and executed
- A comprehensive health system strengthening exercise will be undertaken, focusing on quality, manpower and service delivery gaps.
- More effective utilization of health infrastructure already available, by identifying the gaps in service delivery and plugging them.
- To meet the infrastructure gap, the State will expedite the creation/expansion of health infrastructure, through augmenting the construction of health centres at all level. The State will upgrade all the facilities as per IPHS norms by 2020-21. To encourage transparency and accountability in the process, formation of an infrastructure development corporation under PPP will be done.
- The State will develop a policy for medical referrals and institute a referral system by 2020-21. The referral mechanism guideline will be developed to ensure effective forward and backward linkages.
- To establish AYUSH hospital in each district and 'yoga' centre in all district hospitals and subsequently in CHCs will be initiated by 2020-21.
- The State will ensure evidence-based planning, monitoring and preparedness for disaster management, through:
  - Strengthening surveillance and other information systems for evidence-based intervention
  - Disaster preparedness planning for health facilities and strengthening of the health care response to natural calamities and disasters
  - Planning for new health facilities (HSC/PHC/CHC) based on GPS data to minimize travel from habitation to health facility
- Encourage involvement of non-government/private agencies for health services, primarily through:
  - Developing appropriate policies to create enabling business environment for private sector investment in healthcare services
  - Affiliating the private nursing schools and colleges for allocation of seats for government-sponsored candidates
  - Centralizing the admission process for nursing education for all private and government schools/colleges
- Expanding health insurance (Mukhyamantri Swasthya Bima Yojana) coverage to protect from financial catastrophe due to seeking medical services. Priority will be on covering all BPL population.
- Exploring different sources of resource mobilisation such as corporate social responsibility, District Mining Fund Trust, external aid, PPP, etc.

12. Making emergency transportation system more effective by strengthening 108 ambulance network and connecting it to a centralized call centre
13. Developing platforms for comprehensive use of ICT (e.g. mHealth technology, telemedicine, ERP, etc.) for administrators, service providers and beneficiaries in integrated manner.
  - a) Enterprise Resource Planning (ERP) to cater to requirements pertain to governance, human resource management and development, budget and financing, supply chain management, infrastructure and monitoring of healthcare services
  - b) Design and implement technological interventions (mHealth, telemedicine, medical IT, clinical decision support system, electronic medical/health record, etc.) for ‘comprehensive healthcare services’ (preventive, promotive, curative and rehabilitative) accessible by healthcare administrators, service providers and beneficiaries.

## 10.7. Convergence

In order to strongly emphasize on overall health, including service delivery and strengthening of systems for effective service delivery, multi-sectoral convergence mechanism will be set up. To achieve the set targets, the health department, will be converge with other departments—water and sanitation, women and child development, education, welfare, etc. The department will establish specific convergence with flagship programmes with these department—Sarva Siksha Abhiyaan, Swachh Bharat Mission, ICDS, etc. The convergence among the departments and the flagship programme must enable, components like joint training of functionaries, utilization of common platform, joint reporting and monitoring. The process would enable more transparency and accountability in implementing and monitoring. Most of the programme guidelines enlist measures and tools for convergence; the State will institutionalize these processes and strengthen the implementation of convergence mechanism at all levels. The State will focus on a decentralized approach to strengthen the convergence process and empower PRIs/RKS coordinate the implementation and monitoring.

## 10.8. Conclusion

The State Vision calls for expediting the implementation of health service delivery in Jharkhand, especially in hard to reach areas to achieve the desired health outcomes. More focus attention will be on expanding the health service delivery in high priority districts. Strengthening health service delivery mechanism by investing in human resource, infrastructure development and health research will be the central agenda. The focus will be on evidence-based planning for delivering the required services in a targeted manner and based on the requirements in the region. The focus will be on health research to understand the disease pattern, prioritizing diseases that require immediate planning and intervention. Infrastructure, is one of the crucial requirements in the State, along with adequate human resources deployment. The State will take these up by upgrading all public health facilities as per IPHS norms, and employing GPS-based planning for creating new facilities. Effective service delivery required better coordination with public and private sector (including PSU, faith-based and other civil society organizations). Adequate knowledge management will be focused on, for which the State will collaborate with reputed institutions in their respective fields, such as IIM-R, Institute of Public Health, Ranchi and other technical institutions for health research and promotion. Free drug policy in districts, will be further strengthened through improved procurement and drug logistics, primarily by using information technology. State will focus on further expansion of health insurance coverage to select beneficiary population groups not yet covered under the RSBY programme.

### **Initiatives to be launched in the next fiscal 2018-19 in line with the Union Budget/State Budget**

- Health Protection cover upto 5 lakh rupees per year for each targeting poor and vulnerable families will be provided under “Ayushman” Scheme to be launched by GoI. (Centre)
- A scheme to provide loans up to 50 lakh rupees from the bank will be started for Doctors, belonging to Scheduled Tribes / Caste category, opening a hospital in the tribal areas. (State)
- In order to reduce malnutrition, 48,000 nutrition gardens will be created in 400 villages under the JTELP project. (State)

# 11. Basic Amenities

Access to basic amenities including access to continuous energy, transport facilities and connectivity and access to safe drinking water and sanitation, are critical to the well-being of the citizens of the state and hence Jharkhand has a definite vision in all these areas.

## 11.1. Enabling Access to Energy

**Transforming lives of people with a resilient, cost-effective, sustainable and consumer-focused power system in the state**

### 11.1.1. Context

Energy is a critical enabler for driving any economy forward, both from a social necessity perspective for betterment of human lives, as well as from an economic standpoint for enhancing economic output. The state of Jharkhand has achieved an average GDP growth of 12% over the past three years to maintain such an accelerated pace of development, developing the energy sector in the future is crucial. Jharkhand has also recognized the importance of Sustainable Development Goals (Goal #7) to ensure universal access to affordable, reliable and modern energy services, and take significant strides in the share of renewable energy in the energy mix and energy efficiency improvement rate. The following action plan highlights some of the State's priorities in the sector, identified actions to achieve targets and the long-term vision for the sector.

Since the State was formed, the power sector of Jharkhand has come a long way from the time most of the State was under dark with electricity being a luxury especially in rural areas. Now, most villages have an average of 16 to 18 hours, and all urban areas have about 20-22 hours of electricity supply. Having achieved electrification levels of 57% from 46% in the last two years, the state has gained confidence to aggressively achieve its targets. The power supply position has improved drastically with the energy supply deficit falling from 3% about to 0.6%, with no peak demand deficit from approximately 2% in the last two-year timeframe. On the operational efficiency side, the sector has made a huge progress in reducing its Aggregate Technical & Commercial (AT&C) losses from over 41% to 32% at the end of FY 2016-17. The financial loss has also been relatively controlled by bringing down the per unit ACS<sup>27</sup>-ARR<sup>28</sup> gap from Rs3.50/unit to Rs1.78/unit.

The above has been made possible through a series of concerted steps. The State Government has undertaken multiple interventions and schemes, either self-sponsored or with the support of the Central Government to facilitate the development of the sector. Some of these include:

1. 24X7 power for all by FY19;
2. Participation in the Ujjwal Discom Assurance Yojana (UDAY) scheme for achieving financial and operational turnaround of the State distribution company by FY19;
3. Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), State RE plan and Atal Gram Jyoti Yojana for enhancing rural electrification and power supply;
4. Integrated Power Development Scheme (IPDS) subsuming the Restructured Accelerated Power Development and Reforms Programme (R-APDRP) scheme for network strengthening and expansion in urban towns;
5. Tilka Manjhi Krishi Pump Yojana for releasing connections to farmers;
6. State Solar Policy (2015), policy for grid connected rooftop solar PV on State Government buildings, Decentralized distributed generation (DDG) policy under the State RE plan for enhancing renewable energy in the sector; and
7. State Energy Conservation plan for enhancing energy efficiency and demand side management.

<sup>27</sup> Average cost of supply

<sup>28</sup> Average revenue requirement

The state acknowledges its current level of household electrification (57%) and is committed to achieving the national target of 100% by 2019 as per the ‘24x7 Power for All’, a joint initiative of Government of India and Government of Jharkhand. Although the state has ensured 20-22 hours of supply in urban and 16-18 hours in rural areas, it is on its way to ensuring 24-hour supply in urban and 22-hour supply in rural areas by 2019. With a current renewable installed capacity of nearly 26 MW, the state will take up renewable generation in line with the national target of 2,005 MW of solar and small hydro installed capacity by 2022. In addition, as per UDAY initiative, the Jharkhand Government is committed to achieving 15% AT&C losses by 2019. The State Government intends to transform its power sector, and has now accordingly identified five priorities and focus areas as a part of its sector vision.

1. Electricity access for all
2. State-of-the-art power delivery infrastructure: operational and financial efficiency improvement
3. Maximizing economic growth in transitioning to a better energy future
4. Developing Jharkhand as the power generation hub of India: enabling policy framework
5. Leading innovation in the power sector

The following sub-sections capture each of the State’s priorities, their corresponding indicators, targets and the action plan for the next three years to achieve targets.

### 11.1.2. Electricity access for all

The State Government is committed to ensuring that by 2019 100% household have access to power have achieved 57%, up from 47% in the past two years. This has been identified as a key performance area to enhance the existing poor per capita consumption of electricity and ensuring 24x7 power supply.

This has been a daunting task for the State to achieve. The widespread geographic expanse of the State, with the majority of the population (74%) living in rural areas, and limited ability of the State-owned distribution utility, JBVNL, to invest in such network expansion due to its financial position, have been some key constraints. And this, added with the delay in executing distribution projects, had further added to cost overruns. This inflated the investment requirement, making electricity expensive and potentially unaffordable for socioeconomically weaker consumer segments.

However, with JBVNL taking up multiple schemes under the State and Central Government ambit to enhance investments, improve financial position and expedite project execution, these challenges are expected to be overcome in the near term, and the State would achieve its goals. With adequate access to electricity, people of the State will also see a transition from the currently utilised energy sources like diesel generators, kerosene, firewood, etc. to electricity. The State has accordingly set specific targets for the indicators on energy access in the table below:

**Table 69: Targets for ensuring electricity access to all**

Indicator	Current Scenario	Target for 2021	Target for 2025	Target for 2030
% Household electrification (urban)	97%	100%	100%	100%
% Household electrification (rural)	43%	100%	100%	100%
Average daily hours of supply (urban)	21	24	24	24
Average daily hours of supply (rural)	16	24	24	24

Source: For Baseline JBVNL data, March 2017; UDAY dashboard; GARV dashboard

### Action Plan 2021

#### Enhancing grid coverage

1. Ensuring adequate network capacity in the system by FY19:
  - a) Augmenting the transmission network to 21,395 MVA from the current 5,145 MVA
  - b) Installing 1.36 lakh distribution transformers and adding 51,788 ckm distribution lines
2. Ensuring additional 31.25 lakh rural household connections by FY19

3. Electrifying 842 villages under various schemes<sup>29</sup> such as
  - a) 10<sup>th</sup> and 11<sup>th</sup> plan – 170 villages by FY18
  - b) 12<sup>th</sup> plan DDUGJY – 67 villages by FY18
  - c) DDUGJY – 367 villages by FY18 (Including 173 off-grid villages incorporated under DDUGJY and 52 villages not covered under any scheme now added to DDUGJY)
  - d) RE State plan – 24 villages by FY18
4. **Enhancing off-grid coverage**
  - a) Electrifying solar PV and solar stand-alone system through micro-grids to help set up DDG in remote areas
  - b) Electrifying 254 villages by FY19 through off-grid renewable energy<sup>30</sup>
5. **Enhancing performance of utilities**
  - a) Setting up Project Management Cell to ensure timely execution of distribution network augmentation
  - b) Revamping the existing Performance Management System by aligning targets linked with performance-based incentive for employees

### **11.1.3. State-of-the-art power delivery infrastructure: operational and financial efficiency improvement**

In addition to ensuring access and adequate power availability, the State government also understands that it needs to ensure a reliable electricity network for all its consumers. To ensure that a state-of-the-art infrastructure is put in place, it is crucial that the distribution utility is financially and operationally stable and self-reliant.

The Aggregate Technical & Commercial Losses (AT&C) for JBVNL are currently 32% (which has improved from 41% in the last three financial years). This leads to higher cost of supply – increased expenditure towards power procurement for sale of same amount of energy, and in the absence of cost-reflective tariffs, leads to financial distress. JBVNL, which collects revenues from consumers for the entire sector, has been under financial stress in recent years due to the same. As a result, it has certain constraints to make new investments for both enhancing access as well as improving its operational efficiency to reduce the costs. This also limits the company’s ability on working capital to procure adequate power for supplying to its consumers. It also leads to increased subsidy requirement from the State Government.

The State Government is committed to developing a strong infrastructure for the distribution sector and keeping this in view; it is the first state to sign UDAY scheme with the Central Government. The State has set specific targets for the key indicators in this area in the table below:

**Table 70: Targets set for operational & financial efficiency**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
AT&C losses (%)	32%	14%	11%	8%
T&D losses (%)	23%	14%	11%	8%
ACS-ARR gap (Rs/kWh)	1.78	Nil	Nil	Nil
% Consumer metering	87.5%*	100%	100%	100%
% Feeders metering – rural	22%	100%	100%	100%
% DTRs metering – rural	0%	100%	100%	100%
% Feeder segregation	0%	100%	100%	100%
Utility reliability indices*	SAIDI <sup>31</sup> : 1,295 min SAIFI: 26	SAIDI: 120 min SAIFI: 2	SAIDI: 60 min SAIFI: 1	SAIDI: 30 min SAIFI: 0.5

\* As per 24x7 Power for All document

<sup>29</sup> Source: JBVNL data, June 2017

<sup>30</sup> Source: JBVNL data, June 2017

<sup>31</sup> Monthly data for 30 towns covered under R-APDRP IT enablement scheme funded by GOI. SAIDI (system average interruption duration index) and SAIFI (system average interruption frequency index) are reliability indices that indicate the average outage duration and average number of interruptions, respectively for each customer served

## Action Plan 2021

### Improving the operational performance of the State distribution company

1. *Fast-tracked implementing of State and Central schemes*
  - a) Compulsory metering of feeders, DTRs, smartmetering under UDAY scheme by 2019
    - Metering of 1,089 additional feeders by FY18
    - Metering of 21,172 additional distribution transformer metering by FY19
  - b) Ensuring drastic reduction of AT&C losses through highest level of continuous monitoring (CM/Energy Secretary) t
  - c) Tracking IT enablement, currently adopted for 30 towns (implemented in 7 towns while awarding of contract in process for rest 22)<sup>32</sup> under RAPDRP Part-B, to be extended to all cities to determine the utility's true and holistic performance
  - d) Distribution network strengthening and reliability improvement under IPDS scheme, currently adopted for 40 towns (contract awarded for 20 towns, the process for rest being under way)<sup>33</sup> to be expanded to other cities/towns
  - e) Reliability indices such as SAIFI (System Average Interruption Frequency Index) and SAIDI (System Average Interruption Duration Index) to be monitored throughout the State to improve reliability
2. *Improving collection efficiency*
  - a) Name and shame campaigns and social audits
  - b) Varied consumer interfaces for collection - Pragya Kendra, post offices, ATMs, and online/mobile payment mechanism
  - c) Target-based arrear collection
  - d) Organization of camps for redressal of billing issues
  - e) Conversion of flat billing consumers to metered consumers
  - f) Ensuring higher accountability and tight governance in revenue collection through show cause notices to non-performing circles
  - g) Installation of MVD (medium-voltage distribution) in theft-prone areas
  - h) Use of aerial bunched overhead conductors and underground cables
  - i) Demand response programmes to reduce loads during highest demand hours (losses are highest during these periods)
  - j) Performance monitoring through external agency to bring in transparency and accountability
  - k) Encouraging consumers to report theft, fault, etc.
  - l) Identification of priority areas and bringing in private sector participation to enhance efficiency.
3. *Improving the financial viability of the state distribution company*
  - a) Adoption of advanced load forecasting techniques and participating in short-/medium-term power markets to manage peaks
  - b) Setting up Power Procurement Management Cell for power purchase portfolio management
  - c) Detailed study of energy mix of the State
  - d) Determination of tariffs based on sound economic principles
  - e) Determination of true cost of supply (category or voltage-wise cost allocation)
  - f) Ensuring strict compliance for timely filing of tariff petitions by state distribution company
  - g) Providing attractive electricity tariffs for industrial and commercial sectors through time-bound roadmap for reducing cross-subsidy

#### 11.1.4. Maximizing the economic growth in transition to a better energy future

Jharkhand recognizes that reliable and low-cost electricity is the most binding constraint for all businesses, especially those operating in the manufacturing sector. The State is home to industries such as steel, aluminum, copper, etc., for which electricity has a significant input cost. With industrial and commercial consumers (6.5%

<sup>32</sup> Source: JBVNL data, June 2017

<sup>33</sup> Source: JBVNL data, June 2017



of the total number of consumers) consuming nearly 46% of the total electricity sold by JBVNL and having 78% contribution towards the State GDP, the price of electricity plays a crucial role in the State's economic growth for ensuring competitiveness in the domestic and global market, and therefore attracting new investments in the State.

Acknowledging this need, Jharkhand has been actively adopting measures to be the top state in terms of competitive electricity prices in the country. Being home to the highest coal reserves in the nation, the State has enormous potential for reducing electricity prices with the natural competitive advantage of reduced logistics costs for fuel transportation. The State has set specific target for the key indicators in this area in the table below:

**Table 71: Targets for competitiveness**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Competitive electricity tariffs</b>	Top 10 states	Top 8 states	Top 3 states	Top state

Source: For Baseline JBVNL data, March 2017; UDAY dashboard; GARV dashboard

### Action Plan 2021

#### 1. Minimizing cost of supply

- a) Reducing transmission and distribution losses to reduce lost power and therefore cost of supply
- b) Increasing dependence on power from pit head power plants to reduce landed costs
- c) Generating through efficient coal technologies to reduce power generation costs
- d) Setting up Power Procurement Management Cell to carry out efficient load forecasting and short-/medium-term power procurement to meet the demand during peak periods

#### 2. Enhancing service quality to industries and other large businesses

- a) Deploying state-of-the-art power delivery infrastructure, to provide round-the-clock uninterrupted power supply and reducing dependence on captive sources and diesel generators

### 11.1.5. Developing Jharkhand as the power generation hub of India: enabling policy framework

Jharkhand is the richest state in India in terms of coal reserves, which creates an immense potential for power generation. Being positioned in proximity with power deficit states such as the UP, Chhattisgarh and Bihar, the state in the long term envisages leveraging this opportunity to ensure abundant generation capacity and to drive economic growth through power export.

In order to ensure sufficient capacity addition, the Government of Jharkhand has recognized the need for an enhanced and attractive policy framework to successfully engage Independent Power Producers (IPPs) and private players in the generation of power. Looking at successful case studies from other states in India, it has been observed that an attractive power generation policy is required to attract private players to setup power plants in the state. For instance, Gujarat and Maharashtra have added thermal generation at 60% and 25% CAGR over 2009-13 and 2007-13 respectively, because of a dedicated power generation policy.

Therefore, the State will formulate a revised energy policy for thermal generation<sup>34</sup> to attract IPPs and private players, and to ensure capacity augmentation, given the abundant coal resources in the State. The revised energy policy envisages to cover the following aspects:

<sup>34</sup>Jharkhand came out with its Solar Policy in 2015, to attract IPPs to establish solar generation plants in the state

Incentives	Infrastructure	Institutional strengthening	Good governance
<ul style="list-style-type: none"> <li>- <b>Fiscal:</b> Exemption from electricity duty or other taxes (GST) applicable</li> <li>- <b>Non-fiscal:</b> Assistance in land acquisition, connecting infrastructure, etc.</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Adequate &amp; reliable T&amp;D network</b> for ensuring evacuation and access to generated power</li> <li>- Set up institutes &amp; <b>COEs</b> for clean tech R&amp;D and innovation</li> </ul>	<ul style="list-style-type: none"> <li>- Skill development</li> <li>- Recruitment assistance</li> </ul>	<ul style="list-style-type: none"> <li>- Tackling extremism</li> <li>- <b>Single window clearance</b> for all departments</li> </ul>

The revised energy policy is expected to not only attract new investments but also fast-track some of the existing ones, which have seen slow progress in the recent past.

In addition, a **renovation and modernization policy** is also the need of the hour, to ensure that existing projects are utilized optimally, generating at the normative Plant Load Factor (PLF). The main objective the policy is to ensure that the operating units are equipped with the latest and most efficient technology, with a view to improve their performance in terms of output, reliability and impact on the environment.

The overall objective is to enhance the total installed power generation capacity of the State. This would not only enable the vision of supplying power to all but also generate employment opportunities in the State. The State has set targets for key indicators in this area in the table below:

**Table 72: Targets for making Jharkhand an energy hub of India**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Installed capacity (MW)</b>	2,231	8,010	11,603	17,900
<b>Per capita consumption (kWh)</b>	612	822	1,480	2,045

Source: For Baseline JBVNL data, March 2017; UDAY dashboard; GARV dashboard

### Action Plan 2021

1. *Enabling policy for attracting adequate investment in power generation and enhancing capacity*
  - a) Adding generation capacity of 8,010 MW<sup>35</sup> by 2020-21, currently at various stages of development.
  - b) Revising the Energy Policy (2012) and Solar Energy Policy (2015) by providing comparatively more attractive incentives for IPP to invest in the State (electricity duty reimbursement, recruitment assistance, assistance in land acquisition, connecting infrastructure, etc.). Accordingly, revise capacity addition targets.
  - c) State-wise policy benchmarking for designing an attractive incentive structure.
  - d) Adopting PPP mode for mitigating risks and infusing private investment in power generation.
  - e) For existing power plants, re-designing policies, procedures and timelines for Renovation & Modernization (R&M) of power-generating stations to maintain a nominal PLF (Plant load factor).
2. *Augmenting conventional power generation*

Jharkhand State generation company (Jharkhand Urja Utpadan Nigam Ltd.) has the following action plan for the next three years:

- a) 4,000 MW Tilaiya Ultra Mega Power Projects (UMPP) linked with Captive Kerandari Coal Block, out of which JBVNL's share is 1,000 MW. The Tilaiya UMPP to be up for competitive bidding.
- b) 1,320 MW power project linked with captive Maurya Coal Block under Karanpura Energy Limited, of which JBVNL's share is 800 MW. The project has been handed over to NTPC for execution and management.

<sup>35</sup> Established or various stages of implementation

- c) 4,000 MW thermal power plant is to be developed at Patratu by the Joint Venture Company of GoJ (JBVNL) and NTPC in two phases, out of which JBVNL’s share is 3,400 MW (85%).
- d) Proposed 1,320 MW (660 MW X 2) capacity of TVNL.

3. *Timely executing projects*

- a) Developing business-friendly operating guidelines for expediting regulatory and administrative clearances
- b) Framing Right of Way (RoW) policies, rules and procedures for speedy completion of transmission projects and ensuring collaboration between Central and State Governments and among various state departments such as Railways, Forest, Environment, Highways, etc.
- c) Adopting single window mechanism for IPPs
- d) Setting up of a State and Central Project Management Cell in assistance from Central Government by deploying officers from Community and Public Sector Union (CPSU).

**11.1.6. Leading innovation in the power sector**

In order to address some of the challenges faced by the sector, Jharkhand plans to emerge as an early adopter of innovative technologies to improve reliability, reduce costs and ensure sustainability of electricity supply and enhanced consumer services. In the near term, however, the State’s focus is to optimize its investments towards enhancing electricity access and power supply to its consumers, with innovation limited to only low-cost and specific proven areas across the value chain. With adequate momentum from a power surplus scenario post FY20, the State will subsequently take up other areas for development. Some of these areas would include ultra-supercritical boilers, data analytics, electric public transport, piezoelectric pathways, UAV maintenance, Internet of things, and wireless power transfer.

Accordingly, the State has set targets for key indicators in this area in the table below:

**Table 73: Targets set by the Energy Department for leading innovation**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Renewable capacity mix (% of total capacity)</b>	0.96%	28%	29%	30%
<b>% of new residential, commercial and factory buildings compliant with ECBC/GFBC norms</b>	To be finalised subsequently	100%	100%	100%
<b>% of electric vehicles as a share of all new vehicles</b>	0%	2%	15%	Above 30%
<b>Energy intensity<sup>36</sup></b>	To be finalised subsequently	0.27	0.20	0.11
<b>Industrial energy intensity<sup>37</sup></b>	To be finalised subsequently	0.45	0.40	0.33

Source: For Baseline JBVNL data, March 2017; UDAY dashboard; GARV dashboard

**Action Plan 2021**

1. *Augmenting the renewable generation capacity*

- a) Addition of nearly 2,200 MW of renewable generation capacity by 2020-21 in order to meet RPO (RPO)Renewable Purchase Obligation

<sup>36</sup> Energy intensity is a measure of energy efficiency of the State’s overall economy. It is calculated as units of energy consumed per unit of GDP produced (Mega Joule/Rupee)

<sup>37</sup> Industrial energy intensity is the measure of aggregate energy intensity in the industrial sector. It is measured as energy use per unit of value added by industrial sector (Mega Joule/Rupee)

- b) Installation of off-grid renewable energy systems to ensure last mile electricity access in remote and extremism affected areas/villages
- c) Execution of pilot projects for solar, small hydro and biomass power plants
- d) High efficiency rooftop solar power plants with battery energy storage should be promoted in the remote areas of the state
- e) Rolling-out smart micro-grids powered by clean energy (wind/solar/biomass) and supported by battery energy storage for providing electricity to remote/inaccessible areas
- f) Jharkhand will adopt the Gujarat's successful model of Canal Solar Power Project where it can implement Solar PV power plants along the embankments of the lakes, canals and rivers. The PV modules will be installed on the canals which adds more benefits as it reduces land acquisition cost, project implementation time as well as helps in harnessing water
- g) State to set up a "Power fund" to be funded through a component in tariff in collaboration with state electricity regulator

## 2. *Adopting measures to improve energy efficiency*

- a) Mandatory Energy Conservation Building Code (ECBC) for all new residential and commercial buildings by FY18
- b) Mandatory Green Factory Building Code (GFBC) for all new factory buildings by FY18
- c) Establishment of ECBC/GFBC Cell in JREDA to ensure necessary regulatory infrastructure such as training energy audit managers, creating web-based compliance tools, and speedy certification mechanisms
- d) Promoting energy-efficient products and consumer awareness regarding the same

## 3. *Electricity for transportation*

- a) Promoting the manufacturing and adoption of electric vehicles in the state
- b) Providing attractive incentives for the sale and manufacturing of electric vehicles
- c) Setting up electric vehicle charging stations in the state on a large scale based on PPP operating and financing models

### **11.1.7. Convergence**

To achieve the laid down targets, it is also crucial to understand the dependence of the Energy sector on other departments and sectors. Timely project execution, for instance, is an area where the sector seldom struggles, requiring active convergence and coordination with other departments. For example, execution of transmission capacity augmentation projects requires clearances from the Department of Forest & Environment and Road Construction for RoW permissions to lay the transmission towers/lines. Similarly, for power-generation projects, multiple departments are required to be coordinated with in order to execute a project.

### **11.1.8. Conclusion**

The Action plan 2021 calls for expediting activities across focus areas for enhancing access to electricity and implementing a robust electricity infrastructure in the State of Jharkhand, by the means of speedy progress across the power value chain, to realize its long-term vision of "transforming the lives of its people with a resilient, cost effective, sustainable and consumer-focused power system in the state". The State has accordingly identified five priority areas to achieve this vision, namely electricity access for all, creating a state-of-the-art power delivery infrastructure, maximizing economic growth in transitioning to a better energy future, developing Jharkhand as the power generation hub of India, and leading innovation in the power sector. The near-term focus of the State would continue to be to ensure electricity access for all and developing a state-of-the-art infrastructure.

#### **Initiatives to be launched in the next fiscal 2018-19 in line with the State Budget**

- Grid Connected Roof Top Solar Power Plant will be installed in 1,000 state government buildings. (State)
- 2,000 solar power pumps will be installed for irrigation. (State)
- The Canal top Solar Power Plant of 2-megawatt capacity will be installed at Sikidiri Canal in Angara Block, Ranchi district. (State)

## 11.2. Enhancing Transport Connectivity

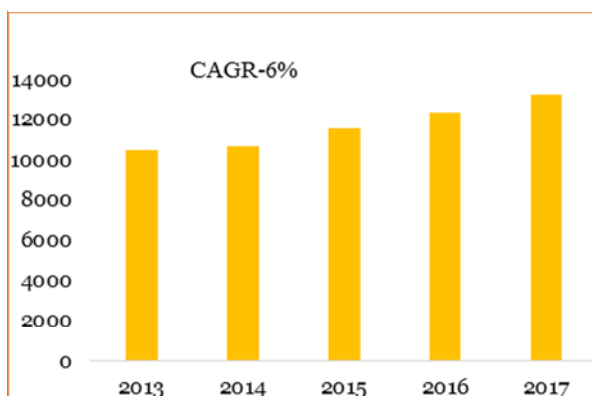
**To provide a safe, reliable and accessible transport system to enable passenger and goods movement in Jharkhand**

### 11.2.1. Context

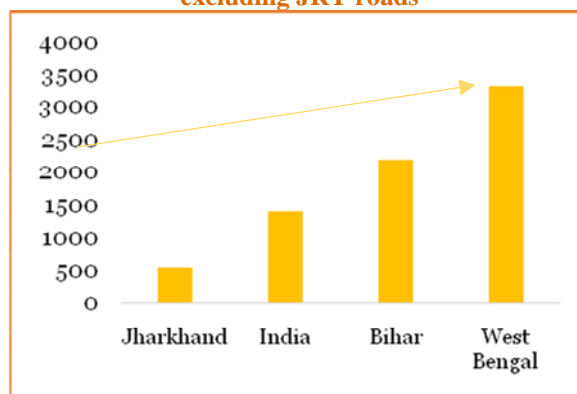
Development of transport infrastructure (i.e. road, rail and aviation facilities) is a pre-requisite for the State's economic development. The State recognizes that not only growth in physical transport infrastructure is important, but also enablers of the transport infrastructure such as provisions in urban/rural connectivity, driver training institutes, IT-enabling infrastructure for issuance of permits/licences, etc. play an important role in increasing convenience to users. Additionally, ensuring safety of transport infrastructure users is one of the primary responsibilities of the State.

The physical transport infrastructure primarily consists of road, rail and civil aviation facilities in the State. Due to the concerted efforts of the State, the NH-SH-OPWD network has grown at a compounded annual growth rate of 6% (approximately) over the last 4 years<sup>38</sup>. Considering that 75% of Jharkhand's population lives in rural areas, providing connectivity through all-weather roads, upgrading the existing roads and building bridges is a key priority of the State. Work under this has been conducted through the Pradhan Mantri Gram Sadak Yojna (PMGSY) and the Mukya Manti Gram Sadak Yojna (MMGSY) schemes by the Rural Works Department. Till date, 25,200 villages of 32,615 have been provided all-weather roads connectivity. However, in spite of the current initiatives undertaken, the road density (as in FY15) in the state (535 km/1000 sq. km.) is less than the national average (1,391 km/1000 sq. km.<sup>39</sup>) and one of the reasons is large area (30%) of the State coming under forest.

**Figure 30: Growth of NH-SH-OPWD network in the state**



**Figure 31: Comparison of road density (km/sqkm) excluding JRY roads**



\*Source: MORTH Handbook 2015

As in FY15, the rail network in the State is of 229,340 route km, which is lower than neighboring states such as Bihar (3,652 route km), West Bengal (4,069 route km) and Odisha (2,529 route km). The State, in association with railways, has been implementing railway connectivity projects in the state. However, owing to difficult terrain and delay in obtaining environmental and forest clearances, the progress in projects implementation has been slow. Projects conceptualized in 2002 have been completed in 2015 at more than thrice the estimated expenditure. Post commencement of operations in these projects, the total length of railway network in the state have increased to 2756 km.<sup>41</sup> On analysis, it has been seen that the rail connectivity is sparse in the Santhal

<sup>38</sup>Data for FY13-15 taken from MoRTh Handbook 2015. SH-OPWD data for FY16 and FY17 obtained from department. NH data for FY16 taken from Jharkhand Economic Survey 2016-17. NH Data for FY17 taken from NHAI.

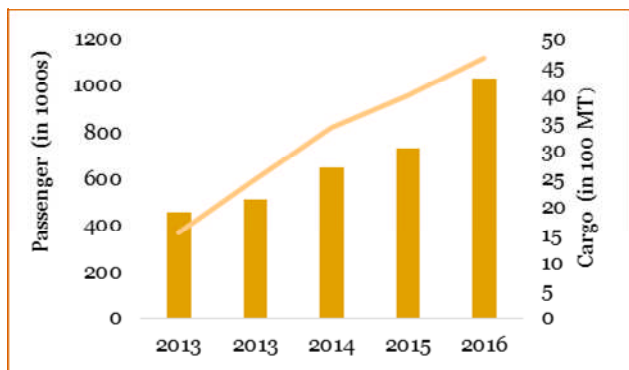
<sup>39</sup>MoRTH Handbook published by the Ministry in 2015. The rural road network excludes roads constructed under Jawahar Rozgar Yojana (JRY). National road density considering JRY scheme is 1665 km/1000 sq. km.

<sup>40</sup>Lok Sabha Unstarred Question No. 3373, dated on 10.08.2015.

<sup>41</sup>Data as obtained from the department

Parganas/north-western region of the State and hence there is a requirement for developing rail network in those regions. Rail lines, connecting major mining areas to the existing network also need to be developed as the existing infrastructure acts as a bottleneck for the movement of raw materials, which impedes the State’s economic growth.

**Figure 32: Passenger/Cargo movement in Ranchi**



\*Source: Airport Authority of India

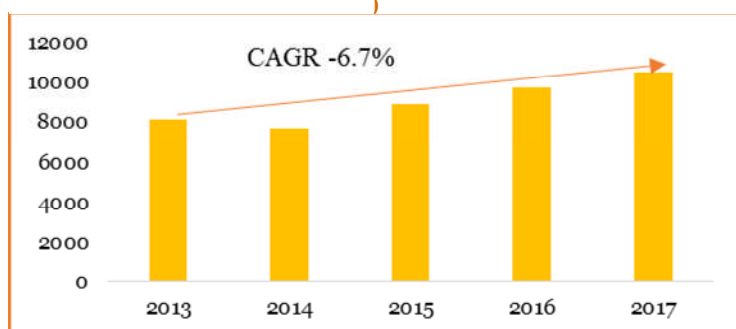
Only one airport which is in Ranchi serves Jharkhand. Owing to this, it has seen an appreciable growth in both passenger and cargo traffic in the last five years, at a CAGR of 22.5%<sup>42</sup> and 32.1% respectively.

Though existing aviation facilities are present in major urban centres of the State, most of them are non-operational, thus increasing reliance on the only airport in Ranchi.

Currently, in the absence of a state transport corporation, the State has been issuing permits to private bus operators for plying buses connecting rural and urban centers. However, a balanced spread of buses across all routes has not been achieved as private players ply on commercially viable routes only. Further, the entire process of permits and license issue/tax collection has not computerized, thus causing inconvenience to users. Infrastructural gaps still remains with respect to providing training facilities for drivers and pollution checking/vehicle fitness facilities in the state. Though the state has taken various initiatives in the transport sector such as enabling transport connectivity, providing facilities for training of drivers, monitoring of fitness of vehicles and provision of enabling IT infrastructure, there are certain shortcomings which would be addressed in this proposed 3 year action plan.

### 11.2.2. Road network

**Figure 33: SH-OPWD network in Jharkhand (MoRTH Data Handbook 2015)**



#### 11.2.2.1. Increase in SH-MDR-OPWD network

The road network in Jharkhand under the state government primarily consists of the State Highway (SH)-Major District Road (MDR)-OPWD) and rural road network.

The SH-MDR-OPWD road network has been increasing at a rate of 6.7% over the last four years. This growth can be attributed to improvement of rural roads to SH/OPWD road

standards owing to their strategic importance. From FY13 to FY16, approximately 3,263<sup>43</sup> km of roads have been added from rural roads to the SH-MDR-OPWD network. Further, approximately 688 km of roads (SH655 km and OPWD33 km)<sup>44</sup> over the same period has been transferred to the NH network, resulting in decrease in SH network in the state. In the 12<sup>th</sup> Five-Year Plan<sup>45</sup>, the department has strengthened and widened approximately 5,295 km of roads. The importance of road construction is amply demonstrated by the fact that the budget for the department has doubled from Rs 1,985 crores in FY14 to Rs 4,311 crores in FY17.

<sup>42</sup>Data obtained from Airport Authority of India reports

<sup>43</sup> As per Planning & Development Annual Report 2017

<sup>44</sup>Information as obtained from the Department

<sup>45</sup>Data from Planning Report 2017 and inputs from Department

In spite of the inorganic increase in road network and recent initiatives taken, the density of the SH-MDR-OPWD network is 112 km/1000 sq. km.<sup>46</sup> as compared to India's average of 386 km/1000<sup>47</sup> sq.km. (FY15). The current road density of SH-OPWD roads is 132 km/1000 sq. km. (FY17)<sup>48</sup>. In order to increase the pace of construction of SH-OPWD network, GoJ formed a body corporate called State Highway Authority of Jharkhand (SHAJ) in 2007; this was envisaged to function as an independent institution for creation of road network within threeyears of its establishment. However, it still functions as a semi-autonomous body, fully relying on funding from the state for its operations. No network study for the core road network in the state has been conducted, and there is an absence of an integrated approach for developing the road network in a holistic manner. Currently, the State is also collecting a cess on Petrol and High-Speed Diesel Oil which is directly being deposited in the State Treasury. However, proceeds of the cess collected is not being channelized for the dedicated utilization of construction/maintenance of the road network in the State.

The State has identified key focus areas which includes the increase in road density and multi-laning of the SH-OPWD network in order to increase the carrying capacity of the existing network. The specific targets which Jharkhand has set to achieve by 2030 are mentioned in the table below:

**Table 74: Targets for increasing the SH-MDR-OPWD network**

Indicator	Current Scenario	Target for 2021	Target for 2025	Target for 2030
<b>Road density (of Road Construction Department (RCD) including SH and OPWD)/1000 sq.km</b>	132*	165	250	400
<b>Multi-lane SHs/OPWD (2 or more than 2 lanes) as a % of total SH-OPWD network in the state#</b>	36.31	45	58	80

\*Data as provided by RCD. Total Length – 10570 km as on 01.04.2017. Current Road Density as on March 31, 2017 is 132. Road Density of the SH-OPWD network was 112 km/1000 sqkm in FY2015 as per MoRTH. Target for 2030 has been considered 3 times of the present average i.e 400 km/1000 sqkm

# Data as provided by RCD for FY2017. As per MoRTH data, the same is 34.03% as on FY2015

The following section mentions in detail the action plan for the next threeyears for achieving the target by 2020-21. As per the actual progress achieved in 2018 and 2019, strategies may need to be revised/changed for achieving targets in 2025 and 2030. Detailed Action Plan for the same will be formulated later, post conclusion of the current action plan.

### Action Plan 2021

To achieve the targets as mentioned above, the focus of implementation would be on augmenting and multi-laning of the existing SH-OPWD road network. In addition to augmentation and multi-laning of roads, ancillary hard infrastructure such as bridges (major and minor bridges)/Road Overbridges would be constructed/refurbished in order to provide convenience to users. The focus areas would be:

1. Capacity augmentation of approximately 2,600 km of road network in the state. This would consist of executing projects aggregating to approximately 1,000 km in 2018, approximately 800 km each in 2019 and 2020-21.
2. Multi-laning of approximately 2,100 km of road network in the state. This would include approximately 1,900 km of single/intermediate lane to two lane and four-laning of approximately 200 km of road network in the region
3. Improvement/Strengthening of 2,500 km of the existing road network to improve riding quality
4. Construction/Improvement of approximately 150 bridges spread equally over the next threeyears
5. Construction of major bridges over important rivers such as Mayurakshi, Swarnarekha, Koyal, Damodar, Ajay, Barakar, etc. This work would comprise starting construction of five major bridges each year for the entire three-year period.
6. Construction of seven ROBs in association with Ministry of Railways over the next 3 years.
7. In order to avoid city traffic, seven major bypasses would be constructed in major urban centres of the State such as Deoghar, Giridih, Khunti, Chaibasa, Lohardega, Godda and Pakur.

<sup>46</sup>Data as per MoRTH Handbook 2015

<sup>47</sup>Data as per MoRTH Handbook 2015

<sup>48</sup>Data as obtained from the Department

8. The State has also been taking initiatives in attracting private sector participation in this sector to take up work on PPP. Jharkhand Accelerated Road Development Corporation Limited (JARDCL) has already implemented 768 lane km of road projects out of its mandated 1,500 lane km and more projects would be undertaken in following couple of years. The State would encourage private sector investments in the road sector.
9. In addition, the State will conduct a study of the existing road network to identify the Core Road Network (CRN) of the state by the end of FY18. This would help in prioritization/schedule phase-wise development of the CRN. The State would also ensure that the CRN identified also connects to the proposed economic corridors being planned in the region. In addition, a periodic traffic count would be conducted on the entire road network and based on the traffic analysis, sequential development plan of the road network would be prepared.
10. SHAJ would be reorganized and institutionally strengthened to enable it to perform the functions for which SHAJ was established. SHAJ would function as an autonomous body and also undertake the function of market borrowing. The State would prepare the report by the end of FY18 on various activities required to enable SHAJ to perform its function.
11. The proceeds of the cess being collected by Commercial Tax Department would be routed to Road Construction Department (RCD)/SHAJ for being utilized against construction/maintenance of the road network. The proceeds of the Road Cess Fund would be leveraged for market borrowings to fund creation/maintenance of the state road network. Operational mechanism of road fund would also form part of the report stated above.

Detailed breakup of the operational plan is provided in the Annexure.

### 11.2.2.2. Increase in rural connectivity

Specific targets which the states intends to reach in rural road connectivity is as mentioned below:

**Table 75: Targets set up for enhancing rural connectivity**

Indicator	Current Scenario	Target for 2018	Target for 2019	Target for 2021
<b>Rural road connectivity (PMGSY)</b>	32,000 km	38, 500 km	46,200 km	49,200 km

### Action Plan 2021

*Achieve maximum connectivity by road:* The State Government is committed towards enabling maximum road coverage to all the districts and blocks of the state. Key action points for this are:

1. Rural Development Special Division have been engaged, in addition to 25 existing Programme Implementation Unit (PIUs)& CPSUs to help achieve the target of building 17,200km of road, 10,800 km of repairing and 512 bridges in the next three years.
2. To maintain specified quality in rural roads, State quality monitors will be deployed. Repair of rural roads will also be undertaken on the basis of the Maintenance Policy 2015.
3. Low-cost material and new technology such as waste plastic, cold mis techno cloth, waste steel slag, fly ash, etc. will be used in building these roads.
4. Considering that certain areas affected by intense LWE activities or may be remote, the State Government is facilitating building of roads, linking these areas to important places.

### 11.2.3. Rail network

As mentioned earlier, adequate railway connectivity needs to be developed in some of the eastern districts like Pakaur, Godda and Sahibganj, northern districts like Chatra, Palamau, Giridih and western districts like Gumla. Rail connectivity connecting major mining areas with the existing railway network in the State also needs to be developed. There has been a delay in implementing railway projects in the State owing to the difficult topography and delay in obtaining clearances. Further, due to the absence of an integrated transport planning study, railway projects aimed at increasing transport connectivity in the State has not been properly planned. The State will conduct a study to analyze the level of penetration of rail connectivity in the State. Based on the requirements as obtained from the study, the department will chalk out a long-term strategy for ensuring rail



connectivity with all the districts within 2030. Accordingly, the State will enter into an agreement with the Ministry of Railways for implementing projects within the timelines. To address these, the State has adopted the following focus areas for developing the railway network in a holistic manner.

The following table mentions the targets that needs to be achieved by FY20:

**Table 76: Targets set up for enhancing rail connectivity**

Indicator	Current scenario	Target for 2019	Target for 2020	Target for 2021
<b>Number of districts connected by rail network</b>	20	20	21	22
<b>Length of broad-gauge rail network in the state</b>	2,756	2,855	2,855	3,076

### *Action Plan 2021*

The following focus areas have been adopted for developing railway network in the State

1. Formation of a joint venture between Government of Jharkhand and Ministry of Railways (51:49) for construction of new rail projects in the state. Under this scheme, several railway projects would be executed such as Namkum-Kandra, Giridih-Madhuban-Parasnath and Tori-Chhatra railway lines.
2. Tripartite MoU has been signed among CCL, IRCON and GOJ for implementing railway projects connecting mining areas with the existing railway network in the State. Jharkhand Central Railways Limited (entity formed from this MoU) intends to construct a railway line connecting Shivpur to Kathautiya.

The focus of the department would be to ensure timely completion of these railway projects which would increase railway connectivity within various districts in the State of Jharkhand.

### *11.2.4. Civil aviation*

The only functional airport in Jharkhand (Ranchi airport) has seen a sharp increase in domestic passengers (CAGR of 22.5%)<sup>49</sup> and cargo traffic (CAGR of 32.1%) over the last four years. The passenger traffic has exceeded 1 million in FY17. At this rate, passenger traffic estimated to use Ranchi airport would exceed 1.5 million in FY19 (Bhubaneswar was declared an international airport in FY2014 at similar passenger traffic). The urban ratio in Jharkhand (24.05%) is also greater than that of Bihar (11.29%) and Odisha (16.09%)<sup>50</sup> where there are existing operational airports to cater to the demand. Considering the increase in passenger traffic and urban population of Jharkhand, there is a need to decentralize the aviation traffic, increase aviation connectivity between district capitals/major urban centres and augment the existing facilities at Ranchi so as to make it an operational international airport. However, detailed feasibility study would be conducted before the same is established.

The following table mentions the targets that needs to be achieved by FY20-21:

**Table 77: Targets set up for enhancing civil aviation connectivity**

Indicator	Current scenario	Target for 2019	Target for 2020	Target for 2021
<b>Number of operational domestic airports in the States</b>	1	2	4	7
<b>Number of international airports in Jharkhand*</b>	0	0	0	1
<b>Number of CPL academy/glider training school</b>	CPL-0 Glider training-2	CPL-1 Glider training-2	CPL-1 Glider training-2	CPL-1 Glider training-3
<b>Construction of helipad at tourist places</b>	0	Increase by	Increase	Increase by

<sup>49</sup>Passenger and Cargo Traffic as per Airports Authority of India (AAI)

<sup>50</sup>Information as per Census 2011

2	by additional 3 places	additional 2 places
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\*As per AAI data, Birsa Munda Airport is a domestic airport

\*\* Current Domestic Airport is at Ranchi. The state proposes to develop domestic airports under RCS and its own initiative. The State intends to develop Jamshedpur in FY2018, Dumka and Bokaro in 2019 and Daltonganj, Hazaribagh and Deogarh in FY20 thus accounting for seven operational domestic airports in FY2020-21

### Action Plan 2021

1. The State has signed a MoU with Ministry of Civil Aviation and AAI as part of Regional Connectivity Scheme to connect major urban centres in the State. Existing aviation facilities at urban centres such as Jamshedpur, Dumka, Dhanbad, Hazaribagh, Daltonganj and Bokaro would be upgraded.
2. The Deoghar airport would be made operational by FY20. Most of the land required for the project has been acquired and transferred to AAI. Utility shifting and forest clearance for the balance land is currently under process.
3. Construction of helipads at seven major tourist spots in the State for enhancing convenience to the tourists.
4. Construction of Commercial Pilot License Academy at Dumka and operationalization of it on PPP basis. Construction of hanger, runway facilities, administrative and hostel buildings have been completed. In addition, construction of glider training and aeromodelling institutes would be done in the State. In FY19, the department intends to open a gliding school at Giridih to impart instructional and joyride flights to Pilgrims at Parasnath. The Department has already initiated plans to renovate the runway and construct basic infrastructure to run aero-sport activities at Giridih.
5. Upgradation of the existing domestic airport at Ranchi to international standards.

#### 11.2.5. Road safety

As mentioned earlier, the total number of road accidents in the state has decreased by 3.60% over the last four years. Accidents expressed as a percentage of population is low as compared to the national average. The total number of registered motor transport vehicles<sup>51</sup> in the state is lower than comparable states. The metric for road accidents fatalities measured as a percentage of vehicles is quite high as compared to other states. Similarly, fatalities expressed as a percentage of total road accidents is very high as compared to the national average suggesting the absence of a swift and efficient accident response system.

The specific target to which Jharkhand has set to achieve by 2030 are as mentioned in the table below:

**Table 78: Targets for road safety till 2030**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>No. of road accidents (as a percentage of the existing level)</b>	4,932 accidents*	Reduce by at least 50%	Reduce by at least 65%	Reduce by at least 80%
<b>No of fatalities due to road accidents</b>	3027*	Reduce by at least 50%	Reduce by at least 65%	Reduce by at least 80%

\*data as provided by Home Department to Transport Department. The status is for CY 2016.

<sup>51</sup>Total registered motor transport vehicles obtained as a sum of LMVs, buses, multiaxle trucks and two wheelers.

The specific target to which Jharkhand has set to achieve by 2020-21 are as mentioned in the table below:

**Table 79: Targets set for road safety till 2020-21**

Indicator	Current scenario	Target for 2019	Target for 2020	Target for 2021
<b>No of road accidents (as a percentage of the existing level)</b>	4,932 accidents*	Reduce by at least 10%	Reduce by at least 15%	Reduce by at least 25%
<b>No of fatalities due to road accidents</b>	3027*	Reduce by at least 10%	Reduce by at least 15%	Reduce by 25% at least

\*data as provided by Home Department to Transport Department. The status is for CY 2016.

Further, as per the current Action Plan, in order to adhere to the Supreme Court directive on road safety, the State will achieve full compliance by the end of this year.

**Table 80: Initiatives set by the department for road safety for the next 3 years**

Indicator	Current scenario	Target for 2019	Target for 2020	Target for 2021
<b>Timely compliance with Supreme Court directive on road safety</b>	75%	100%	100%	100%

### *Action Plan 2021*

To achieve the target, the State intends to focus on reduction of road accidents as a percentage of the existing level by adhering to the Supreme Court directive on road safety. The focus areas would be

1. Identification and rectification of black spots in the State in association with Roads Construction Department. Development of a road safety MIS for proper documentation of accident data. This database would be utilized for identification of any future black spots in the state.
2. Home Department will adequately equip police to monitor rash/drunken drivers for traffic violations on state/national highways and in major urban centres.
3. Steps for reduction in fatalities occurring on account of road accidents to be ensured by concerned departments.
4. Ensure road safety to form a part of the school curriculum and display of road safety videos in all cinema halls to increase awareness.
5. Video recording to be made mandatory for issuing driving licence. Possibility of engagement with a third party for streamlining the driving licence issuance process to be explored.
6. Road Safety Audit team to be prepared for ensuring that safety features are incorporated during feasibility study preparation and construction of roads.
7. Proper monitoring of road safety to be done by appropriate authority as per directive of Supreme Court committee.
8. Road safety fund created and proceeds of the funds to be utilized for procurement of equipment for monitoring of traffic violations, conducting traffic safety programmes and other initiatives.

### **11.2.6. Urban and rural connectivity**

In the absence of a state transport corporation, the state government has been issuing permits to private operators for running buses for increasing rural/urban connectivity in the state. The state has issued 131 permits for rural connectivity, 1,972 permits for urban connectivity and 76 permits for running AC buses connecting Ranchi to the district headquarters. The state has already identified 364 routes for enhancing rural connectivity.

The following table mentions the targets that the State intends to achieve by FY2020-21:

**Table 81: Targets set for enhancing urban/rural connectivity**

Indicator	Current scenario	Target for 2019	Target for 2020	Target for 2021
<b>Number of buses/permits for connecting major urban centres</b>	1,972	2,252	2,659	3,084
<b>Number of buses for connecting rural centres</b>	184	250	300	350
<b>Number of buses for providing linkage of all district headquarters with capital city of Ranchi by AC buses</b>	95	120	150	170

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In order to achieve enhanced rural/urban connectivity as mentioned in the table, the focus areas would be the following:

1. Increase urban connectivity between district headquarters and major urban centres
2. Increase AC bus services between Ranchi and other district headquarters
3. Provide benefits such as allotment of separate timetable and identification of separate routes for urban private bus operators
4. Increase bus connectivity with rural habitations by mapping of PMGSY and other rural roads
5. Incentivize the private operators of rural bus services by offering them tax rebates and bank loans
6. State would undertake the Transport Plan Study by end of Year 2018 to identify the need for transport sector connectivity improvement which would also take into account multi-modal transportation needs. Study would entail passenger and also goods movement within the state

**11.2.7. Usage of information technology**

Currently, the online Vahan software (Vahan 4.0) of NIC is being used for vehicle registration at all the District Transport Offices (DTOs). The Sarathi software of NIC is used for issuance of Learners / Driving License at all DTOs. Presently NIC is upgrading the old offline Sarathi 1.0 with the new online Sarathi 4.0 system and all the 24 DTOs have been covered with the new system. However, permits to private operators for intra-state and inter-state bus services are being provided offline.

The following table mentions the targets that the State intends to achieve by FY2020-21:

**Table 82: Targets set up by the Transport Department for enhancing IT infrastructure**

Indicator	Current scenario	Target for 2019	Target for 2020	Target for 2021
<b>% of permits (interstate) being handled online</b>	0%	60-80%	100%	100%
<b>% of permits (intrastate) being handled online</b>	0%	60-80%	100%	100%
<b>Compliance in IT enablement/e-collection of permit fees and taxes</b>	50%	100%	100%	100%

**Action Plan 2021**

Hence, in order to provide a seamless experience to users, following focus areas would be adopted

1. Implementation of the new version Vahan 4.0 (vehicle registration) and Sarathi 4.0 (driver license issuance)
2. All taxes and fees will be incorporated into the online transaction module and integration would be done with Electronic Government Receipt Accounting system (E-GRAS). This would enable online collection of fees and taxes, thereby increasing convenience for the citizens
3. Online permit system for all kind of carriages, including stage, good and contract carriage

- Existing human resources at the DTOs/RTOs need to be augmented for proper enforcement of rules and regulations
- Capacity building training to officials, computer operators at field offices, transport vehicle dealers, etc.

### 11.2.8. Other focus areas

Currently, there is only one truck driving institute in Jharkhand (truck driving institute at Dhanbad), which was established in 2015. To cater to a registered vehicle base of approx~ 2.06<sup>52</sup> million vehicles, there are only 65 pollution centres and 8 fitness centres in the state.

The following table mentions the targets that the state intends to achieve by FY2020:-21

**Table 83: Targets set up by the Transport Department in other focus areas**

Indicator	Current scenario	Target for 2019	Target for 2020	Target for 2021
<b>Number of HMV/LMV institutes in the state</b>	HMV-1 LMV-40	HMV-1 LMV-50	HMV-3 LMV-60	HMV-7 LMV-90
<b>No of trainees being trained by HMV/LMV</b>	HMV-900 LMV-12000	HMV-900 LMV-15000	HMV-4800 LMV-18000	HMV-8400 LMV-27000
<b>Number of PUC/Fitment centres in the state</b>	PUC-65 Fit-8	PUC-90 Fit-12	PUC-100 Fit-18	PUC-110 Fit-24
<b>Number of automated fitness centres in the State</b>	0	1	3	5

### Action Plan 2021

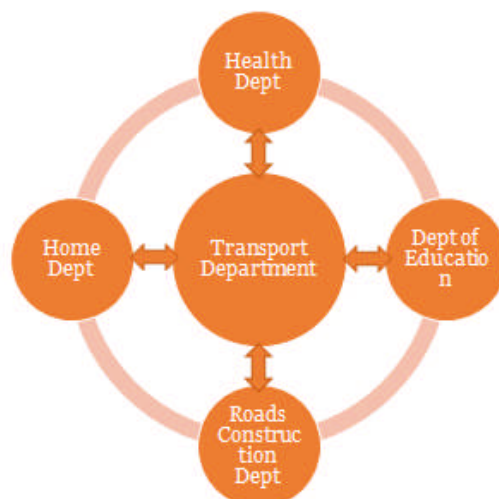
In order to enhance the infrastructure facilities for both training and inspection purposes, the following focus areas have been adopted:

- A Memorandum of Understanding has been signed between Tata Motors and Govt of Jharkhand for establishing a training institute in Jamshedpur. Besides creating quality drivers and increasing employment, 7 HMV training institutes will be opened in Ranchi, Dumka, Saraikela-Kharsawa, Dhanbad, Deogarh, Khunti and Koderma
- LMV training institutes will be opened in all remaining districts across Jharkhand for imparting training to create better quality of drivers
- In order to monitor the fitness of vehicles (to curb pollution), fully automated fitness centres will be opened in 5 major centers, i.e. at Ranchi, Dhanbad, Jamshedpur, Palamu and Deogarh
- Coordination with other departments like Urban Development and Municipalities for development of a transport hub called “Transport Nagar” in outskirts of Ranchi as well as upkeep and modernization of bus stands.

### 11.2.9. Convergence

For achieving the goals as mentioned previously, an integrated approach will be adopted with active co-ordination amongst various departments for implementation. For example, proper monitoring of traffic violations will be done by the Transport Department in co-ordination with Home Department. Identification and reduction in black spots (for increasing road safety) will be achieved by the joint efforts of Roads Construction Department and Transport Department. Similarly, a multi-department approach will be adopted for creating a post-accidental response system. Hence, identification of joint initiatives will be done and accountability with respect to the

**Figure 34: Convergence among departments for effective execution**



<sup>52</sup> Ministry of Road Transport & Highways, Govt. of India. (ON393), (ON913) |

responsibilities to be discharged will be charted for achieving the targets as mentioned in the Action Plan.

### ***11.2.10. Conclusion***

The Action Plan 2020-21 calls for improvement of the transportation infrastructure, primarily through augmentation of road, rail and civil aviation network infrastructure. The State will also focus on transportation infrastructure. It will work on enhancing rural and urban connectivity, IT enablement for issuance of permits and licences and creating a comprehensive road safety plan. The State will also focus more on leveraging resources for augmentation of physical transport infrastructure through public and private partnership.

## 11.3. Access to Safe Drinking Water & Sanitation

### Safe drinking water and sustainable sanitation for all

#### 11.3.1. Context

The right of access to safe drinking water and sanitation is a basic human right. All sections of population survive and thrive on the availability and access to clean and safe water and sanitation facilities. Water and sanitation facilities are important as they contribute to the overall health and wellbeing of individuals. Adolescent girls and women are particularly more vulnerable and affected by inadequate or lack of WASH facilities.

The Sustainable Development Goal (SDG 6) envisions universal, sustainable and equitable access to safe drinking water, sanitation and hygiene, as well as the elimination of open defecation by 2030, whilst prioritizing the poorest and most vulnerable groups. Further, the State envisages to achieve the targets of SDG 6 in a shorter period, targeting to achieve 100% individual household latrine and making Jharkhand 'open defecation free' (ODF) by 2019 under Swachh Bharat Mission (SBM). Further special schemes and funds are being made available to implement piped water schemes through District Mineral Foundation Trust (DMFT), Pradhan Mantri Khanij Kshetra Kalyan Yojna (PMKKKY) and National Rural Drinking Water Programme (NRDWP).

#### 11.3.2. Drinking water

Situation of the State in terms of its rural population having access to safe drinking water is poor. Further, the decadal growth in improving the access to safe drinking water from 2001 (2.7%) to 2011 (3.7%) has not been encouraging as per the targets set by the State. The current scenario of households having access to drinking water through tap source has been presented in *Figure 26*, which shows a steady improvement.

However, as per the NRDWP MIS (India-Water, March 2017) report, 26% of households have main source of drinking water as tap water. The recent progress has been reported due to impetus on the state budget for rural piped water supply and NRDWP over the last several years.

In urban areas, according to 2011 census, around half of the population use tap water as the main source of drinking water and have these within their premises. The State has decadal increase of only 6% on the main source as tap water and only 2% rural households have availability of drinking water within their premises. The graph depicts the progress to access of drinking water in urban areas based on the census data.

Further, the effect of large-scale mining in Jharkhand and location of several coal washeries and industrial units on the river banks has resulted in decline

Figure 35: Percentage of household with access to drinking water through tap source - Rural

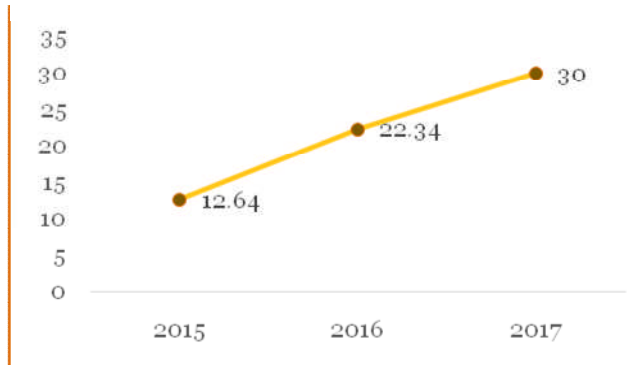
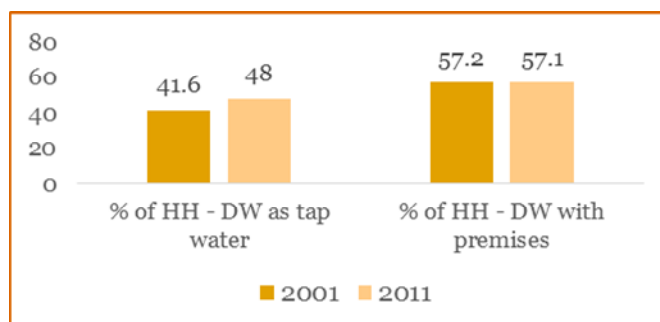


Figure 36: Percentage of household with access to drinking water through tap source and within premises- Urban



in quality of water. This is further aggravated by the rapidly increasing urban population and consequent increase in sewerage which flows into the river and other water bodies.

As a consequence, river Damodar, Swarnrekha are heavily polluted and same is the case of Kanke and Getalsud reservoir of Ranchi. Major population of the capital gets water from these reservoirs.

The State recognizes the need to lay sewer system in all major cities with sewerage treatment plant and enforce pollution control laws for industries. The specific targets for rural and urban drinking water which Jharkhand has set to achieve by 2030 are provided in table below:

### 11.3.2.1. Rural drinking water

**Table 84: Targets for increasing rural drinking water coverage**

Indicator	Current scenario	Target 2021	Target 2025	Target 2030
Rural areas having piped water supply (%)	30*	50	70	>95
Households having main source of drinking water as “treated tap water”(%) - Rural	2.1# / 30*	42	70	100
Households having availability of drinking water within the premises in rural area (%)	11.7#	25	65	80
Rural population having access to minimum 40 LPCD water (%)	90.9*	100	100	100
Habitations fully covered under ground water quality testing in rural areas (%)	94.1*	100	100	100
Surface/source water covered under water quality testing (%)	Baseline to be established	Increase by 25	Increase by 75	All

\* India-water MIS, March/April 2017; # Census 2011 \*\* Service Level Benchmark, Dept. of UD & H, GoJ 2015-16

### 11.3.2.2. Urban drinking water

**Table 85: Targets for increasing urban drinking water coverage**

Indicator	Current scenario	Target 2021	Target 2025	Target 2030
Households having main source of drinking water as “treated tap water”(%) – Urban	34.7**	45	80	100
Households having tap water as main source of drinking water (%) – Urban	59.1**	75	90	100
Per capita supply of water in urban areas (L)	39.2#	50	80	>135
Continuity of water supply in urban areas (hours)	2.4#	4	15	24
Non-revenue water in urban areas (%)	40.5#	35	25	<20
Coverage of wards under water quality testing at household level	Baseline to be established	Increase by 25%	Increase by 80%	All
Surface/source water covered under water quality testing (%)	Baseline to be established	Increase by 25%	Increase by 75%	All

\* India-water MIS, March/April 2017; # Census 2011 \*\* Service Level Benchmark, Dept. of UD & H, GoJ 2015-16

## Action Plan 2021

### Institutional strengthening

1. Functional review of department and setting up of a technical support unit to enhance efficiency and effectiveness due to increased work load (managing increase in budget provision from Rs 350 Cr. in 2012-13 to approximately Rs 1500 Cr. in 2016-17<sup>53</sup>)

<sup>53</sup>Department of Drinking Water and Sanitation: 2016-17 Progress report and 2017-18 work-plan



2. Partnership with Water Resource Department for:
  - a) Conservation, renovation and maintenance of existing water resource
  - b) Small-scale surface water resource projects for increasing drinking water sources
  - c) Creating small water supply grid in the feasible geographical areas in the State for drinking water provision

#### **Water availability**

1. Expediting laying of pipelines (to cover at least 50% rural population) to ensure drinking water supply within premises
2. Ensuring uninterrupted availability of safe water to meet the per capita norms of water supply through well-managed water supply systems/schemes
3. Maximizing use of surface water for drinking purposes through creation, restoration of water reservoirs, check dams, rain water harvesting system, etc.
4. The State will focus on augmenting and strengthening of urban water supply system of Ranchi, Dhanbad, Chas, Hazaribag and Giridih under AMRUT

#### **Quality assurance**

1. Enhancing capacities of existing water treatment plants or establishment of new water treatment plants by government or through PPP/community ownership model for supply of clean and treated water for every household
2. Ensure periodic water quality testing of all source points and water testing of consumption level on a sample basis. Establish 5 district level water testing laboratories accredited by NABL
3. Urban Development Dept. has sanctioned and implemented sewerage schemes for many towns. Local rejuvenating measures for the lakes like aeration, algae removal, diverting nala (drainage) water from entering into reservoirs will be taken up by the Drinking Water And Sanitation Department(DWSD)
4. GoI has also issued detailed draft guidelines on “integrated and holistic approach for rejuvenation of rivers” and “National plan for conservation of aquatic ecosystem (NPCA)” for conservation and rejuvenation of rivers and lakes respectively. The State is committed to this initiative

#### **Community mobilization**

1. Capacity building of PRIs and water and sanitation committee members for management of water supply systems as well as community mobilization
2. Enabling environment for engaging civil society organization for community engagement, innovation and maintenance of sustainable models of drinking water supply
3. Promoting extensive IEC/BCC for usage and benefits of safe drinking water among rural and urban population

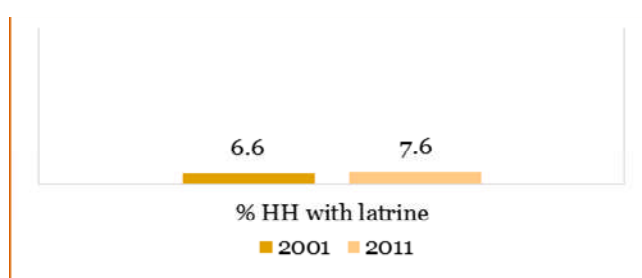
#### **Monitoring:**

1. Installation of SCADA System for all piped water supply system
2. Developing a state-wide MIS for water quality testing of piped water supply

### **11.3.3. Sanitation**

Sanitation is a basic prerequisite for good health and wellness of people. The present Swachh Bharat Mission (Gramin) envisages to provide thrust in achieving the defecation free status. The status of household with toilets /latrines in Jharkhand as per the latest MIS is presented in Figure 28. As per the census 2011, only 7.6% of rural household have toilets/latrines;92% of households defecate in the open.

**Figure 37: Percentage of household with latrine facilities in Jharkhand- Rural**



The access and availability of sanitation facilities has improved in urban areas as compared to the rural areas. With the advent of JNNURM and later Swachh Bharat Mission (Urban) emphasis was given to improve the status of sanitation in urban areas. The status of household with toilets /latrines as per the census reports is shown in Figure 29.

The progress over the last decade shows a meager improvement in availability of toilets at household level with 31% of household, defecating in the open in urban areas as per census 2011.

The specific targets for sanitation in **rural area**, which Jharkhand has set to achieve by 2030, are provided in table below:

**Table 86: Targets set up for increasing sanitation coverage in rural areas**

Indicator	Current scenario	Target 2021	Target 2025	Target 2030
<b>Coverage of individual household latrine (IHHL) (%) – Rural</b>	52.5*	100	100	100
<b>Households going for open defecation (%) - Rural</b>	91.7#	0	0	0
<b>Open defecation free (ODF) (%) - Villages</b>	13.63*	100	100	100
<b>Open defecation free (ODF) (%) - Districts</b>	1**	100	100	100
<b>Gram panchayats having solid &amp; liquid waste management (SLWM) system (%)</b>	0*	30	100	100

\* SBM MIS, March 2017

\*\* SBM MIS, May 2017

# Census 2011

The specific targets for sanitation in **urban area**, which Jharkhand has set to achieve by 2030, are provided in table below:

**Table 87: Targets set up for increasing sanitation coverage in urban areas**

Indicator	Current scenario	Target 2021	Target 2025	Target 2030
<b>% of urban households going for open defecation</b>	17.94*	0	0	0
<b>Coverage of individual household latrine (IHHL) (%) – Urban</b>	84.64**	100	100	100
<b>% of public toilets in urban areas (%)</b>	41.36*	100	100	100
<b>Coverage of community toilets in urban areas (%)</b>	26.23*	100	100	100
<b>% of HH connected to sewer system (%)</b>	14#	50	55	60

\* SBM MIS, March 2017

\*\* SBM MIS, May 2017

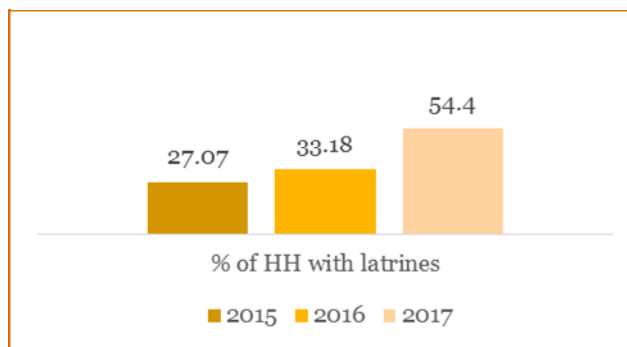
# Census 2011

## Action Plan 2021

### Institutional strengthening

1. Strengthening monitoring mechanism by actively engaging (e.g. compulsory field visits) district level task force to monitor implementation, progress and take corrective measures
2. Strengthening municipal corporations and urban local bodies for developing solid and liquid waste management system in their respective cities and towns
3. Setting up regional institution for capacity development and research, development and innovation in water sanitation and hygiene

**Figure 38: Percentage of household with latrine facilities in Jharkhand- Urban**



### **Construction of toilets and awareness generation**

1. Expediting the construction of individual household toilets, specially focusing on low performing districts of Godda, Dhanbad, Palamu, Giridih and Garhwa
2. Strengthening ODF implementation plan with focus on SBCC strategies and district wide approach. In the current implementation phase out of 24 districts, the State will focus on 13 districts to make it ODF by 2018. The focus districts are: Bokaro, Chaibasa, Deoghar, Dumka, Hazaribagh, Jamtara, Khunti, Koderma, Latehar, Pakur, Sahebganj, Simdega and West Singhbhum
3. Upscaling community approach to total sanitation by building capacity of ward water sanitation committee
4. Providing award, recognition and incentives to ULBs which sustain ODF status for next three years and five years after getting ODF status

### **Solid and liquid waste management**

1. The State will develop an integrated sewerage system in the towns of Jamshedpur Urban Agglomeration consisting of the areas under Jamshedpur, Mango, Adityapur and Jugsalai. The State has also undertaken the integrated sewerage system in convergence with Namami Gange Programme in Sahibganj, Rajmahal and Dhanbad. The State is targeting completion of the Sahibganj Sewerage & STP project by 2018 and Rajmahal by 2019. The integrated sewerage project for Zone -1 of Ranchi city has been targeted for 2019
2. Establishing solid and liquid waste management system at city level
3. Establishing onsite compost treatment machines in urban areas
4. The State will undertake septage management in Chas, Giridih, Hazaribagh, Ramgarh, Phusro, Dumka, Medininagar, Chaibasa and Deoghar and partly in Ranchi and Dhanbad under AMRUT & other schemes

#### ***11.3.4. Convergence***

To achieve the set targets and successful implementation of drinking water and sanitation programme, the State will create an institutional set-up for promoting convergence at state, district and block levels with linked departments and programmes. The key departments that can support the drinking water and sanitation agenda are the urban and rural development department, education, health, women and child development. Drinking water programme will be coordinated with programmes like MGNREGS programme for construction of new ponds and rejuvenation of the old ponds, including desilting, and should be built into the system design and execution. Convergence approach will support State in identifying the need, rational deployment of resources, and common reporting. This will also ensure more transparency and accountability among stakeholders.

#### ***11.3.5. Conclusion***

The Action plan 2020-21 calls for expediting the implementation of drinking water and sanitation through institutional strengthening, community mobilization and through strengthened monitoring systems. The State will focus on creating more sustainable measures by creating enabling environment, greater accountability and strengthening inter-sectoral convergence for promoting water availability and access to sanitation facilities. The State will also focus on leveraging resources for drinking water and sanitation through public and private partnership.

## 12. Women Empowerment and Child Protection

*Empowering and ensuring proper development, care and protection of women, children and other vulnerable sections*

### 12.1. Context

Women and children constitute more than two-thirds of population of Jharkhand. Total female population in the State has ~49% and more than 50% of female population belongs to the working age group, i.e. 15 – 59 years. The State acknowledges that women population is a driver to bring positive change in the society and development. It is thus critical to make the female population an equal partner in the socio-economic development of the State, by keeping them healthy, empowered and protected. As per National Sample Survey 66<sup>th</sup> Round, the State has already witnessed a sharp decline in women workforce since 2005 from 19% in 2004-05 to 10% in 2011-12.

Further, nearly 30% of the population in Jharkhand consists of young and adolescents who are potential growth drivers for the State. This age group needs significant investment in terms of their health, nutrition, protection, and education, for the State to realize the demographic dividend.

The State also has the responsibility towards the vulnerable sections, including aged, differently abled and homeless people in the state. Through different targeted schemes, the State focuses on their protection and well-being in order to provide them a decent life. Therefore, some of the key focus areas for providing required services to the above sections of the society are:

1. Nutrition and Development
2. Child Protection
3. Women Empowerment
4. Welfare and Social Security

### 12.2. Nutrition and Development

The nutritional status of children, adolescent and women in the State is quite low. Only a marginal improvement in the nutritional status of children in the age group of 0-5 years has been registered from 11.8% children malnourished (under -3SD) in 2005-06 (NFHS 3) to 11.4% children in 2015-16 (NFHS 4).

The specific targets which Jharkhand has set to achieve by 2030 are provided in table below:

**Table 88: Targets set by the Department for increasing health and nutrition**

Indicators	Current scenario*	Target for 2021	Target for 2025	Target for 2030
<b>Children</b>				
Children under 5 years who are underweight (weight-for-age) (%)	47.8	40	20	< 10
Children under 5 years who are severely wasted (weight-for-height) (%)	11.4	10	< 7	< 3
Children under 5 years who are stunted (weight-for-age) (%)	45.3	40	20	< 10
Children age 6-59 months who are anemic (< 11 g/dl) (%)	69.9	55	25	< 10
Early initiation of breastfeeding (within 1 hour of birth) (%)	33.3	55	85	>95
Children on exclusive breastfeeding (up to 5 months) (%)	64.8	70	90	>95
Children aged 6 -8 months who were fed complementary foods (%)	47.2	50	80	>95

Indicators	Current scenario*	Target for 2021	Target for 2025	Target for 2030
Children (3- 5 years of age) attending pre-school education (PSE) (AWC and privately run institutions) (%)	61.4**	75	90	> 95
<b>Adolescent girls</b>				
Prevalence of anemia among girls aged 10 -17 years (%)	83.1	70	40	< 15
Girls aged 15 -18 with Body Mass Index less than 18.5 (%)	43.3	40	15	< 5
<b>Women</b>				
Women of 15 – 49 years of age with low BMI (%)	31.5	25	< 10	< 10
All women age 15-49 years who are anaemic <11g/dl (%)	65.2	55	25	< 20
<i>Sources:</i>				

\*NFHS 4

\*\*RSOC 2013-14

### Action Plan 202

To achieve these goals, the State will focus on the following:

1. Increasing the overall nutritional status of children and women by 2020-21 - The State will focus on enhanced service delivery of nutrition services in 12 nutritionally high burden districts (Kodarma, Dumka, Giridih, West Singhbhum, Danbad, Chatra, Garhwa, Godda, Lohardaga, Latehar, Pakur and Palamau):
2. Improving child nutrition through promoting practices of early initiation of breastfeeding, exclusive breastfeeding till six months after birth, complementary feeding practices, home-based care, full immunization, services for children at AWCs and health facilities and schemes for girl child
3. Improvement in nutrition services for adolescents, pregnant and lactating women through promotion of life-cycle approach on importance of nutrition and strengthening of nutrition services at AWCs
4. Improvement in nutrition for women through focus on dietary diversity and use of locally available nutrition food, and to educate the women about these and the importance of good nutrition
5. Active engagement of local public leaders and periodical special drives/campaigns for awareness on nutrition in the select priority districts. The Panchayat Raj Institution members will be engaged in community mobilization, decentralized planning and community scoreboard for monitoring of service delivery under nutrition programmes
6. Increased use of modern information technology based MIS for tracking of children for ensuring immunization and nutrition
7. Strengthening convergence mechanism among health, WASH, ICDS and PDS for improving the nutritional status of children and supporting better health outcomes.
8. Designing interventions against anaemia among children, adolescents and general women through AWCs / Sub-centers and engagement of civil society organizations
9. Information technology based MIS on daily status of nutrition supplementation stock at AWCs (e.g. mobile-based technology at AWCs)
10. Engaging private sector and civil society organizations in planning, periodical screening of malnutrition among target groups, capacity building of service providers, social behaviour change communication

### 12.3. Child Protection

‘Child Protection’ is about protecting children from or against any perceived or real danger or risk to their life, their personhood and childhood. The State is committed to reducing vulnerability to any kind of harm and protecting children in harmful situations while ensuring that no child falls out of the social security and safety net.

A key intervention/scheme towards catering to the well-being of children in the State is the Integrated Child Protection Scheme (ICPS). Based on cardinal principles of “protection of child rights” and “best interest of the child”, ICPS is focused on improvements in the well-being of children in difficult circumstances, as well as

towards reducing vulnerabilities to situations and actions that lead to abuse, neglect, exploitation, abandonment and separation of children from their families<sup>1</sup>.

In the area of child protection, specific targets envisaged by the State are as follows:

**Table 89: Targets set by Department for increasing Child Protection**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>No of cases of crime committed against children</b>	406 <sup>#</sup>	Decrease 10% on yearly basis	Decrease 25% on yearly basis	Decrease 50% on yearly basis
<b>No. of cases of child trafficking</b>	29 <sup>#</sup>			
<b>Children Home</b>	17*	1 per	1 per	1 per
<b>No. of Observation Home**</b>	10 *	1 per district	1 per district	1 per district
<b>No. of Districts with Special Home</b>	1*	1 per divisional headquarter	1 per divisional headquarter	1 per divisional headquarter
<b>No. of Places of Safety in the state<sup>\$</sup></b>	2* <sup>#</sup>	1 per divisional	1 per divisional	1 per divisional
<b>No. of Open Shelter</b>	0*	10	24	24
<b>Children enrolled in 'After Care' programme (%)*</b>	To be established	100	100	100

\*DWCD&SS

# NCRB 2015; Place of Safety are in Jail premises which is not aligned to guidelines

\*\* ICPS provides setting up of Observation Homes / Special Home in every district or group of districts

\$ A 'Place of Safety' is any place or institution, (not being a police lockup or jail), established separately or attached to an observation home or a special home, the person in-charge of which is willing to receive and take care of the juvenile in conflict with law placed there, by order of the Board, for a period and purpose as defined in the order – Revised ICPS

### Action Plan 2021

The State will focus on strengthening child protection through the following:

1. Establishing mechanism of bottom-up planning under ICPS
2. Developing systems for estimation of vacancies and regular filling up of vacancies arising at JJBs and CWCs
3. Disposing pending cases more than 3 months old in fast track mode
4. Ensuring availability of adequate infrastructure for institutional care in each district – Observation Home, Children Home, Special Home, Place of Safety, Open shelter, through expansion / upgradation of existing infrastructure in phased manner, creation of new infrastructure and engaging civil society organisation
5. Making available Specialised Adoption Agency in each district through appropriate partnerships
6. Establishing linkages with Education department and Skill Mission to assure quality education to children under institutional care and development of skills for gainful employment under 'After Care' programme
7. Developing and implementing IEC activities to generate awareness on Child Help Line in entire state
8. Expanding/Upgrading/Creating infrastructure for institutional care under ICPS in a phased manner
9. Engaging civil society organisations in awareness generation on child protection and service delivery under ICPS

## 12.4. Women Empowerment

Gender equality is fundamental human right and necessary foundation for peace, prosperity and sustainability of development. The Government of Jharkhand realizes that providing women and girls with equal access to education, health care, decent work, and representation in political and economic decision-making processes has the potential to benefit the society, leading to economic growth.

NFHS 4 has set out some key indicators for assessing women's empowerment, which will be considered by the State as a basis for reviewing the progress in this area<sup>54</sup> and will also be built into the regular MIS for continuous monitoring.

### 12.4.1. Gender Budgeting

Gender Budgeting is a powerful tool for achieving gender mainstreaming to ensure that benefits of development reach women as much as men. It is not an accounting exercise but an ongoing process of keeping a gender perspective in policy/programme formulation, its implementation and review. Acknowledging the present status and the potential role of women in the State's overall development, Government of Jharkhand started implementing "Gender Budget" within the general State budget. All the schemes in which women beneficiaries are more than 30% have been brought together under the "gender budget". Further, future schemes in which 30% or more have been earmarked for women, would be taken up as "gender budget". More than 13,515 crores was earmarked for such schemes with 43.72% funds underlined for women empowerment<sup>55</sup>. Key initiatives under gender budget include widow pension scheme, training to SC/ST/OBC women to earn livelihood, facilitate easy loan, formation of SHGs for diary business, construction of Working Women's Hostel, Open Shelter for trafficked children and women. Apart from ongoing women focused health services, dedicated Mother and Child Hospital is also planned. Promotion of nursing education will be promoted as a tool for creating employment opportunities for women as well as filling gaps of skilled human resources in health sector. Budget provisions are for reimbursement of tuition fee and examination fee of girl students up to post graduate level and construction of Model Mahila Colleges in 11 districts, which are sanctioned in 2015-16.

### 12.4.2. Health

Sustainable Development Goal 5 with respect to Health empowerment places emphasis on who takes decision on the woman's health issues. As per NFHS 3, 61.2% of women usually make specific decisions alone or jointly with their husband about their own health care.

**Table 90: Targets set up the department on Woman's Health**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Women who usually makes specific decisions alone or jointly with their husband about her own health care (%)</b>	To be established from NFHS 4 Report	10% increase on a year-on-year basis	10% increase on a year-on-year basis	10% increase on a year-on-year basis

### Action Plan 2021

The State will focus on the following:

1. Women centric health services, i.e. quality health services to be accessible, available and affordable to women
2. Awareness generation on importance of women health in family and society

<sup>54</sup> The State will review the NFHS 4 report once it is published to assess the coverage of the indicators identified

<sup>55</sup> Jharkhand Economic Survey 2016-17

### 12.4.3. Education

Education is very effective tool towards gender equity. While more than three-fourths of male population is literate in the State, women literacy was around 55% as per Census 2011. Though the gap between male literacy rate and female literacy rate is narrowed in last decade, still it is calling for more attention to intensive interventions to increase female literacy in the state.

The specific targets which Jharkhand has set to achieve by 2030 are provided in table below:

**Table 91: Targets set by the department for increasing Woman Education**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Literacy rate among female</b>	55.40*	70	100	100
<b>Net enrolment ratio (Female) – Primary</b>	97.93	100	100	100
<b>Net enrolment ratio - (Female) – Secondary</b>	51.32	70	100	100
<b>Transition rate – Female (Class V to VI)</b>	85.32	90	95	99
<b>Transition rate – Female (Class VIII to IX)</b>	77.66	85	90	99
<b>Transition rate – Female (Class X to XI)</b>	55.66	65	80	99
<b>Annual average dropout rate – Primary (Female)</b>	5.03	0	0	0
<b>Annual average dropout rate – Elementary (Female)</b>	6.30	3	0	0
<b>Annual average dropout rate – Secondary (Female)</b>	24.56	10	0	0

\* Census 2011; DISE 2014-15, 2015-16

### Action Plan 2021

The State will focus on the following:

1. Rapid improvement in access to secondary schools by upgradation of upper primary schools into secondary and secondary to Higher Secondary level, setting up of hostels, upgradation of Kasturba Gandhi Balika Vidyalaya (KGBVs). Support to NGOs will be provided for setting up secondary schools
2. Strengthening the present initiatives (“Vidya Chale Chalaye Abhiyan”, “PANKH”, “Pehle Padhai, Phir Bidai”, etc.) for increasing enrollment and reducing dropout which are contributing towards raising awareness in the community, increasing enrollment and reducing dropout
3. Regular and structured measures for capacity building of SMCs/SDMCs
4. Scaling-up engagement of NGO to support schools and SMCs for preparation and implementation of School Development Plans (SDP)
5. Interventions for literacy through Lok Seva Kendra (LSKs) with thrust on low literacy pockets and literacy of women and disadvantaged population. “Shiksha Akhra” awareness drives will also be conducted at community level for intensifying the programme
6. Promotion of vocational education and skill development by expanding the framework of the skill development programme to include livelihoods perspective and self employment. Jan Shikshan Sansthan fully financed by National Literacy Mission Authority (NLMA) and skill development programmes will be linked with LSK to impart demand-driven skill development programmes to eligible candidates undergoing literacy programmes under Sakshar Bharat Mission

### 12.4.4. Workforce participation and employment

Status of female workforce participation is as follows:



**Table 92: Comparative analysis of woman workforce participation and employment**

	Person		Male		Female	
	National	Jharkhand	National	Jharkhand	National	Jharkhand
<b>Labour force participation rate (LFPR)</b>	52.5	48.9	74.4	78.2	25.8	15.6
<b>Worker population ratio (WPR)</b>	49.9	45.3	71.4	78.2	23.8	15.6
<b>Unemployment rate- (UR)</b>	4.9	7.4	4.1	6.6	7.7	12

Source: Fourth Annual, Employment & Unemployment Survey Report (2013-2014)

**LFPR:** In Jharkhand, labour force doesn't have a significant female participation. Female LFPR in Jharkhand is low and needs to be focussed upon.

**WPR:** The female Worker Population Rate in Jharkhand is also very low. WPR is higher in rural areas as compared to the Urban.

**UE rate:** Rate of unemployment is almost 3% higher in Jharkhand as compared to the national average. This rate of unemployment is again higher in the rural areas of Jharkhand as well as amongst the female population. In Jharkhand for ST category, the unemployment rate is almost double the national average.

In the area of women workforce participation, specific targets set by the state are as follows:

**Table 93: Targets set by the Department for increasing woman workforce participation and employment**

Indicator	Current scenario*	Target for 2021	Target for 2025	Target for 2030
<b>Labour force participation rate (LFPR)</b>	15.6	25	50	70
<b>Unemployment rate- (UR)</b>	12%	7.5%	5%	3%

\*Fourth Annual, Employment & Unemployment Survey Report (2013-2014)

### Action Plan 2021

1. Creating more jobs with special focus on employment to women
2. Providing employment in primary sector round the year by ensuring multi-cropping in agriculture and allied sectors
3. Having a special focus on gender will be a vital component of the Government's skill initiatives
4. Implementing Rural Wage Employment Programmes like NREGS to encourage rural women participation
5. Providing safe, secured and healthy work environment and encourage women participation
6. Providing a certain floor level of reservation for women in the jobs, both private as well as public will contribute towards this
7. Empowering women through SHGs
8. Implementing Labour Reforms to address issues like-
  - a) Social security to women workers, their health care and proper working conditions (Creche, etc.)
  - b) Equal pay for equal work
  - c) Prohibition & elimination of child labour/bonded labour
  - d) Migrant workers – safety/protection/safeguarding of rights (particularly of women migrant workers)

### 12.4.5. Other aspects of women empowerment

The trends and targets with respect to other parameters reflecting women empowerment in the State of Jharkhand are reflected in the table below:

**Table 94: Targets set up for increasing woman empowerment**

Indicator	Current scenario*	Target for 2021	Target for 2025	Target for 2030
<b>Girls married before 18 years of age (%)</b>	38	25	15	< 5
<b>Married women participate in household decisions (%)</b>	86.6	90	>95	>95
<b>Ever-married women who have ever experienced spousal violence (%)</b>	34	25	15	< 2
<b>Women owning a house and/or land (alone or jointly with others) (%)</b>	49.7	60	80	>90

\*NFHS 4

### Action Plan 2021

The State will focus on the following:

1. Developing IEC strategy to generate awareness to change social behaviour to bring gender equity in the society. Examples of social behaviour which need to be addressed: male child preference, prioritizing male child for nutrition, health issues and education, early marriage of girls, gender discrimination on livelihood opportunities, etc.
2. Making available standard curriculum and methodology to develop Life Skills among school going and non-school going adolescent girls
3. Ensuring linkages with skill development programmes for women across the districts for gainful employment/developing entrepreneurship
4. Scaling up women helpline in entire state
5. Strengthening counselling services for victims of violence by appointing more counsellors at district level
6. Enhancing utility of women helpline: expanding functionality and services to make women helpline as a primary centre for information on health, nutrition, and government schemes promoting government schemes
7. Implementing capacity-building programmes for PRI members on interventions which require their active role such as child protection, identification of target groups for social security interventions, welfare and empowerment interventions, awareness generation and community mobilisation for Social Security schemes, women empowerment

Crime against women is another subject which destabilizes growth of women and safety status within society. Crime against women is an important indicator of social development; at the same time, it is an indicator of effectiveness of enforcement agencies. Targets for few select indicators on crime against women are as follows:

**Table 95: Targets set up for reduction of crime against woman**

Indicator	Current scenario*	Target for 2021	Target for 2025	Target for 2030
<b>Assault on women with Intent to outrage her modesty (%)</b>	5.2	4	2.5	< 1
<b>Sexual harassment (Section 354A IPC) (%)</b>	3.3	2.5	< 1	< 1
<b>Kidnapping &amp; abduction of women (%)</b>	5.7	4.5	3	< 1

\*NCRB 2015

### Action Plan 2021

The State will focus on the following:

1. Generating awareness on preventive and punitive measures to fight crime against women, statutory and legal support available to victims and rehabilitative options available for the victims
2. Sensitizing enforcement agencies on gender sensitiveness and legal recourse available to check crime against women
3. Increasing number of women police station in all districts
4. Scaling up women helpline across the state

5. Promoting ‘‘Shakti’’ mobile app for distress call to police control room
6. Mechanism for fast track legal recourse

### 12.4.6. Welfare and social security

The State is committed to protecting its vulnerable population through several social security programmes. The State has been aiming at ensuring national standards for social assistance through National Social Assistance Programme (NSAP). At present, NSAP includes Indira Gandhi National Old Age Pension Scheme (IGNOAPS), Indira Gandhi National Widow Pension Scheme (IGNWPS), Indira Gandhi National Disability Pension Scheme (IGNDPS), National Family Benefit Scheme (NFBS), and Annapurna. The status and progress of few key schemes are provided below:

**Table 96: Targets for social security**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Social Security</b>				
Coverage in % of eligible target groups under social security programmes	Baseline to be established	100%	100%	100%
<ul style="list-style-type: none"> <li>• Elders above 60 years of age</li> <li>• Adolescent girls</li> <li>• Differently abled</li> <li>• Widows</li> </ul>				

### Action Plan 2021

1. Holding rigorous awareness generation programmes on social security interventions, e.g. campaigns
2. Establishing baseline of different target groups to monitor coverage
3. Reviewing/Evaluating ongoing social security schemes to understand effectiveness of the intervention as well as identify barriers
4. Intervening to support citizens with special needs (disabled) such as availability of special education to disabled children preferably at district level by expanding/upgrading existing infrastructure, creating new infrastructure and engaging civil society organisations. Having linkages with skill development programmes for disabled to develop gainful employment skills

### 12.5. Convergence

Health, drinking water, sanitation and availability of adequate nutrition are key determinants of nutritional status of women, children as well as population in general. At the service delivery level, convergence between service providers for Health and Nutrition are observed, which belongs to two different line departments. Awareness generation on safe drinking water and sanitation are built-in health and nutrition programmes. The State recognizes the need to strengthen convergence amongst key services and departments, i.e. Department of Health, Medical Education and Family Welfare, Women and Child Development, Home, Labor, Higher and Technical Education and Drinking Water and Sanitation to successfully achieve its vision.

Effectiveness of law enforcement not only determines status of security among children and women but also affects health and nutrition status among women and children. Police, intelligence and investigation agencies responsible for enforcement of law and order and prevention of crime against women and children come under Department of Home, Jail and Disaster Management. The State will focus on ensuring convergence between Department of Women and Child Development and Department of Home, Jail and Disaster Management for effective response to prevention, identification and rehabilitation of crime against women and children. ‘‘Education’’ is another key for sustained development of women and children. A mechanism will be established for a more systematic convergence at district level and state level amongst the key departments for periodical appraisal of status of health, nutrition and safety of women and children, decision-making, joint planning and implementation.

## ***12.6. Conclusion***

Policy framework and institutional mechanism are directly linked with efficiency and effectiveness of implementation of programmes and schemes. The State will take initiatives to strengthen institutional framework like consolidation of different programmes and schemes, functional review and restructuring of women and child development & social security to assess efficiency of the department, formation of IEC Bureau to professionally plan and manage IEC activities at state, district and lower levels.

The State will create a robust and dynamic database of target beneficiaries, resources and infrastructure to facilitate evidence-based planning, monitoring and decision-making for social welfare and social security interventions. Designing performance rating system of service delivery points (AWCs, institutional care points under ICPS, women hostels and other service institutions) linked with positive reinforcements will have a positive impact on overall achievement of the desired goals. The system will facilitate to identify which service point is lagging and what could be the corrective measures. The State will develop or adopt a consolidated dashboard/index on gender equity issue to be monitored at state and district levels to facilitate decision-making oriented towards the welfare of women.

The Action plan 2021 calls for multi-sectoral approach to ensure nutrition to and safe environment for women and children and social security to vulnerable citizens of the state.

## 13. Employment-Oriented Industrial Development

*Establishing state-of-art infrastructure, sustainable manufacturing, enhanced inclusivity, foster innovation, and creating employment opportunities across sectors by providing favourable and globally competitive business climate*

### 13.1. Context

Industrialization, keeping in view that the State's favourable situation is necessary to improve its economic performance which also helps to create employment opportunities, thereby improving the standard of living of the people.

Jharkhand has the largest mineral resource base (~87 BT) in India which can be tapped for rapid industrialization of the State in appropriate areas.

Jharkhand has diverse agro climatic conditions suitable for the cultivation of a wide range of agricultural and horticultural crops. Due to availability of labour, other inputs and its proximity to industrial and urban centres of West Bengal and Orissa, the State is well positioned to become the hub for Agro & Food processing. Government's thrust on food processing and preservation, handicraft and sericulture and MSMEs in the rural areas will create more off-farm jobs, and increase the income of rural workforce and farmers. Besides, about 30% of the State's geographical area is covered with highly bio-diversified forests, which gives an opportunity for development of minor forest produce (MFPs)-based industries and herbal-based industries.

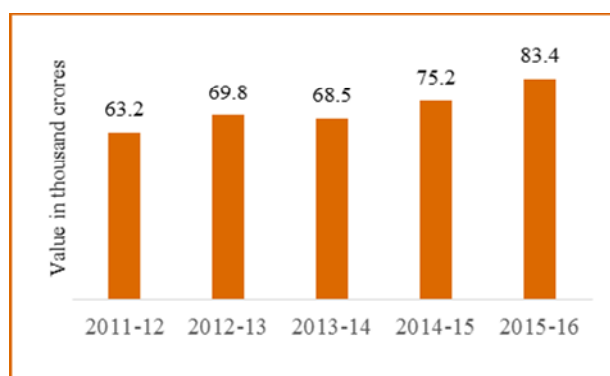
In Jharkhand, the industry sector has on an average<sup>56</sup> contributed to about 41.2 % of the gross state domestic production. The total value of output from the industrial sector has increased from about 63.2 thousand crores in 2011-12 to about 83.4 thousand in 2015-16 crores. The sector has grown at a CAGR of about 7.2% from the year 2011-12 to 2015-16<sup>57</sup>.

The State currently boasts of producing more than one-fifth of the total steel produced in the country. The State government has also signed a Memorandum of Understanding with investment partners to establish integrated steel plant which will help the State to produce about 25 million MT of steel in the near future. The key manufacturing areas where the state has also experienced a healthy growth rate<sup>58</sup> are pharmaceuticals, medicinal chemicals and botanical products, electrical equipment and production, processing and preservation of meat, fish, fruit, vegetable, oils and fats.

The State industry department has the objective of promoting micro, small, medium and large enterprises in the state, which contributes significantly in manufacturing and exports besides providing adequate employment opportunities. The State Government aims at overall improvement and growth through the focus areas such as creation of state-of-the-art infrastructure, development of sustainable industrialization and innovation and entrepreneurship.

#### *Macroeconomic indicators and improvement of business ecosystem*

Figure 39: Total output from the industry Sector



<sup>56</sup> Over the year 2011-12 to 2015-16 at constant prices

<sup>57</sup> The figures quoted are as constant price with 2011-12 as base year

<sup>58</sup> Growth rate in double digits in 2013-14 as compared to 2012-13

**Table 97: Macroeconomic indicators of the state**

Indicator	Jharkhand
Share of industry sector in GSDP at 2011-12- constant price (%) (2015-16)	39.9
Year-on-year industrial growth rate (2015-16)	11%
Gross value added/person engaged (INR in Lakhs) (2013-14)	13.01
No. of factories (2013-14)	2688
Total persons engaged in the industries in lakhs (2013-14)	1.88
No. of MSMEs (INR in Lakhs)	6.75
Employment in MSMEs (INR in Lakh)	12.91

Contribution and growth of the industries are every critical and the State is committed to focus on its development to increase its share in GSDP. **State will work on strategies that are inclusive**, i.e. all the areas pertaining to industry and at the same time ensure that the growth path taken is sustainable. Its focus is on creating an environment which encourages innovations and promotes entrepreneurship in the State.

The State has set specific target for the key indicators as shown in the table below:

**Table 98: Targets set up for increasing industrial metrics**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
Share of industry sector in GSDP at 2011-12 Constant Prices (%)	39.9 (2015-16)	42.6	43.6	46.4
Year-on-year industrial growth rate	11% (2015-16)	12.5	12.5	14.3
Share in aggregate GVA in India (%)	2.29% (2013-14)	3.1	3.7	8
Gross value added/person engaged ( INR Lakhs)	13.01( 2013-14)	15.9	21.1	32.2
Ease of doing business rank (2016)	7	Among the Top 5		

## 13.2. Enabling Infrastructure for Industries

Development of high-quality infrastructure is essential for establishing industries with less capital investments and their functioning without impediments. Existence of physical infrastructure in terms of road, rail and air transport, etc., will help in boosting the industrial sector.

### Action Plan 2021

1. Developing Multi-modal terminal at Sahibganj
2. Preparing Land Zoning Plan for new and existing Industrial Estates/Parks by JIADA
3. Enabling policy for Land Bank Development along with approach roads, high-tension electricity connection, water supply
4. Formulating suitable policy to encourage private sector investments in the proposed industrial parks.
  - a) Setting up of sector specific Industrial Parks under Public, Private PP, JV mode (plastic park, EMC, Pharma Park, Apparel Park, etc.)
  - b) Development of Barhi Integrated Manufacturing cluster under Amritsar Kolkata Industrial corridor

- c) Development of Plastic Park at Deoghar
  - d) Development of Pharma Park at Ranchi
  - e) Development of electronic manufacturing cluster at Adityapur
5. Strengthening Inland Container Depot located at Tatanagar to facilitate export and High-speed Freight & Passenger Train Services
  6. Commissioning early Eastern Dedicated Freight Corridor which passes through Jharkhand covering all northern states and connectivity to ports
  7. Strengthening road and rail connectivity to Kolkata, Haldia, and Paradip ports
  8. Providing administrative assistance to agencies related to the development of broadband, high speed communication, data connectivity, 4G, etc.
  9. Developing 16 clusters in different districts for overall industrial development
  10. Facilitating assistance in IT infrastructure, IT parks, SEZs, R&D centres for promoting innovation, excellence and employment opportunities
    - a) Developing a sustainable eco-system of innovation, research & development in the state
    - b) Setting up dedicated “IT Parks” with focused area of expertise.
    - c) Labs in science and engineering colleges/universities to be upgraded and industry-linked, collaborative research.
    - d) Priority in R&D to be given to the high-growth segments and Incubation Centres
    - e) Providing significant thrust to Internet of Things (IoT) ecosystem
    - f) Adopting future technologies like Block Chain for the advancement of capabilities in data centres, etc.
  11. Working towards making the state a preferred investment destination in ESDM (Electronic System Design and Manufacturing) industry:
    - a) Set up “ESDM Design Hub” for attracting global companies for design functions and Incubation Centres
    - b) Incentivise private and public sector investments
    - c) Performance Linked Assistance: Grant based on performance; Reimbursement of various duties and fees
    - d) Subsidized plans for high-speed Internet, mentor facility, financial experts, co-working spaces etc.
    - e) Reimbursement of VAT/SGST to dedicated start-up companies within three years of being incubated
  12. Financial Assistance at industrial areas for establishment of:
    - a) Common solid waste management facility
    - b) Common Effluent treatment plant, hazardous waste management facility
    - c) Development of Green Industrial Estate

### ***13.3. Development of Focus Sectors***

Jharkhand has natural advantage in some sectors like mining, mineral based industries, steel, coal-based thermal power plants, coal to poly-generation industry, food processing, automobile and auto component, textiles and handicrafts etc. However, the natural advantage of Jharkhand has not been fully exploited for employment generation and improvement in the standard of life of its people. Hence, the State will focus on the development of key sectors to generate employment opportunities and inclusive growth. To ensure this, some of the thrust areas have been identified in Jharkhand Industrial and Investment Promotion policy 2016 which are Tourism, Film Industry, Textile and Apparels, Sericulture, Handloom and Handicraft, IT and ITeS, Electronics System Design and Manufacturing, Biotechnology, Automobiles and Auto Components, Renewable Energy and Agro-Food Processing Based Industries.

#### ***13.3.1. Revival and strengthening of rural industrialization***

The State will create additional employment in rural areas through set-ups based on sericulture, handloom, handicraft and other rural industries by supporting artisan either individually or

collectively in groups. The rural industries will create opportunities to help farmers to engage in additional non-farm economic activities, thus increasing their income. The **State is implementing 18 clusters programmes exclusively for cottage, micro and small sector enterprises** such as black smithy, carpentry and other handicrafts based activities like khadi, bamboo and leather craft, tribal jewellery, dhokra agarbatti, making, etc.

### Action Plan 2021

1. Cluster development will be carried through “*Mukhya Mantri Cluster Development Scheme*” in which the Government will develop 20 clusters of 7000 units by year 2020 -21 and build the capacity of Micro, Small enterprises including small scale industries for enhancing the productivity and competitiveness.
2. Revival of **village food processing industries** which will help improve production of organic and other suitable food crops and their linking through grading, preservation and semi-processing for markets suitability.
3. Promote khadi and village industries to provide employment and well-being of traditional artisans of Jharkhand in and around the urban and industrial area.
4. Market Development Assistance at the rate of 20% of the cost of production of Khadi and polyvastra will be provided to artisan.
5. Develop and run Khadi Park at Dudhani Dumka & Rajnagar by 2018.
6. Adoption of **10 additional cluster every year for developing rural enterprises, small and micro industries**. The Government will also facilitate forward linkage to these clusters by establishing connectivity with large private sector buyers.

### 13.3.2. Development of MSME sector<sup>59</sup>

As per the fourth census on MSME, the total number of MSMEs in the state is about 6.75 lakhs. There has been a total investment of about 1592.3 crores towards the setting up of new micro and small enterprises from 2000 to March 2014 which helped in establishment of about 44,747 units. From April 2014 to December 2015, there has been a total investment of 176.63 crores, leading to establishment of about 3858 Micro and Small Enterprises<sup>60</sup>. The Government will promote ancillary units around the large industries to generate additional employment.

The State has set specific target for the key indicators in this area in the Table below:

**Table 99: Targets set up for MSME Development**

Indicator	Current Scenario	Target for 2021	Target for 2025	Target for 2030
<b>No. of MSMEs ( in lakh)</b>	6.75	10.1	15.2	22.8
<b>Employment in MSME (in lakh)</b>	12.91	19.4	29.0	43.6

Source: 4<sup>th</sup> All India Census of MSME 2012-13

### Action Plan 2021

The state is committed for development of MSME ecosystem which can be done by the following ways:

1. Purchasing preference to goods manufactured by SMEs in the government purchases.
2. Providing platform for interaction between enterprises within Jharkhand as well as potential domestic and global markets
3. Utilizing information technology for strengthening Jharkhand MSE Facilitation Council
4. Developing symbiotic relationship between MSME and Technical Institutions by linking each cluster with a technical institution to solve technical and design related problems of MSMEs
5. Providing linkages for MSMEs with MFIs and efforts to suitably complement different schemes
6. Developing dedicated Smart Industrial Parks for MSME units

<sup>59</sup> Figures from 4th All India census of MSME 2012-13

<sup>60</sup> Jharkhand Economic Survey 2016-17



7. Developing MSME clusters (especially in industrially backward and rural areas) and provide support in the form of credit availability, skill development, technology and innovation in manufacturing, infrastructure development and marketing & branding support.
8. Set up Industry-cum-Service Centres to facilitate development of Micro, Small & Medium industry in the industrially backward and Rural areas
9. Linking JHARCRAFT with a dedicated branding agency for promotion of its products and the role and activities of JHARCRAFT will be scaled up for better branding and marketing.
10. Preference to goods manufactured by MSEs in government purchases

### ***13.3.3. Development of food processing industries***

Jharkhand is strategically located to tap the processed food demand of the country, particularly, Eastern India and export demand of SAARC nations. The State has a large number of progressive farmers involved in agriculture, horticulture, dairy and organic farming. The farm produce will be linked to the food processing cluster/urban area by creating cold chain infrastructure including preservation and processing infrastructures.

#### ***Action Plan 2021***

1. Targeting incentives to Anchor Units for accelerated development in this sector
2. Promoting commodity Value Chain Development in PPP mode
3. Operationalising of Mega Food Park at Getalsud, Ranchi and setting up of three more food park in Jharkhand
4. Establishing food quality testing laboratories and incentivise setting up of such facilities by private players in major food processing clusters
5. Encouraging dal processing units in Garhwa and Palamu and Tomato processing units in Latehar & tomato growing region of Ranchi
6. Developing MSME Start-up Ecosystem in Ranchi and East Singhbhum
7. Promoting development of Packaging Development Centres with Financial Incentives
8. Promoting Food Processing through development of Agricultural Economic Zones
9. The State Agricultural University will be made a nodal institute for undertaking extensive skill development programme in Food Technology and Applied courses in the state
10. Establish animal feed processing units in the state through creation of infrastructure facilities, encouragement of capital investment, technology upgradation, development of marketing network, development promotion, grants and concessions

### ***13.3.4. Handicrafts and handloom***

Handicrafts and handloom is a key focus area for the State and the State has more than 40 types of handicrafts. The State will focus on creating infrastructure and facilities to facilitate the growth of handicrafts and handloom.

#### ***Action Plan 2021***

1. Government has established the ***Mukhyamantri Entrepreneur Development Board*** for the development of traditional handicraft and Lac Udyog and other rural cottage industries. It will provide technical and financial support to 5,000 rural industries by 2020-21, resulting in additional 25,000 employment.
2. Strengthen urban haats at Hazaribagh, Giridih and Deoghar.
3. Promote khadi and village industries to provide employment and economic development of traditional artisans of Jharkhand such as barber, black smith, carpenter and other handicrafts like agarbatti, making, bamboo and leather craft, tribal jewellery, dhokra, etc. in and around the urban and industrial area.

4. Government will promote lac as a livelihood option in rural area by grouping them into **Lac Udyami Sahi Mandal** and provide them training on technologies along with the financial assistance.
5. Establish **Jharkhand institute of Craft & Design** at Ranchi, to provide technical manpower in the field of handloom and handicraft.
6. Train about 1,00,000 persons in pre-cocoon and reeling, spinning under post cocoon/Handloom Sector/Handicraft Sector
7. Set up Mega Handloom cluster at Godda to generate 25,000 employment for the weavers.
8. All six districts of Santhal Pargana e.g. Deoghar, Dumka, Godda, Sahebganj, Jamtara & Pakur to have about 15,000 handlooms. These will become functional at the end of fifth year of project from the date of commencement and this will help more than 60,000 weavers.
9. Running of 30 new marketing outlets in various city to provide marketing support to the persons engaged in production of handloom, sericulture and handicraft goods

### 13.3.5. Sericulture

Jharkhand is a major producer of silk. It has a decadal share of more than 40%<sup>61</sup> of tassar silk production for the cumulative period from 2004 to 2014. The major silk worm rearing districts are Singhbhum, Dumka, Giridh, Hazaribagh, Ranchi, Palamu and Dhanbad. However, the reeling and weaving is primarily done only in Kharwasa (Saraikela) Chaibasa, Puraini and Katoria. The state has an immense potential for growth in this sector. The major development point till 2020-21 are given below:

#### Action Plan 2021

1. **Engage more than 3 lakh farmers** in this sector by 2020-21 with at least 30% to 35% women beneficiaries
2. Promote the production of Organic Mulberry Silk by increasing area of organic mulberry plantation by 2020-21
3. Increase production to be increased significantly and at least 10% of total raw silk production be converted into thread and cloth
4. Apportion Market Development Assistance at a rate of 20% of the cost of production of Khadi & Polyvastra among the artisans, khadi producing institutions and selling institutions in the ratio of 25%, 30% and 45% respectively
5. Support in Post Cocoon Reeling & Spinning: Government will establish the common facility centre (CFC) to provide the facility of reeling machine and other necessary equipment to the group of women for tassar silk reeling. Threemonths' training in reeling and spinning will be provided to 9,450 women beneficiary of 315 CFC by 2020-21. After training of women group involved in tassar silk production, marketing support will be provided by JHARCRAFT
6. Establish National Institute for Fashion Technology (NIFT) to provide the design support to the tassar silk product and others
7. Enhance collaboration with Central Silk Board for overall development of the sector

### 13.3.6. Development of textile & apparels

Jharkhand, in its Industrial and Investment Promotion Policy 2016 has declared textile as “Thrust Area”. Jharkhand has witnessed positive growth in Sericulture Sector. In order to maintain the leading edge and rejuvenate existing rural industries, including sericulture, handloom, handicraft, khadi, textile, etc., it is envisaged to assist them in modernization/technological upgradation and provide necessary common facilities, backward and forward linkages, including product design, marketing support, etc. so as to make them globally competitive and their product remunerative. Jharkhand ranks first in the country in production of tassar silk. In order to maintain the leading edge and give special

<sup>61</sup><http://momentumjharkhand.com/wp-content/uploads/2016/09/Textile-Sector-Profile-Jharkhand.pdf>

thrust to the sector, Jharkhand Silk, Textile and Handicraft Development Corporation (JHARCRAFT) was established in 2006 to provide support in designing, training, entrepreneurship development, marketing and raw material support in clustered and organized manner by grouping local artisans, SHGs and NGOs involved in similar activities. This sector has potential to generate more employment in non-farm sector. To harness the potential of this sector, Government of Jharkhand will appropriately implement its Jharkhand Textile, Apparel and Footwear policy 2016.

### *Action Plan 2021*

1. Construct Apparel park at Ranchi and linking it to the proposed national corridor
2. Design special incentives to support the spinning and dyeing segments of textile manufacturing
3. Earmark pre-approved land parcels for the sector
4. Setup yarn bank
5. Extend support to cluster development by constructing common effluent plants
6. Undertake capacity building, branding and marketing of products with government support
7. Create centres for excellence to facilitate knowledge dissemination in textiles sector and apparel sector

### *13.3.7. Promote tourism, sports and culture*

Jharkhand is endowed with rich cultural heritage and bestowed liberally with bounties of nature. The State is kaleidoscope of past splendors and present glory. A fascinating State with luxuriant forest, captivating wild life, enthralling waterfalls, exquisite handicrafts, sprawling water bodies, enchanting classical and folk dances and music and above all hospitable and peace-loving people. The State of Jharkhand is blessed with immense biodiversity, moderate climate, rich cultural and historical heritage, religious places of worship and ethnic aspects to make the State the ultimate destination for tourists.

The State Government has a firm belief that development of tourism sector would not only generate immense employment opportunities directly or indirectly, but also contribute to accelerated economic development. This would not only ensure showcasing of rich traditional and cultural heritage of the State but also would have cascading effect on the development of other sectors. Tourism serves a major contributor to the economy and a source of employment in the State of Jharkhand. Jharkhand has 33% of its land cover as forest and provides plenty of potential for ecotourism. Realizing the potential of this sector, the State has taken initiatives, including development of ecotourism circuit, development of falls and development of dams. Jharkhand is also rich in spiritual tourism and has lots of religious places with rich potential. Important religious places in the State include Deoghar which is the abode of Baba Baidyanath, Parasnath (the most sacred place for Jains), Rajrappa and Ma Bhadrakhali Temple which are located in the Ramgarh and Chatra districts respectively. These religious destinations have been the major attractions for tourists and pilgrims. Specially, in the month of Sawan, millions of pilgrims visit Deoghar. The State in association with Ministry of Tourism under the PRASAD scheme has undertaken initiatives for development of Baidyanath Dham, Deoghar in an integrated, planned and sustainable manner. The State is also planning to develop Shakti circuit (Deori Temple, Rajrappa Temple, Itkhori and Kauleswari temples) and Shiva circuit (Deoghar, Basukinath, Dumka and Maluti temples).

It is estimated that the proactive initiative of tourism department will result in a rise in tourist footfall by approx. 20-40% over the next 5 years. The department also follows community-based development and pro-poor tourism concept in developing the pilgrimage destinations. This would help in harnessing the tourism potential of these tourist/pilgrimage locations and assist in employment generation and economic development of these places.

Jharkhand also has a glorious sports tradition and its sportsperson have won laurels for India in disciplines such as archery, cricket, hockey, athletics, football, etc. Jharkhand had hosted the 34th National Games in 2011. Realizing the importance of sports, Jharkhand has already notified the

Sports & Youth Policy and has created sports infrastructure in the block/districts for identification and nurturing sporting talent at a young age. In order to provide an impetus for the development of sports over the next 3 years, the State will create new sports infrastructure such as construction of residential sports training centres, stadiums, sports hostels and renovate the existing sports infrastructure. The State will also develop 4 centres of excellence in the disciplines of hockey, archery, football & badminton. In addition to developing sports physical infrastructure, the State also understands the importance of providing adequate training facilities for enhancing the skill levels of meritorious athletes/coaches. The State intends to increase the total number of trainees at the residential/day boarding sports centres. The State will also ensure provisioning of adequate staff at Sports Authority of Jharkhand so that they are able to provide quality training to aspiring sportsperson in Jharkhand.

### *Action Plan 2021*

The Tourism Department has formulated various strategies so as to popularize the tourism sector in the State. Key interventions that the State would undertake will include development of critical and basic infrastructure under Central Government/State Government schemes, encourage private sector investment, human resource development, marketing of tourism products and institutionally strengthen the existing governmental tourism agencies. Key strategies are mentioned below:

1. Development of critical and basic infrastructure, tourist circuits and destination development of existing tourism spots in the state under the following schemes
  - a. Central Govt. Programme Support:-
    - i. Swadesh Darshan Scheme of Govt. of India.
    - ii. As part of the ongoing project, develop the eco-tourism circuit in the state.
  - b. Develop the following proposed circuits as mentioned below
    - i. Spiritual (Shakti) Circuit spread across Deori Mandir-Rajrappa (Chhinnamastika)-Itkhori (Bhadrakali)
    - ii. Spiritual (Shiva) Circuit spread across Harihar Dham-Baidyanath Dham-Basukinath
    - iii. Spiritual Circuit spread across Tanginath Dham-Anjan Dham-Ramrekha Dham
    - iv. Eco-tourism Circuit spread across Dimna Lake-Galudih Dam-Buridih Lake (Ghatshila)
    - v. Eco-tourism Circuit spread across Betla National Park-Palamau Tiger Reserve-Netarhat
    - vi. Heritage Circuit spread across Navratan Garh-Palamu Fort-Hazaribagh Fort-Maluti temples
    - vii. Eco-tourism Circuit spread across Saranda -Meghatuburu- - Thalkobad
    - viii. Develop Deoghar Temple (ongoing project) as under the PRASAD (National Mission on Pilgrimage Rejuvenation and Spiritual Augmentation Drive) scheme
  - c. State Govt. Programme Support: The State has already formulated the Jharkhand Tourism Policy for the period 2015-2020. The State will develop the major tourist attractions in the state such as Queue Complex and Shrine Area development in Deoghar, development of Dassam, Jonah, Hundru and Panchgagh falls (this is an ongoing scheme), destination development plans at Patratu and Chandil Dam, development of tourist places in and around Netarhat Lake, development of Hatia, Kanke, Tilaiya and Maithan Dam on PPP mode and development of Jagannath Temple area as a tourist and cultural hub. The State would also provide hard and soft infrastructure at all the identified potential tourism spots. The State would also provide better transport facilities at all the identified tourist places.
2. Private Investment- The State would explore private investment by way of PPP for developing adventure sports at Hundru, Dassam, Jonah and Panchgagh Falls, operate and maintain existing tourism assets at Maithan Dam, Urwan-Koderma, Hatia and Kanke, develop ropeway at Dalma, Pahari Mandir, Koleswari Dam and other identified feasible locations. It is to be mentioned that in the recently concluded Global Investor Summit, 8 MoUs have been signed for the development of tourism infrastructure in the state.
3. Human resource development- The State is currently developing the Institute of Hotel Management at Ranchi. The State is also exploring two additional Hotel Management institutes in the State. The state would also develop the food craft institute at Deoghar. In addition, the state

through training service providers will conduct suitable training programmes for local people for engaging them as tourist guides. The State will also encourage homestay scheme at major tourist spots for ensuring more participation of local people which will aid in economic development of the state. Further under Ministry of Tourism (GoI), the state will provide a 6-8 weeks training for food & beverages, food production, housekeeping utilities, bakery and patisseries to approximately 2,000 people. Empaneled organizations would provide training under the same scheme. Further, the State will also tie up with existing 5-star hotels for providing on-job training. The state will also involve various self-help groups for development/maintenance of various hotels/guesthouses and properties of JTDCL. Currently, the state is in the process of partnering with various NGOs and SHGs for management of 24 properties of JTDCL. The State has launched the Paryatak Mitra scheme in order to generate employment of local people at various tourist spots in the state. Around 180 Paryatak Mitras have been engaged for ensuring safety, security, cleanliness of tourist spots, provide support and share information with tourists in relation to tourist spots.

4. **Marketing of tourism products:** The state will market the tourism potential in other states by participating in various national/international events, hold regular publication of tourism promotion material in magazines/newspapers, develop a new website and use social media for promoting state tourism, promote the rich culture of the state such as Chhau Dance in national/international markets and promote various destinations by organizing tourism fairs/festivals.
5. **Governance and Institutional Strengthening:** The State will also carry out various governance/institutional strengthening initiatives such as strengthen and fill vacancies in JTDCL, Shrine Boards, District Tourism Council and create a State Tourism Board.

Below is the detailed Action Plan for Infrastructure and Circuit development:

Schemes	Projects to be implemented
<b>SwadeshDarshan</b>	<ul style="list-style-type: none"> <li>• Eco-tourism circuit</li> <li>• Spiritual (Shakti) Circuit</li> <li>• Heritage Circuit</li> </ul>
<b>PRASAD</b> <b>Provision of hard and soft infrastructure</b>	<ul style="list-style-type: none"> <li>• Rejuvenation and Spiritual Augmentation</li> <li>• Development of Queue complex, Deoghar</li> <li>• Development of 4 falls as tourism spots (Hundru, Jonah, Dassam and Panchgagh)</li> <li>• Development of Patratu Phase I-</li> <li>• Development of leisure sports at Chandil Dam</li> <li>• Development of other hard and soft infrastructure</li> </ul>

### 13.4. Mining

Jharkhand has the largest mineral resource base (approximately 87 BT) in India. Mining is a key sector of Jharkhand's economy as its contribution to GSDP is approximately 10%. The key mineral based industries in Jharkhand are power (approximately 20% of India's total installed capacity is present in Jharkhand and its neighbouring states - West Bengal, Odisha and Bihar), iron and steel (Jharkhand's steel production accounts for approximately 16% of India's total steel production), and cement (approximately 1% of India's cement making capacity is located in Jharkhand). The mining sector in Jharkhand employs ~1% of main working population.

For sustainable economic growth of Jharkhand, the growth of the mining sector aligned to a Sustainable Development Framework is necessary. Implementation of such framework will ensure:

- Optimum utilisation and conservation of mineral resources
- Environment friendly and economically viable mining
- Development of communities affected by mining operations
- Balance between the interest of government, investors and the local communities

The key focus areas for Jharkhand's mining sector are:

- Upgradation and strengthening of mineral inventory
- Sustainable, efficient and economical mining in the State of Jharkhand
- Attracting investment in Jharkhand's mining sector

### *Upgradation and strengthening of mineral inventory*

Upgradation and strengthening of Jharkhand's mineral inventory is critical and will be addressed by carrying out detailed exploration, general exploration, preliminary exploration, and DGPS surveys of mining leases across the state. This will be accompanied by capacity building exercises, strengthening of various infrastructures like laboratories, training centres, monitoring centres, etc., procurement of the required equipment and recruitment of skilled manpower. A separate cell is proposed for identification of prospective exploration projects and for submitting application to NMET for obtaining the funding. The following strategies will be covered in the action plan.

### *Action Plan 2021*

1. Accelerated development in the key priority areas
  - DGPS Survey: The State will form a committee to ensure that DGPS survey is completed at the earliest for all the mining leases, prospecting licenses and reconnaissance permits in the next two years. This will help in curbing illegal mining and resolve any issues related to boundary of mining leases.
  - Reassessment of resources: To ensure continuity of mining, the State Government needs to identify the leases which are expiring in 2021 and reassess the resources in accordance with MMDR Amendment Act, 2015 and the rules made there under. DIMG should undertake following activities.
    - a) Reassessment of remaining resources at G2 or G1 level for accelerating the auction and grant of such leases.
    - b) Establish framework and mechanism to identify the leases, collection of information required and prepare data repository for auctioning of the expiring leases.
    - c) Formulate methodology for valuation of assets other than mineral resources and provisions for transfer of assets from the previous allottee to the new allottee.
  - Preparation of mineral blocks for auction: Directorate of Geology, DIMG Jharkhand has already formulated a road map for exploration of new mineral blocks to G3/G2 level as per the UNFC norms. This process has to be expedited for auctioning these blocks in accordance with the Mineral (Auction) Rules, 2015. For this the state government will undertake following:
    - a) Acquiring funds from NMET, and conducting exploration work under the proposed contractual framework
    - b) Simultaneously, to ensure preparation of state level policy and legal framework for empanelment of exploration agencies immediately
    - c) Empanelment of exploration agencies in accordance with the suggested policy and legal framework
2. Improving level of mineral exploration and strengthening mineral inventory
  - Reconnaissance permit/prospecting license: Jharkhand's OGP area under prospecting license is only 0.006%, which is significantly lower as compared to other mineral rich states. Jharkhand would prioritize mineral exploration through various models such as auction of Composite License, PPP or outsourcing to complete the exploration & reporting of 1.6% of unexplored OGP areas as G3, G2 or G1 by 2021

- Use of digital technology in mineral exploration and monitoring: The State will encourage adoption of digital technologies such as drones/UAVs for reconnaissance, surveillance and monitoring. State would also encourage miners to adopt other digital technologies such as UAVs, GPS, RFID systems, sensors and monitors to improve mining conditions and surveillance.
- Online geological data repository: The State will work towards establishing an online repository of the geological data obtained from the exploration activities for sharing with the prospective investors. Furthermore, this portal will allow the companies to share any existing geological data with the government and other stakeholders

### *Sustainable, efficient and economical mining*

The action plan will involve formulation of a roadmap for promoting sustainable, efficient and economical mining in Jharkhand. The roadmap will cover two phases. In the first phase, a policy, legal, regulatory and institutional framework for promoting productivity of workers and skill development, utilization of DMF funds, zero-waste mining and recycling of water, safety and health of mine workers, sustainability reporting, IT-based data reporting and automation in the mining sector will be formulated. The second phase will cover the implementation of this framework, and a suitable monitoring mechanism in the mining areas. The following strategies will be covered in the action plan:

#### *Action Plan 2021 -*

1. Operationalization of auctioned/allocated coal and mineral blocks - The State has auctioned/allotted 24 coal blocks and auctioned 3 mineral blocks. However, of these, 27 coal/mineral blocks only 2 were operational till FY17. Therefore, operationalization of these blocks should be expedited by the State for receiving the envisaged socio-economic benefits in form of revenue, employment, conducive business environment, etc.
  - In case of auctioned/allotted coal blocks, the State is expediting the identified challenges with the allottee, District Administration, Forest Department, Department of Revenue and Registration, DIMG, Jharkhand, and Ministry of Coal, GoI. For coal blocks, the State will formulate a portal for monitoring all these issues at State level. This portal can be integrated with the Online Coal Clearances System of MoC, GoI, and the other Departments of the Jharkhand state.
  - For mineral blocks, TAMRA (Transparency, Auction Monitoring and Resource Augmentation) launched by MoM, GoI already exists for monitoring the status of auctioned mineral blocks. State will consider launching a similar portal for monitoring the state level clearances and integrate it with TAMRA and the other Departments of the Jharkhand state.
2. Promoting sustainability reporting
  - Global Reporting Initiative (GRI)/Sustainable Development Framework (SDF)/Transparency framework: These frameworks help in understanding and communicating the impact of business on critical sustainability issues such as zero waste mining, recycling of water, climate change, human rights, corruption and many others. Jharkhand government will encourage miners in state to adopt these standards.
3. Indigenous equipment manufacturing and skill development
 

Jharkhand will promote investment in mining equipment manufacturing within state to allow faster economic growth of the sector, specifically spares. To train local workforce employable in technology driven mines a Mining Centre of Excellence can also be established by the state.
4. Introducing artificial intelligence and robotics in the operations for promoting automation
  - Artificial intelligence (AI) in opencast mining: Artificial Intelligence-Based Truck Dispatch Systems (TDS) are being tested in Australian mines. The State will explore the option of

collaborating with international institutes/societies in this regard to bring such technologies in Jharkhand.

- Robotics in underground mining: Jharkhand has good quality coking coal resources standing on pillars in multiple seams because they are largely unsafe to mine with present technologies. State will encourage miners to assess if robotic mining technologies may be deployed to extract coal from such deposits.
- Automated data acquisition: Jharkhand Government would leapfrog into implementation of fully automated surveillance system for monitoring exploration, mining activities, dispatch, and revenue collection. The purpose is to capture data at mining source, which will be fed across government systems on daily basis.
- Automation skills: GOJ will consider establishing facilities in collaboration with OEMs to impart automation skills to local manpower.

### *Action Plan 2021*

The action plan will cover development and implementation of a framework for promoting investment in the development and mining of minerals, minerals processing, and minerals transportation infrastructure for attracting investment in Jharkhand's mining sector. The key outcome of this project will be designing and implementing a mechanism which will address issues related to land availability, clearances and process of awarding major and minor mineral concessions. The following strategies will be covered in the action plan:

1. Strengthening the important areas. State will focus on the areas mentioned below on an immediate basis -
  - Land availability: The State Government will take immediate steps to make land available for mining. In areas where land ownership by private parties is not possible, PPP mode of mining may be developed and adopted.
  - Single Window Clearance: Jharkhand scored lower on parameters related to single window clearance (Business Reforms Action Plan, DIPP) when compared to its peers - MP and Chhattisgarh. State will work on integrating Single Window with the mineral administration system.
  - Investment promotion roadmap: For attracting investment and providing conducive environment to the investors, the State will prepare an investment promotion roadmap and an investment manual for potential domestic and foreign investors (such manual will cover all the processes and incentives).
  - Exploration agencies: Presently, only 0.01% and 1.27% of OGP area is under PLs and MLs respectively. Thus, empanelment of agencies for establishing geological potential across state and bringing in resources to G2 and G3 level is necessary.
  - Coordination committee: GOJ will formulate a coordination committee involving officials from Department of Industries, Mines & Geology, Forest Department and Land Revenue Department for expediting and monitoring approval processes. An IT system will also be established for monitoring the clearances and approvals process of both major and minor mineral leases
  - Capacity building: For successful implementation of any strategy, manpower with the requisite skill set is necessary. Thus, an official will be designated for expediting the recruitment of the required manpower to fill the vacancies. This will ensure efficient monitoring and administration of the mining sector.
  - Award of composite license for non-coal: Jharkhand produced only 22.6 MTPA of non-coal minerals in FY 16 as compared to 98 MTPA and 54 MTPA of Odisha & Chhattisgarh respectively. Thus, awarding composite licences will be a priority for developing the available mineral resources in a sustainable manner, and for establishing a constant source of revenue for State's exchequer.
2. Establishing a mineral sector regulator - The State will consider establishing an independent regulator to address issues regarding mineral auction, royalty management, production-related



disputes, commercial aspects of mining projects, etc. The regulator will monitor the productivity parameters including OMS among others. Further, the regulator will enforce the PPP and MDO models for developing major and minor minerals in the state.

3. Conference and other key initiatives
  - GOJ will consider establishment a joint skill development centre with private and public sector participation for Mining Automation.
  - Government of Jharkhand will host “Automation in Mining” meet comprising of automation solution providers for mining industry, researchers and academicians to come together to debate on development and testing of automation technologies.
  - Government of Jharkhand will consider earmarking a mine for pilot testing through existing automation technologies by 2019.
  - Further, the Government will encourage companies to complete at least one feasibility study for implementation of automation in Jharkhand by 2025
4. Collaborations for knowledge sharing and implementation
  - Knowledge: Continuous exchange of knowledge defines and transforms the growth path for any sector of a state. Thus, GoJ can collaborate with local and international academic institutes LIKE Colorado School of Mines, University of British Columbia, UNSW etc., geological authorities, research centres like USGS, CMPDIL, IIT (ISM), CMRI, mining players like Rio Tinto, BHP Billiton, Anglo Ashanti etc., and international organizations like EITI, GRI.
  - Implementation: GoJ will incorporate the knowledge obtained from the above experiences in the mines with help of companies experienced in automation through PPP mode, through outsourcing models for exploration, through MDOs for mining operations, and launching pilot projects for implementation of robotics in mining.

### ***13.5. Improving Business Environment to Facilitate Private Investment***

The Government of Jharkhand has accorded priority for improving business eco-system in the State by significantly improving ease of doing business and reducing the business transaction cost for the entrepreneurs. With the view to steer rapid economic reforms and promote investment in the State, Government will create an environment which is investor friendly and will encourage the entrepreneurship development. ***The investment climate of Jharkhand has shown improvement, with higher levels of investment, employment generation in the economy, and new units have been set up.*** The level of investments has increased over 2014- 2015. There has been increase in investments in Mega Industries, Large, Medium industries, Small & Micro industries.

#### ***Action Plan 2021***

1. Creation of time-bound, web-based transparent working mechanisms for project clearance, and non-financial assistance
2. Initiatives for bringing in automation in the process of administering of subsidies/incentives and making application under different policies
3. Developing the effective communication plan/calendar for three years in advance
4. Continuous attracting of investment through investment promotion events in the State, in India and outside India. Publicity of investment events through Road Shows
5. Gas pipeline will be developed in the state through GAIL and private sector
6. Facilitating in grounding of investments leads generated during the Global Investment Summit, 2017
  - a) Establishment of a Special Purpose Vehicle (SPV) for organizing/channelizing Momentum Jharkhand at appropriate intervals
  - b) Monitoring of MoU through Investor Tracking portal - monitoring of each project through Project Management System, E Sameeksha and E Pragati
  - c) Industry Facilitation through Single Window.

- d) Coordinating with external agencies like bank, railways and other Central Government agencies apart from State Government departments.
- e) Engagement of professional services agencies for investment promotion
7. The Government of Jharkhand is also having Industry Facilitation Cell at District Industries Centre (DIC) through District Executive Committee (DEC) for all districts at the district level and Single Window at the state level with Secretary, Department of Industries, Mines & Geology as CEO of Single Window Clearance Committee. To ensure better service delivery at the factory level / business premises, Govt of Jharkhand has formed a Factory Gate Facilitation Team for each district. Composition of FGFC are:
  - a) District EoDB Manager, who is MBA graduate with IT knowledge.
  - b) Technical Officer (EoDB) who is IT knowledge graduate with complete knowledge of online Single Window System
  - c) Multi-tasking staff for delivery of services to businesses

**Factory Gate Facilitation Team** is equipped with a dedicated two-wheeler to ensure mobility to visit various factories and laptop with internet connectivity and smartphone to ensure IT connectivity. These teams work under the direction of DEC under the supervision of concerned GM DIC and supported by Single Window body at state level. The composition of Factory Gate Facilitation Team will be done by 360 degree evaluation with the help of industries and industrial association.

### **13.6. Foster Innovation and Entrepreneurship**

Aligned to the flagship initiative of Government of India, “**Start-up India**”, which intends to build strong ecosystems for nurturing innovation and start-ups in the country for driving sustainable economic growth and generate large scale employment and entrepreneurial opportunities, it is envisaged by the State Government of Jharkhand that similar ecosystems of innovation, R&D, disruptive technologies and start-ups will be encouraged in the state. The State currently has a start-up policy to encourage start-ups in the state. Following action plan has been laid up by the state to foster innovation and inculcate entrepreneurship in the State.

#### **Action Plan 2021**

1. Incubation Centres in higher education institutions across sectors
  - a) National Level R&D centres and premier institutes of Science & Technology in state to set up Incubation Centres
  - b) Knowledgehub incubators at IIM Ranchi, XLRI Jamshedpur, BIT Mesra and NIT Jamshedpur for start-ups
  - c) Birsa Agricultural University to establish incubation centre for start-ups in agriculture sector
  - d) Establishment of quality engineering colleges in the state and IIT in Ranchi
  - e) Three additional CIPET centres in Deoghar, Jamshedpur and Palamu
  - f) Establishment of NIFT at Ranchi
  - g) Set up Entrepreneurship Development Institute at Ranchi and Jamshedpur
2. Promoting entrepreneurship among SC/ST, Women, and other under-privileged for inclusive growth.
3. To promote innovation, start-ups, technological development and its commercialization
4. Strengthening of Jharkhand Skill Development Mission to coordinate state level skill development initiatives
  - a) The participation of CPSUs/ private investor will be promoted with involvement of Tool room, Jharcraft, EDC, CIDC, Pan IIT, CII, etc. Direct employment to about 50 lakh persons by 2020-21 is expected.
  - b) To promote new tool rooms and expand the activities of existing tool rooms
  - c) To set up new training institute/centre for skill development with emphasis to train 30% women and upgradation of existing training institute with modern standard syllabus

5. Set up Skill Development Committees in the high-demand sectors (Building & Construction; Tourism, Hospitality, Travel & Trade; Real Estate & Business Services; Food Processing; Banking & Finance; Iron & Steel, Automobile)
6. Promoting and encouraging local entrepreneurs at district level by creating awareness about the business opportunities and facilitating them establishing the enterprise.

### ***13.7. Access to Finance for Industries***

Inadequate industrial finance is one of the bottlenecks in the rapid growth of the State. The Government will take necessary measures to ensure easy flow of finance to industrial units and entrepreneurs. Government will ensure that the SLBC platform is appropriately used for exchanging information and discussion on the problems faced by the small and medium scale industrial units and small entrepreneurs. The State will encourage the financial institutions such as NABARD, SIDBI, Co-operative Banks, and Commercial Banks to extend credit to SHGs and facilitate easy flow of micro credit. The State will make sure that the Industrial finance set up should benefit the small-scale industrial units adequately, without discriminating their stature.

#### ***Action Plan 2021***

1. Increasing the loan to deposit ratio to national average
2. Setting up and strengthening of Jharkhand MSME Venture Fund to provide financial assistance
3. Facilitating the access to credit to MSME players and appropriate restructuring of loans in coordination with commercial banks and regional office of RBI
4. Strengthening financial inclusion programmes for artisans and other people engaged in the rural industries.

### ***13.8. Convergence***

A Governing Body headed by the Development Commissioner has already been constituted to oversee the Policy formulation, implementation program and provide resources from the state. The department of industries will continue focus on a cohesive approach of industrial development by the 18 Departments of the Government of Jharkhand. Regular review meetings, on annual and monthly basis will be conducted.

### ***13.9. Conclusion***

In the last few years, Jharkhand has adopted many best practices, introduced policies and schemes that have ensured an investment friendly environment. Undoubtedly, Jharkhand has made impressive strides in the recent past and with further thrust on MSME development (rural enterprises, etc.) along with the existing initiatives the state has a bright future ahead.

The growth of rural-based enterprises will bring in capital to the semi-urban and the rural areas and contribute to the development of the state as a whole. The creation of new employment opportunities in the State will also help in increasing the per capita income of the people in the state and help increase the standard of living of people throughout the state.

**Initiatives to be launched in the next fiscal 2018-19 in line with the State Budget**

**Silk Park in PPP mode will be established in Ranchi and Kharsawan. (State)**

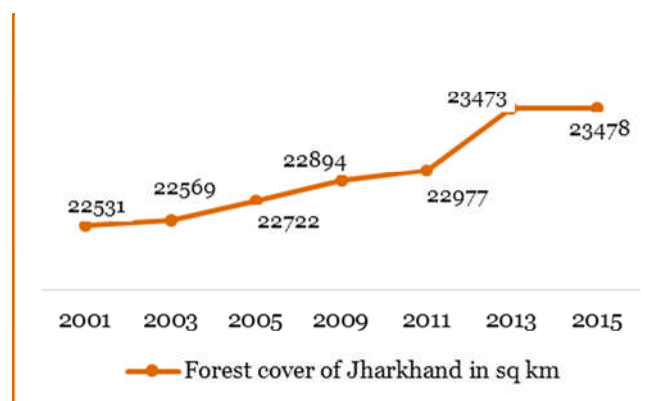
## 14. Sustainable Forest Management

*To preserve bio diversity rich environment in a balanced and sustainable manner while ensuring increase in economic contribution of forests*

### 14.1. Context

Jharkhand has 3.31% of the total forest cover of the country and ranks 10th in the country in terms of its forest cover. According to India Forest Survey Report (IFSR) 2015, the total forest cover of Jharkhand is 23,478 km<sup>2</sup> with an additional tree cover of 2,783 km<sup>2</sup>. Forests form an integral part of Jharkhand's ecosystem covering 32.94% of the state's total geographical area. A significant proportion of the population in Jharkhand depends on forests for their employment. Consequently, the Government of Jharkhand is focusing on conservation of forests and environment and management of natural resources in sustainable manner.

Figure 40: Forest cover of Jharkhand in sq km



Source: Economic Survey of Jharkhand 2015-16

### 14.2. Sustainable Conservation and Management of Forests

The total forest cover as a percentage of the total geographical area has remained unchanged over the years. There are variations in cover by forest type but there is evidently no change in the net forest cover matrix which is due to forest degradation leading to an increase in the open forest and scrub area. The current coverage at more than 32.94%<sup>62</sup> has been pegged up to improve and achieve decadal growth of 33%<sup>63</sup> through extensive afforestation activities not only in increasing the forest cover but trees outside forests (TOF).

#### 14.2.1. Forest cover

The increase in forest area have been planned keeping in mind the average growth rate, sustenance rate of planted seedlings and availability of suitable land for afforestation. Also measures of growing stock is important. While forest cover is the aerial extent of the forests, growing stock is a measure of the subsistence of its tree wealth which is crucial for policymakers providing input for deriving the amount of carbon sequestered in the forests.

#### 14.2.2. Water conservation and replenishment through forests

Forests help in retention of soil moisture and ensuring sustainability of water resources. This role of forest will be strengthened through water conservation/management in forest areas.

<sup>62</sup> Jharkhand Economic Survey 2015-16

<sup>63</sup> Jharkhand Economic Survey 2015-16

**Table 100: Changing trends in forest coverage and composition (area in square km)**

Year	Forest cover			Total	Percentage of geographical area	Increase in forest coverage			
	Very dense forest	Moderately dense forest	Open forest			Very dense forest	Moderately dense forest	Open forest	Total
<b>2001</b>		11681	2,2531		28.26				
<b>2003</b>	2,544	9076	10,949	22569	28.31		-61	99	38
<b>2005</b>	2,595	9892	10,235	22722	28.5	51	816	-714	153
<b>2009</b>	2,590	9899	10,405	22896	28.72	-5	7	170	172
<b>2011</b>	2,590	9917	10,470	22977	28.82	0	18	65	83
<b>2013</b>	2,587	9667	11,219	23473	29.45	-3	-250	749	496
<b>2015</b>	2,588	9663	11,227	23478	29.48	1	-4	8	5

\* IFSR 2005, 2009, 2011, 2013 and 2015

**Table 101: Targets set by the department for enhancing forest cover**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>State forest cover (TOF cover)</b>	26261 sq. km (2015)/32.94% of GA <sup>64</sup>	Resource Mapping of forests completed	District-wise plan for forest development and conservation	Increase in forest cover to 33% 2 Reports published by 2030 on 'Change in the Growing stock' Contribution of VDF raised to 5.26%
<b>VDF contribution in total forest cover*</b>	3.26% of total forest cover	Development of canopy measurement index	Contribution of VDF raised to 4.26%	Contribution of VDF raised to 5.26%
<b>Community participation in forest protection</b>	92.80% of forest area <sup>65</sup> covered under JFM <sup>66</sup>	100% forest area covered Development of IEC Content in local language for community engagement	Define level of participation for all existing JFM's and train them to maintain static and dynamic inventory of found species	Establish JFM's committees covering all forest areas Capacity Building of 100 % Eco Development Committees around the Protected Areas

\* Economic survey of Jharkhand 2016

### Action Plan 2021

1. To complete the resource mapping of forests.
2. Special efforts will be made to promote Bamboo (Green Gold) cultivation and value addition
3. To create Bamboo high-tech nurseries as per National Guidelines. This could be integrated in the *Permanent Nurseries & Seed Orchards* scheme

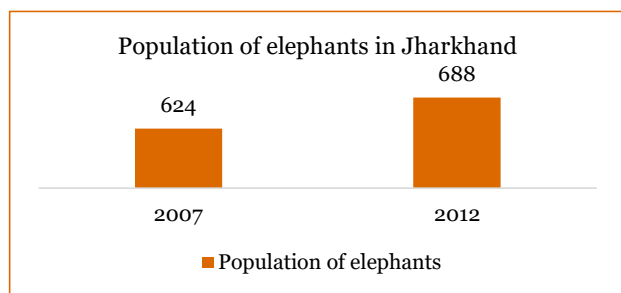
<sup>64</sup> Economic survey of Jharkhand 2016<sup>65</sup> Department Annual Plan 2016-17<sup>66</sup> State Action Plan for Climate Change

4. To cultivate bio-fuel producing plants and fuel trees/crops in the degraded and wastelands. The Centrally Sponsored Scheme of *Green India Mission* has a focus area on promotion of alternate fuel which could be integrated with afforestation efforts to both reclaim degraded lands and increase forest cover
5. To engage community in Sustainable forest Management through upscaling coverage of Joint Forest Management (JFM) committees. Currently, under *National Afforestation Program*, JFMC's are being strengthened where efforts need to be further intensified by integrating with *Jharkhand Participatory Forest Management Project*.
6. To implement water conservation/management schemes in forest areas to help overall strengthening of water resources in the state.

### 14.3. Wildlife Conservation

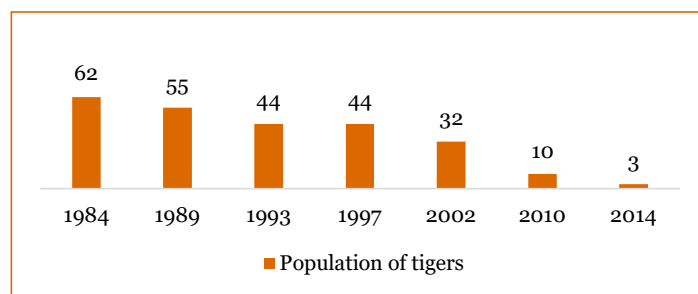
The tiger and elephant population in Jharkhand has dwindled over time. Project Tiger with Palamu Tiger Reserve and Project Elephant are national conservation projects which are running in the State, started in 1989. It is important to intensify efforts to increase tiger population and reduce man elephant conflicts due to habitat disruption

**Figure 41: Population of elephants in Jharkhand**



Source: India's fifth National report to the convention on biological diversity 2014

**Figure 43: Population of tigers in Jharkhand**



Source: CAG of India: Report on conservation and protection of tigers in tiger reserves, Status of tigers in India 2014

**Table 102: Targets set up for wildlife conservation**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Conservation of Tiger population</b>	3	4	8	17
<b>Conservation of Elephant population</b>	688	Preparation of management plan for forthcoming years for elephant protected areas	Constitution of elephant habitat Conservation Cell	Reduction in losses due to man animal conflict by 50%
<b>Conservation of Important Bird Areas (IBA)</b>	NA	Development of bird checklist for the state	Special team deployment to develop Udhwa Lake Bird Sanctuary	Reclamation of Gyps bengalensis (Oriental White-backed Vulture)

#### Action Plan 2021

1. To strengthen Project Tiger and Project Elephant through specialized staff
2. To collaborate with Wildlife institute of India for tiger population for breeding

## 14.4. Capacity Building of Personnel and R&D

The availability of the resources both in terms of quality and quantity and dependence of its indigenous peoples on it is required for sustainable management of forests. Even though management decisions are taken at top level, the basic data regarding resources viz., growing stock, biodiversity, regeneration etc. are to be collected by front line staff only. Thus, capacity building activities across levels would be done after various positions in the department are filled.

**Table 103: Targets set up for capacity building and R&D in Forestry**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Institutional capacity of Forest Department personnel</b>	Vacant positions IFS (39), State Forest Services (84), forest area officers (133), forrester (737), forest guards (3491). <sup>67</sup>	100% filling of vacancies	Establishment of a State-level training institute in collaboration with FRI to train staff on Forest Management, research and related activities	Evolve into fully functional resource institute with a systematic mechanism for biennial training of forest staff of all cadres to upgrade all kinds of skills

### Action Plan 2021

1. To recruit for vacant positions in the forest and climate change department
2. To strengthen applied research and targeted capacity building of stakeholders of forest department by setting up of 'State Environment Training and Research Institute', in collaboration with FRI. Under the scheme of *Training facilities*, *professional training* is to be provided to the forest staff. However, it can be ensured to provide focused and extensive trainings through collaboration with specialized institutes

## 14.5. Technology Integration

In addition to the use of various records at the disposal of the Forest Department like maps & Survey of India (SOI) toposheets etc., use of modern technology especially GPS/DGPS Survey of forest areas is proposed to delineate the actual line of forest boundaries as per the existing records.

**Table 104: Targets set up for Technology Integration in Forestry/Wildlife**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Technology integration in forest and wildlife conservation</b>	NA	Establishment of fully integrated GIS for forest and wildlife mapping ICT integration in all offices	Digitization of forest boundaries	Computerized data for all forest and protected areas

### Action Plan 2021

<sup>67</sup> Department Action Plan 2016-17

1. To develop a monitoring mechanism for all ecosystems through GIS based Bio-Diversity Monitoring System. The state is focused on modernizing the forest department and also integrating technology based forest development. The 12<sup>th</sup>-year plan focuses of use of GIS/ ICT in forest and wildlife management among others. Through, *Modernization & IT-enabled Services for Forest Offices*, the main focus would be on infrastructure needs of the offices for their effective functioning, application of modern technology for efficient forest protection and management etc. However, intensified efforts for large-scale technology implementation is required.

## 14.6. Climate Change Adaptation and Mitigation

Jharkhand is highly vulnerable to climate change given that its tribal population concentration is as high as 26% who are primarily rural with rain- and climate-dependent agriculture as their main source of sustenance. Districts of Pakur, Simdega, Loharanga and Lather are highly vulnerable to climate change. The lack of adaptive capacity is the main reason of the backwardness of these districts. Whereas districts like Ranchi, Bokaro and Dhanbad have scored much better in respect to adaptive capacity and thereby vulnerability index.

**Table 105: Targets related to climate change adaptation**

Indicator	Current scenario	Target for 2021	Target for 2025	Target for 2030
<b>Implementation of SAPCC</b>	NA	100 % Achievement of upgraded SAPCC	Inception of upgraded SAPCC	100 % achievement of upgraded SAPCC
<b>Monitoring degree of impact on climate by human activities</b>	NA	Mapping of departments undertaking initiatives which directly impact the climate	Identification of index, developing measurement systems, building baseline and fixing targets for life on land and life below water	100% achievement of targets fixed in 2022

### Action Plan 2021

A comprehensive State Action Plan on Climate Change (SAPCC) and the same would further be intensified to achieve the climate action goals

1. Rapid implementation of SAPCC
2. To develop District Management Plan to combat climate change and increased awareness
3. Information dissemination of climate changes by designing a Climate & Energy Education Programme (CEEP)
4. Institutional strengthening of Climate Change Department as a Nodal Monitoring agency for Climate adaptation initiatives

## 14.7. Convergence

The primary department for all the activities would be the Forest, Environment and Climate Change, However, for Climate Change action, the department would need to integrate efforts with Education Department. Also, for afforestation in urban areas, integrated efforts with the Urban Development would be required. Apart from this, in order to provide high-impact-focused trainings to forest officials, FRI will be strengthen. Similarly for wildlife development, integrated efforts with Wildlife Institute of India are being taken. A separate unit for to tackle climate change, State Climate Change Action Unit is also being established.



## ***14.8. Conclusion***

The Action Plan 2020-21 has been devised keeping in focus the current gaps in the sector and prospective activities to overcome them. In order to check the deterioration, several plantation schemes aimed at restocking/ rehabilitation of natural forests, raising plantations with emphasis on quick growing species for small wood/ fuel/ fodder/ fruit/timber/-other NTFPs, etc. with soil and moisture conservation measures as per requirement of the site, have been formulated and are being implemented. Besides these, initiatives like strengthening and mobilization of VFMPs/EDCs/SHGs through awareness and livelihood programmes will help the department in seeking better cooperation from the villagers in successful implementation of various forestry activities as well as protection of forests. The department would also focus on increasing number of tourists in eco-tourism sites to provide additional source of income and employment for forest dependent communities. The State would make adequate investments for more technologically equipped offices as well as staff to reduce manual dependency. State plans to recruit sufficient staff to improve efficiency of the department in the coming years. Community engagement would also be enhanced and made more beneficial for both the communities and the forests. Apart from this, the State would focus on research works in planting stock improvement suitable for Jharkhand conditions. The State would also focus on increasing the deteriorating number of tigers in Palamu Reserve through association with Wildlife Institute of India and also work on reducing the damages due to man animal conflict. Besides, to battle the issues of climate change, forest department being the nodal agency would co-ordinate with other departments in addressing the issue. So, JSCC – Action Unit would be set up, and strengthened.

## 15. Resource Forecast

Jharkhand, for its development, will receive resources from multiple sources – from State and Central Government, financial agencies, multilateral agencies and private sources. The total financial resource from the government sources (like any other state of the country) will include the state's own tax and non-tax revenues, its share in central taxes, its non-debt capital receipts and the fiscal deficit (borrowing) incurred by it. It will also include grants in aid from the Government of India and transfer of fund from the central government for Centrally Sponsored Schemes (CSS) and Central Sector Schemes. Resources from other sources like the credit advanced by the financial institutions, the investments done by private business enterprises, grants made by multilateral agencies, the expenditure by philanthropic organisations, expenditure of corporate sector for corporate social responsibility and the District Mineral Foundation fund will also contribute in the development of the state.

### 15.1. Growth outlook and Revenue Forecast for 2018-19 to 2020-21

While the own tax and non-tax revenues and fiscal deficit (borrowing) of the State depend on its nominal GVA (Gross State Value Added), its share in central taxes which primarily depends on the total divisible pool of the centre and the inter-se share of Jharkhand in it, depends on the nominal GVA of the country.

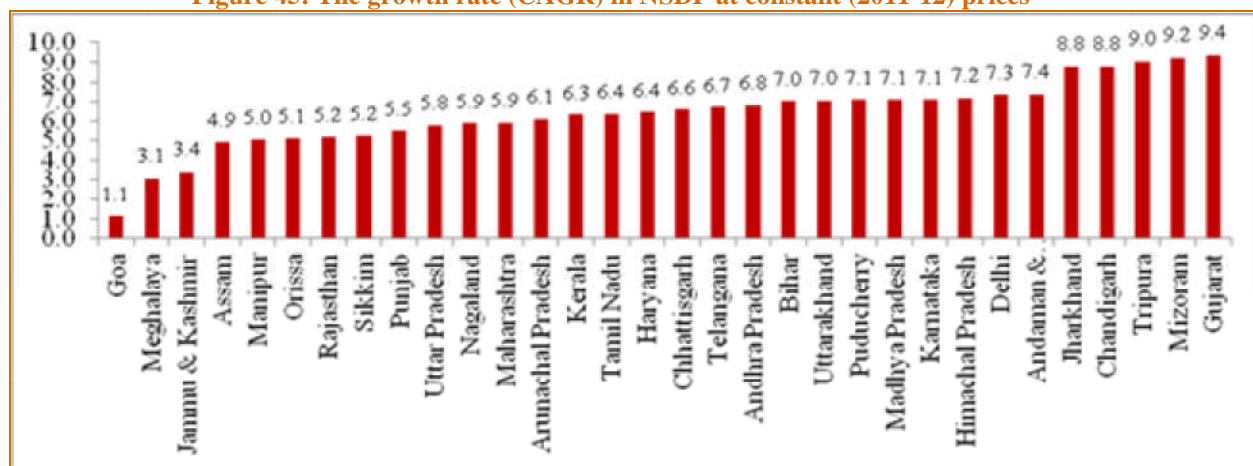
The performance of Jharkhand, in the last five years, has been better than the performance of the country as a whole. While the GDP at constant (2011-12) prices of India grew at an average annual rate of 6.8 percent (CAGR), that of Jharkhand grew at the rate of 8.5% per annum between 2011-12 and 2015-16. Except for 2013-14, when the growth rate of Jharkhand was abysmally low, in all other years, the performance of the economy of Jharkhand has been better than the all-India average.

**Table 106: Rate of growth in GVA and GSDP at current and constant (2011-12) prices**

Year	GVA		GSDP	
	Constant prices (%)	Current prices (%)	Constant prices (%)	Current prices (%)
<b>2012-13</b>	8.0	15.59	8.2	15.77
<b>2013-14</b>	0.9	7.28	1.6	7.92
<b>2014-15 (P)</b>	11.1	13.74	12.5	15.14
<b>2015-16 (A)</b>	13.4	12.66	12.1	11.44
<b>2016-17 (Pr)</b>	8.76	12.92	8.01	11.81
<b>2017-18 (Pr)</b>	8.97	13.19	8.25	12.17
<b>Average of year to year growth between 2011-12 &amp; 2015-16</b>	8.37	12.3	8.59	12.57
<b>CAGR between 2011-12 &amp; 2015-16</b>	8.26	12.27	8.50	12.52

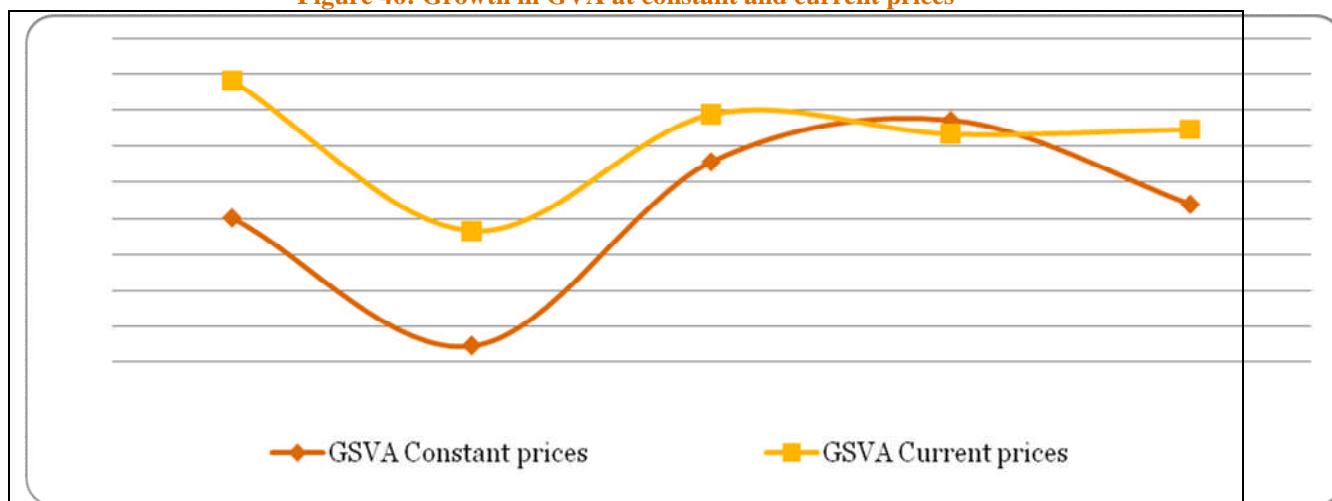
The performance of Jharkhand has not only been better than the all India average, but has been better than most of the states and Union Territories of the country. The growth rate (CAGR between 2011-12 and 2014-15) of only three states of the country, namely, Gujarat, Mizoram and Tripura (Mizoram and Tripura are special status states), has been better than that of Jharkhand.

**Figure 45: The growth rate (CAGR) in NSDP at constant (2011-12) prices**

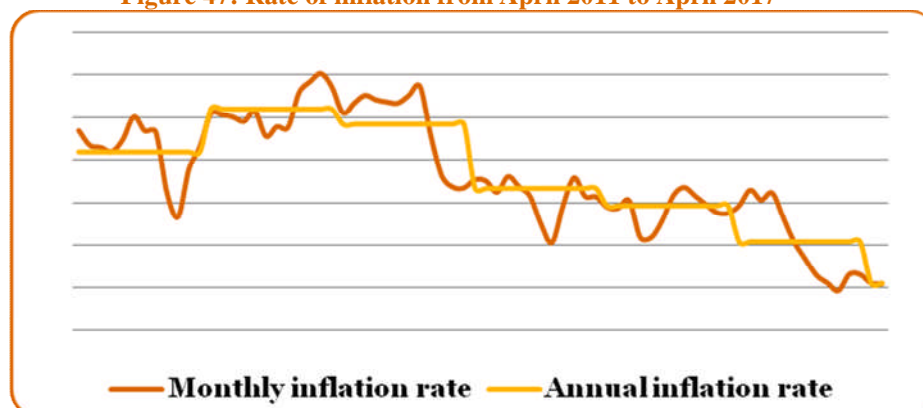


The growth rates of both the GSVA and GSDP at current prices have been much higher than their growth rates at constant prices in the years 2011-12 and 2012-13. The two, i.e. the growth rates at current and constant prices, started converging thereafter, to become almost equal in 2015-16. This has happened because of fall in the inflation rate after November 2013.

**Figure 46: Growth in GVA at constant and current prices**



The rate of inflation remained very high in April 2011 to December 2013. In 17 out of these 33 months, the rate of inflation, in fact, remained in double digits and in another 8 months it was above 9%. Of the remaining 8 months, it was low - less than 8%, in only three of the months. As a result, we find a wide divergence in the nominal (at current prices) and real (at constant prices) growth rate in GSVA (and also in GSDP) in this period. The rate of inflation became low only from January 2014. Of the 34 months between January 2014 and October 2016, the rate of inflation always remained less than 8%. It was less than 5% in 6 of these 34 months. Since then, till date (May 2017), it has been less than 3%. As a result, the rate of growth in nominal and real GSVA and GSDP seems to converge after December 2014.

**Figure 47: Rate of inflation from April 2011 to April 2017**

Source: <http://www.inflation.eu/inflation-rates/india/current-cpi-inflation-india.aspx>.

The nominal GSVA of Jharkhand, on which its own tax revenue, non-tax revenue and fiscal deficit (borrowing) depend, has grown at an average annual rate of 12.4% on year-on-year basis. It reached its high of 15.6% in 2012-13 and low of 7.28% in 2013-14. The high nominal growth rate of GSVA in 2012-13 was because of high inflation rate of that year; otherwise, the real GSVA this year grew by only 8%. The average rate of inflation in the year 2012-13 was as high as 10.43%. In only four months of this year, the inflation rate was a little less than 10%; otherwise, in the remaining 8 months it exceeded 10%. The high rate of inflation continued in the following year as well. In the first 8 months of this financial year also the inflation rate exceeded 10%. As a result, while the real GSVA grew only by 0.9% over 2013-14, the nominal GSVA grew by 7.28%.

Given the trend of low inflation rate since August 2016, low inflation targeting of the monetary policy committee (MPC) of RBI (at 4% with a band of 2% above and below) and sound fiscal situation of the country (low deficit situation), we do not expect a high rate of inflation in the near future. As a result, we can ignore 2012-13 in calculation of the average rate of growth of the nominal GSVA, the hike in which, as discussed earlier is mainly because of the high rate of inflation. 2013-14 should also be ignored for this calculation, both because of high inflation rate and also for abnormally low real growth rate. This year is basically an outlier in the series of state income. The GSVA and other related aggregates of the year 2016-17 is just a statistical projection based on the previous year's trend and is not based on real ground situation; so, this year's growth rate should also be ignored for final calculation of the average growth in nominal GSVA. If these three years are ignored, then the average rate of growth in GSVA turns out to be 13.20%.

**Table 104: GSVA at current prices**

Year	Rs. in lakh		Annual growth rate (%)	
	GSVA	GSDP	GSVA	GSDP
2011-12	13,912,959	15,091,759		
2012-13	16,082,669	17,472,369	15.59	15.77
2013-14	17,253,230	18,856,671	7.28	7.92
2014-15 (P)	19,623,166	21,710,718	13.74	15.14
2015-16 (A)	22,107,948	24,195,500	12.66	11.44
2016-17 (Pr)	24,964,230	27,051,782	12.92	11.81
<b>Average growth rate on y-o-y basis</b>			12.44	12.42
<b>Average growth rate on y-o-y basis ignoring 2013-14</b>			13.73	13.54
<b>Average growth rate on y-o-y basis ignoring 2012-13 &amp; 2013-14 and projection of 2015-16</b>			13.20	12.57

If the factors determining the nominal GSVA of the state remain normal (i.e. what they have mostly been so far) we can expect that the nominal GSVA will continue growing at the annual rate of 13.20 percent per annum in coming three years. Hence, this rate can be considered the base rate of growth for the projection of the GSVA and the internal financial resources of the state for the coming three years; 2017-18, 2018-19 and 2019-20. This rate may further increase if the events like “Momentum Jharkhand” and other efforts of the State to promote the development of the State pay off well in attracting and enhancing investment in the state. In that case the nominal GSVA may grow by a higher rate 14.20%. But, in case of monsoon failure or some unforeseen event causing fall in investment and production, the rate of growth may fall to a low level of 12%<sup>68</sup>.

**Table 105: Growth projection for the years 2017-18, 2018-19 & 2019-20. (in%)**

Expected growth rate in 2017-18, 2018-19, 2019-20	Low growth rate	Base growth rate	High growth rate
	12.00	13.20	14.20

### 15.1.1. Resource forecast of the State

On the basis of the source of receipt, the financial resources of the State can be classified into those collected from its own sources, those received from the centre as per the recommendations of 14th Finance Commission and those which are transferred by the centre for Central Sector Schemes and Centrally Sponsored Schemes.

#### *Own sources*

The tax and non-tax revenues of the government, as mentioned above, depend on the state’s GSVA at current prices. In the year 2016-17, the tax revenue of the state was 6.71 percent and the non-tax revenue was 3.93 percent of the GSVA at current prices of the state. At these rates state’s own tax revenue is projected to be in the range of Rs. 210 hundred crore to Rs. 218 hundred crore in the year 2018-19, Rs. 235 hundred crore to Rs. 249 hundred crore in the year 2019-

20 and 264 hundred crore to 285 hundred crore in the year 2020-21. Similarly, the state’s non tax revenue is expected to be in the range of Rs. 123 hundred crore to 127 hundred crore in the year 2018-19, Rs. 137 hundred crore to 146 hundred crore in the year 2019-20 and RS 154 hundred crore to Rs 167 hundred crore in the year 2020-21.

The non-debt capital receipt of the state has been calculated at 0.0185 percent of the GSVA of the state and the fiscal deficit of the state has been calculated at the rate of 3.25 percent of the GSDP at current prices (the rate which is admissible as per the 14th FC). An additional sum in the range, Rs. 111 hundred crore to 115 hundred crore in the year 2018-19, Rs. 124 hundred crore to 131 hundred crore in the year 2019-20 and Rs 139 hundred crore to Rs 150 hundred crore in the year 2020-21.

<sup>68</sup>Usually, in times of high growth, because of improved supply situation, the nominal and real growth rates converge and in times of low growth they diverge because of shortage of supply and consequent hike in prices. As a result, while the nominal GSVA grows at the same pace as the real GSVA in times of high growth rate; it grows at a much higher rate than the real GSVA in times of low growth rate

**Table 106: Estimation of Financial resources from own sources (in Rs. Crore)**

	2018-19			2019-20			2020-21		
	12	13.2	14.2	12	13.2	14.2	12	13.2	14.2
<b>GSVA at current prices</b>	313151	319898	325575	350730	362124	371806	392817	409924	424603
<b>GSDP at current prices</b>	339338	346648	352800	380058	392406	402897	425665	444204	460108
<b>State's own taxes</b>	21011.21	21463.86	21844.76	23532.56	24297.09	24946.72	26358.0	27505.9	28490.8
<b>State's own non taxes</b>	12306.85	12571.98	12795.08	13783.67	14231.48	14611.98	15437.7	16110.0	16686.9
<b>Non-Debt Capital Receipt</b>	58.04	59.29	60.35	65.01	67.12	68.91	73	76.00	79.00
<b>Fiscal Deficit</b>	11028.47	11266.06	11465.99	12351.89	12753.18	13094.16	13834	14437	14954

**Share in central taxes and grants in aid**

The state is expected to get Rs. 280 hundred crore in the year 2018- 19, Rs. 325 crore in the year 2019-20 and Rs 376 hundred crore in the year 2020-21, as a share in Centre's taxes (projected at the rate of 3.139 percent, which is the inter se share of Jharkhand in the divisible pool). The state is expected to receive, Rs. 18 hundred crore Rs. 24 hundred crore and 27 hundred crore as grants to rural and urban local bodies in the years 2017-18, 2018-19 and 2019-20, respectively. An additional Rs. 4 hundred crore is expected as Centre's share in SDRF

(all these projections are based on the projections done by 14th Finance Commission).

**Table 107: Estimation of Financial resources received from Centre in form of share in Central taxes and grants in aid (in Rscrore)**

	2017-18	2018-19	2019-20
<b>Share in central taxes<sup>i</sup></b>	24242.62	28044.77	32480.65
<b>Central Share in SDRF</b>	361	379	398
<b>Grants to Local Bodies</b>			
<b>Basic Grants</b>			
	Rural	1044.45	1208.24
	Urban	293.95	340.05
<b>Performance Grants</b>			
	Rural	134.18	152.38
	Urban	84.97	96.50
<b>Total</b>	<b>26161.17</b>	<b>30220.94</b>	<b>35296.6</b>

**Centre's transfers for Central Sector Scheme and Centrally Sponsored Schemes**

The state receives funds for the central sector and centrally sponsored schemes meant for promoting education, health, power, irrigation, agriculture and allied sectors, other dimensions of rural development and for ensuring welfare and social welfare. The NITI Aayog's document on "Three Years' Action Plan" has projected certain rates of growth in their expenditure in these fields in the years 2017-18, 2018-19 and 2019-20 (Chapter 4). We expect that the fund for the central sector and centrally sponsored schemes pertaining to these sectors will be transferred to Jharkhand at the same rate. The state, thus, is expected to receive Rs. 9405.79 crore for the year 2018-19, and Rs 11064.75 crore for the year 2019-20 for various schemes pertaining to these sectors.

Keeping in view the trend, it is expected to be Rs. 12724.46 crore in the year 2020-21.

**Table 108 : Transfers for Central Sector Scheme and Centrally Sponsored Schemes (Projected)***(All Values in Crore)*

Heads	2015-16		Projection	
			2018-19	2019-20
<b>Education</b>	906.8	1333.54	1533.571	1763.61

<b>Health</b>	252.78	553.2849	846.5258	1295.18
<b>Agriculture &amp; allied services and Rural Development</b>	2,622.43	4816.879	5443.074	6150.67
<b>Power, irrigation and Flood Control</b>	330.06	476.8707	538.8639	608.92
<b>Welfare/Social welfare</b>	1,002.25	1753.938	2174.883	2696.85
<b>Others*</b>	314.02	471.2812	527.835	591.18

We expect a higher allocation from the Centre for the development of such districts which have been identified as aspirational/backward by NITI Aayog.

### *The total financial resources of the State from government sources*

Depending on the rate of growth in the economy the total financial resources of the Jharkhand is expected to be between Rs 656,356 crore to Rs 668,578 in 2017-18, Rs 736,521 crore to Rs. 764167 crore in the year 2018-19, Rs. 826882 crore to Rs. 873786 crore in the year 2019-20 and RS. 927761 crore to 998737 crore in the year 2020-21.

#### **District Mineral Foundation Fund:**

The mineral producing districts of the state will receive fund in the form of District Mineral Foundation (DMF) Fund to be utilized for the development of these districts, mainly for developing their mining-affected people. According to one estimate, the State is expected to receive more than Rs 1,000 crore every year as the district mineral foundation fund<sup>69</sup>.

#### **The Financial Resources of the State from Other Sources**

Besides Government sources, the State, for its development will also receive financial resources from sources like financial institutions, multilateral agencies and private sectors (corporate, semi corporate and non-corporate enterprises).

The total advance from the institutional financial sources in September 2016 was Rs 103 thousand crore. If it grows by 16% per year (the expectation based on past trend and current developmental efforts of the state which will improve the credit absorptive capacity), it will grow to Rs 138 thousand crore in 2018, Rs 161 thousand crore in 2019, Rs 187 thousand crore in 2020 and Rs 217 thousand crore in the year 2021..

The State is expected to receive a sizable amount from the multilateral agencies like Asian Development Bank and World Bank. The private sources are also expected to make investments in the State. These investments will also contribute towards realizing the goals of the three years' action plan of the State.

### *Conclusion*

Jharkhand, for its development, is expected to receive resources from multiple sources - both government and non-government.

Based on the projections of GSVA at current prices the state's own tax revenue is expected to be in the range of Rs 210 hundred crore to Rs 218 hundred crore in 2018-19, Rs 235 hundred crore to Rs.

<sup>69</sup>Estimate by Delhi – based Centre for Science and Environment (CSE) quoted in Hindustan Times, of July 05, 2015.

249 hundred crore in 2019-20 and Rs. 264 hundred crore to Rs. 285 hundred crore in the year 2020-21 and its non-tax revenue is expected to be in the range of Rs 123 hundred crore to Rs 127 hundred crore in 2018-19, Rs 137 hundred to Rs 146 hundred crore in 2019-20 and Rs. 154 hundred crore to Rs. 167 hundred crore in the year 2020-21. An additional sum in the range of Rs 111 hundred crore to 115 hundred crore may be expected in form of non-debt capital receipt and fiscal deficit in 2018-19, Rs 124 hundred crore to Rs 131 hundred crore in 2019-20 and Rs 128 hundred crore to Rs. 139 hundred crore in the year 2020-21.

The State is expected to get Rs 280 hundred crore in 2018-19, Rs 325 crore in 2019-20 and Rs. 376 hundred crore in 2020-21 as a share in Centre's taxes and Rs 18 hundred crore, Rs 24 hundred crore and Rs 27 hundred crore as grants to rural and urban local bodies in 2018-19, 2019-20 and 2020-21 respectively. An additional Rs 4 hundred crore is expected as Centre's share in SDRF. The State is also expected to receive Rs 9,405.79 crore for 2018-19, Rs 11,064.75 crore for 2019-20 and Rs. 12724.46 crore for 2020-21 for the Central sector schemes and Centrally Sponsored Schemes. The State is also expected to receive more than Rs 1,000 crore as DMF fund.

Besides government sources, the State, for its development, will also receive financial resources from sources like financial institutions, multilateral agencies and private sectors. The total advance from the institutional financial sources is expected to be Rs 138 thousand crore in 2018, Rs 161 thousand crore in 2019, Rs 187 thousand crore in 2020 and Rs 217 thousand crore in 2021.

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## ***16. Transparent and Responsive Governance***

### ***16.1. Introduction***

The “governance” has been a much talked about topic in recent times in the context of country’s development agenda; it also has numerous definitions coined by development organisations and renowned economists. One such definition from UNDP resonates in our context is:

*“Governance is a system of values, policies and institutions by which a society manages its economic, political and social affairs through interactions within and among the state, civil society and private sector. It is the way society organizes itself to make and implement decisions - achieving mutual understanding, agreement and action. It comprises the mechanisms and processes for citizens and groups to articulate their interests, mediate their differences and exercise their legal rights and obligations. It is the rules, institutions and practices that set the limits and provide incentives for individuals, organizations and firms”.*

The State Government would like to enshrine following governance attributes in their interactions with citizens and government machinery:

- Accountability
- Transparency
- Equity
- Participation

The key reform measures which the State Government intends to bring in the governance is articulated in the following section.

### ***16.2. Result-Oriented Governance System***

The first and foremost requirement for an efficient service delivery system is to reorient it towards results that are measurable and time-bound. Towards this, the State Government plans to design an outcome-based system of performance measurement.

The main objective of such a system would be to bring accountability at each level of Government starting from State Secretariat to Gram Panchayats. This would also entail a shift from a process or output based monitoring of performance to outcome and output based monitoring. The tendency of “passing the buck” would be stopped and so that the governance decisions are taken at appropriate level and not unnecessarily escalated to delay the decisions.

### ***16.3. Reorganization of the Governance System with Focus on Structural Changes***

The governance system over the years has undergone many changes to account for the changing needs to deliver in an effective and efficient manner. In cognizance of this, State Government effected administrative reforms by reorganising various administrative departments and reducing their total number. The number of departments were brought down from 41 to 30. The focus of these changes was to bring about structural changes in the way government programmes are delivered and right size the various layers of administrative structures.

As a next step, Government plans to look into the sub-units within various departments such as directorates, corporations, societies, etc. Many of these sub-units were created as special purpose vehicles for rapid delivery of services. However, over a period, many of these units have become dysfunctional and defunct. Government intends to undertake the second level of administrative reforms by looking into the utility of these sub-units and effect measures to rationalise, reorient, realign and make these units functional and vibrant.

Human resources form the key of any governance structure and efficiency of delivery rests with the people working under various departments and sub units. To bring about changes in the functioning of the manpower, an assessment will be carried out to estimate the vacancies and surplus within the various units of administration. Net vacancy/surplus will be estimated based on the results of this exercise and manpower rationalisation will be carried out to ensure right number of people are available to deliver on the commitments of government. This exercise will be carried out in 2017 that will include an assessment of rules and guidelines that guide the functioning of the manpower. New rules and guidelines will be formulated wherever necessary to enable to carry out the structural changes and in 2018 all net vacancies will be filled up.

#### ***16.4. Mission Mode Approach for Critical Areas of Concern (Inter-departmental Convergence Model of Governance)***

The current governance mechanisms suffer from high level of departmental compartmentalisation that result in unnecessary delays and affect the desired quality of outcomes. The departments work in silos with lack of communication and coordination among themselves.

In order to reduce the compartmentalisation, a composite framework of governance will be developed which will include key contribution of each department in the results framework with assigned responsibilities and accountability. The composite framework will include guidelines in the areas of communication, coordination and cooperation to improve the net results of various efforts of the government. The composite framework will have an outcome and result orientation inbuilt into the system and each and every one will work towards achieving the shared outcomes and results.

One of the outcomes expected from this initiative is greater empowerment at the lowest level like gram panchayats. The various initiatives carried out as per 73<sup>rd</sup> Constitutional Amendment to provide decentralised governance and devolution of power will be reviewed and new impetus given to convergent action at last mile through empowered PRIs.

#### ***16.5. Technology-driven Governance to Bring in Transparency and Reduce Discretion***

Technology can play a significant role in improving the overall functioning of the governance systems by bringing in efficiency, transparency and accountability. It has the power to transform the way services are delivered and reduce many of the inefficiencies associated with delivery such as delays and leakages. It also offers a great platform to establish direct interface with citizens and obtain their feedback. Many states including Jharkhand have leveraged the technological advancements to rapidly expand the coverage of schemes and efficiently deliver the benefits.

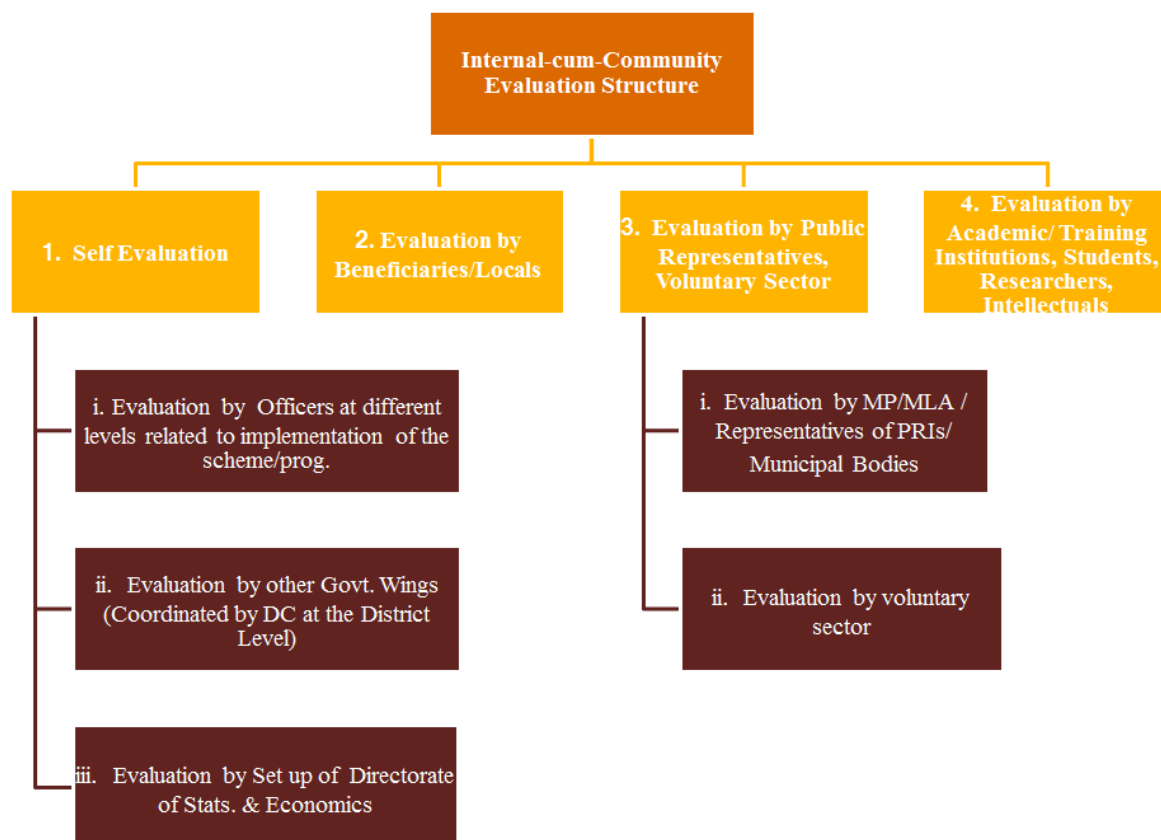
In order to leverage the advancement of technology for ushering improvements in programmes, it is intended to set up a robust MIS system across departments and programmes. The ongoing e-Office project once completed would streamline the inter-departmental and intra-departmental communication channels. The composite MIS system will be developed that will be linked with the CM dashboard to closely monitor the outcomes and outputs. The composite MIS system will have attributes to capture progress vis-à-vis financial allocations and capture information on other key determinants to reflect the outcomes.

Technology will also be used to frame a community-based evaluation system to put in place and ensure concurrent monitoring of efforts and investments made by the Government and measure it against outcomes

##### **a) Likely methods of concurrent monitoring/Evaluation/Impact assessment**

- **Impact studies through academic/research institutions, university as selected/identified by the State Government.**

- **Monitoring/Evaluation system through system of inspection by officers** - Concurrent monitoring/Evaluation for mid-course correction.
- **Expansion of coverage of social audit**– To cover other departmental individual benefit schemes along with MGNREGS.
- **Evaluation through officials of UN Bodies UNICEF, UNDP** (posted in different departments of the state) along with PMRDF or other specialized officials appointed by departments.
- **Evaluation studies through SKIPA and SIRD**
- **“Web-based Internal-cum-Community Based Evaluation” with the help of NIC/IT Dept**



#### b) Framework of Internal-cum-Community Evaluation Structure

For leveraging the reach of ICT, government will put in place systems for regular and frequent reviews at the lowest possible level. Video conferencing will be used to reduce the time for physical movement of officials. Under normal circumstances, State-level meetings will be conducted through video conferences where district level officials can participate, and in due course, this facility will be extended to the sub-district level. Such an initiative will significantly reduce the travel time associated in attending such meetings and improve the productivity of functionaries.

### 16.6. Participatory Governance and Communication

The 73<sup>rd</sup> constitutional amendment and PESA are two legislations which have brought path-breaking changes in participatory governance. While the implementation has been slow in Jharkhand, the State Government is committed to see meaningful implementation and empowerment of the PRIs and tribal societies so that these organisations plan, participate and own the development initiatives.

Many a scheme and initiatives by the State Government has had lacklustre success due to limited beneficiary awareness and understanding. This lack of understanding and awareness has been exploited by vested interests to siphon and divert resources. The State Government intends to come out with clear and simple standard operating procedures for implementation of each scheme and widely publicize the citizen charters' to ensure that every citizen is aware of the entitlements and process to claim them.

This initiative is expected to aid both equity and transparency attributes of governance.

### ***16.7. Capacity Enhancement***

Capacity of the government functionaries is the most critical area and requires special attention. While, most of the departments have their own capacity-building plans, the net effect of such initiatives is not reflected in the overall functioning of the departments. The Government has taken cognizance of the capacity building needs of its people at all levels and intends to roll out a robust plan to improve the overall performance and functioning of its people. Steps have been initiated to identify new functional domains where capacity building is required to deliver as per the assigned responsibilities.

As a first step, capacity building need assessment will be carried out across the multiple layers within departments to understand and map the gap between the existing skills and emerging skills required. The findings of such an exercise will be communicated to the training institutions such as SIRD and SKIPA and other specialised training institutions within the State. These institutes will then design appropriate training curriculum which will include modules, capsules, refreshers, etc. that will be delivered both on campus and off campus. For improving the reach of these training programmes, online content will be developed in due course and incentive structures for functionaries will be created to maximise the number of people attending training program.

For further expanding the reach and coverage of the training programmes, campuses of SIRD, SKIPA and other institutions will be established at regional headquarters level. This will not only reduce the costs associated with training but also rapidly proliferate the training program to lower geographic levels such as districts and blocks.

### ***16.8. Development and Implementation of Integrated Financial Management System (IFMS)***

The Planning-cum-Finance Department (Finance Wing), Government of Jharkhand is responsible for management of finances of the State Government that encompasses mobilization and allocation of resources for development of the State. The major functions and activities of the Finance Department are budgeting, administration of Treasuries, monitoring of expenditure, debt management, preparation of the Annual Financial Statement and internal audit of Government Departments.

The GOJ and NIC implemented KUBER –a Treasury Information System in 2006. The system has evolved over the years and various modules have been added to the system like the Treasury MIS module in 2007, DDO Bill preparation application in 2008, Online GPF accounting module in 2010 and Fund Distribution Module in 2012 and so on. But these developments were undertaken in a piecemeal manner and though there is some level of integration between the various systems, the department faces various issues with regard to lack of full integration of all financial functions, data consistency, seamless data exchange between various systems, lack of full automation resulting in combination with manual processes, archaic processes leading to obsolescence of some of the systems due to technological progress and issues with scalability of current systems.

In order to mitigate these issues, the Finance Department plans to implement an enterprise-wide comprehensive Integrated Financial Management System (IFMS) in the State. The main objectives of IFMS implementation would be to achieve-

- **Full integration:** Integrate all financial functions (Planning, Budgeting, Expenditure management, revenue administration, pensions, MIS and other functions). Integration across Government Departments and other stakeholders (employees, pensioners, RBI, Agency Banks, AG and others)
- **Improving Financial Discipline, transparency and accountability**
  - Availability of real-time information of budget allotment, payments, receipts cash positions and debt data,
  - Reduced time for transactions through process re-engineering and automation
  - Business intelligence tools for decision support
  - Automated Reconciliations and Accounting management
  - Provision of e-services for employees and pensioners.
- **Data Consistency**
  - Common data master across systems, functions, departments and other stakeholders; Data digitization at source ensuring data consistency The envisaged IFMS solution encompasses the entire spectrum of Public Financial Management covering various processes including planning, budgeting, core functions of treasury, interface modules with DDO, departments, AG, link banks and procurement systems

IFMS is likely to bring changes to business processes, organization structures and current IT systems for financial management. These changes will have a direct impact on staff and other stakeholders. The impact of these changes will need to be complemented with effective change management initiatives and communications strategy addressing people-related concerns and aspects in IFMS implementation to ensure successful adoption of the system. Intensive training is also an absolute essential for successful implementation. The State is in the final stages of preparing Detailed Project Report (DPR), which includes an as-is assessment and a feasibility study and scope for the proposed Integrated Financial Management System (IFMS).

## ***16.9. JSDEP (Jharkhand Service Delivery Enhancement Program)***

The key objective of JSDEP is to promote inclusion and alleviate poverty and exclusion through the improvement of service delivery and strengthening state's governance framework for better policy and program implementation. The Project consists of the following key components:

- **Component 1:** To provide incentives for achieving results along three subcomponents: access to services and citizen outreach campaigns; strengthening government institutions and IT systems; and performance management;
- **Component 2:** Technical Assistance in specialized technical areas and strengthen the capacity of the implementing agencies under the Right to Guarantee of Service Delivery (RTGS).
- **Component 3:** Technical Assistance to cover analytical work across sectors, to support the government of Jharkhand in developing a long-term Vision document as well as an Implementation Road Map and to enable the government to improve service delivery and implementation of inclusive development programs in Jharkhand.
- **Component 4:** This component will support social protection system strengthening, especially the Direct Benefits Transfer Cell. Building on the work done under Jharkhand NLTA on the digital payment delivery through the DBT cell, this sub-component will support the Government of Jharkhand in strengthening the DBT platform for achieving the vision of a digital payments system in Jharkhand.

## Appendix 1: Development Gap between India and Jharkhand

Indicators	2015-16			2005-06			% Growth (2005-06 to 2015-16)
	India	Jharkhand	Dev, deficit	India	Jharkhand	Dev, deficit	
Educational Development							
<b>Female age 6 years and above who ever attended school (%)</b>	68.8	61.1	11.2	58.3	46.3	20.6	32.0
<b>Women who are literate (%)</b>	68.4	59.0	13.7	55.1	37.1	32.7	59.0
<b>Men who are literate (%)</b>	85.7	79.7	7.0	78.1	68.5	12.3	16.4
<b>Women with 10 or more years of schooling (%)</b>	35.7	28.7	19.6	22.3	15.1	32.3	90.1
Gender Development							
<b>Sex ratio of the total population</b>	991	1002	-1.1	1000	1022	-2.2	-2.0
<b>Sex ratio at birth for children born in the last five years</b>	919.0	919.0	0.0	914.0	1091.0	-19.4	-15.8
<b>Ever-married women who have never experienced spousal violence (%)</b>	71.2	66	7.30	62.8	63.1	-0.5	4.6
<b>Currently married women who usually participate in household decisions (%)</b>	84.0	86.6	-3.1	76.5	77.7	-1.6	11.5
<b>Women owning a house and/or land (alone or jointly with others) (%)</b>	38.4	49.7	-29.4				
<b>Women having a bank or savings account that they themselves use (%)</b>	53.0	45.1	14.9	15.1	14.4	4.6	213.2
Amenities and Infrastructural Development							
<b>Households with electricity (%)</b>	88.2	80.1	9.2	67.9	40.2	40.8	99.3
<b>Households with an improved drinking-water source (%)</b>	89.9	77.8	13.5	87.6	57.0	34.9	36.5
<b>Households using improved sanitation facility (%)</b>	48.4	24.4	49.6	29.1	15.1	48.1	61.6
<b>Households using clean fuel for cooking (%)</b>	43.8	18.9	56.8	25.5	10.5	58.8	80.0
<b>Households using iodized salt (%)</b>	93.1	97.6	-4.8	76.1	92.7	-21.8	5.3

Development in indicators of Health and physical well being							
<b>Couples using any modern method of birth control (%)</b>	47.8	37.5	21.5	48.5	31.1	35.9	20.6
<b>Mothers who had full antenatal care (%)</b>	21.0	8.0	61.9	11.6	4.9	57.8	63.3
<b>Mothers who received postnatal care</b>	62.4	44.4	28.8	34.6	15.6	54.9	184.6
<b>Institutional births (%)</b>	78.9	61.9	21.5	38.7	18.3	52.7	238.3
<b>Children age 12-23 months fully immunized</b>	62.0	61.9	0.2	43.5	34.2	21.4	81.0
<b>Children under age 3 years breastfed within one hour of birth (%)</b>	41.6	33.2	20.2	23.4	10.9	53.4	204.6

Indicators	2015-16			2005-06			% Growth (2005-06 to 2015-16)
	India	Jharkhand	Dev, deficit	India	Jharkhand	Dev, deficit	
<b>Children under age 6 months exclusively breastfed (%)</b>	54.9	64.8	-18.0	46.4	57.8	-24.6	12.1
<b>Total children age 6-23 months receiving an adequate diet (%)</b>	9.6	7.2	25.0				
<b>Total fertility rate (children per woman)</b>	2.2	2.6	-18.2	2.7	3.3	-22.2	-21.2
Coverage of health-promoting schemes and facilities							
<b>Households with any member covered by a health scheme or health insurance (%)</b>	28.7	13.3	53.7	4.8	4.6	4.2	189.1
<b>Mothers who received financial assistance under JSY (%)</b>	36.4	41.6	-14.3				
Indicators of ill-being							
<b>Women age 20-24 years married before age 18 years (%)</b>	26.8	38.0	-41.8	47.4	63.2	-33.3	-39.9
<b>Teenage pregnancy</b>	7.9	12.0	-51.9	16.0	27.5	-71.9	-56.4
<b>Infant mortality rate (IMR)</b>	41.0	44.0	-7.3	57.0	69.0	-21.1	-36.2
<b>Under-5mortality rate (U5MR)</b>	50.0	54.0	-8.0	74.0	93.0	-25.7	-41.9
<b>Children under 5 years who are stunted (height-for-age) (%)</b>	38.4	45.3	-18.0	48.0	49.8	-3.7	-9.0
<b>Children under 5 years who are wasted (weight-for-height) (%)</b>	21.0	29.0	-38.1	19.8	32.3	-63.1	-10.2
<b>Children under 5 years who are underweight (weight-for-age)(%)</b>	35.7	47.8	-33.9	42.5	56.5	-32.9	-15.4

<b>Women whose Body Mass Index (BMI) is below normal (%)</b>	22.9	31.5	-37.6	35.5	42.9	-20.8	-26.6
<b>Men whose BMI is below normal (%)</b>	20.2	23.8	-17.8	34.2	38.6	-12.9	-38.3
<b>Children age 6-59 months who are anaemic (%)</b>	58.4	69.9	-19.7	69.4	70.3	-1.3	-0.6
<b>All women age 15-49 years who are anaemic (%)</b>	53.0	65.2	-23.0	55.3	69.5	-25.7	-6.2
<b>Men age 15-49 years who are anaemic (%)</b>	22.7	29.9	-31.7	24.2	36.5	-50.8	-18.1
Health Hazardous Habits							
<b>Women who use any kind of tobacco (%)</b>	6.8	5.8	14.7	10.8	11.6	-7.4	-50.0
<b>Men who use any kind of tobacco (%)</b>	44.5	48.6	-9.2	57.0	61.7	-8.2	-21.2
<b>Women who consume alcohol (%)</b>	1.2	4.1	-241.7	2.2	9.9	-350.0	-58.6
<b>Men who consume alcohol (%)</b>	29.2	39.3	-34.6	31.9	38.9	-21.9	1.0



## Appendix 2: Rural Urban Gap in Development in Jharkhand

Indicators	2015-16		
	Urban	Rural	Dev, deficit
Educational Development			
<b>Female age 6 years and above who ever attended school (%)</b>	77.1	55.7	27.76
<b>Women who are literate (%)</b>	79	51.5	34.81
<b>Men who are literate (%)</b>	88.3	75.9	14.04
<b>Women with 10 or more years of schooling (%)</b>	51.1	20.2	60.47
Gender Development			
<b>Sex ratio of the total population</b>	967	1,014	-4.86
<b>Sex ratio at birth for children born in the last 5 years</b>	893	926	-3.70
<b>Ever-married women who have never experienced spousal violence (%)</b>	19.7	38.8	-96.95
<b>Currently married women who usually participate in household decisions (%)</b>	86.2	86.7	-0.58
<b>Women owning a house and/or land (alone or jointly with others) (%)</b>	50	49.5	1.00
<b>Women having a bank or savings account that they themselves use (%)</b>	55.8	40.9	26.70
Amenities and Infrastructural Development			
<b>Households with electricity (%)</b>	96.7	74.4	23.06
<b>Households with an improved drinking-water source (%)</b>	88.6	74	16.48
<b>Households using improved sanitation facility (%)</b>	59	12.4	78.98
<b>Households using clean fuel for cooking (%)</b>	55.4	6.3	88.63
<b>Households using iodized salt (%)</b>	98.7	97.2	1.52
Development in indicators of Health and physical well being			
Health indicators			
<b>Couples using any modern method of birth control (%)</b>	42.5	35.8	15.76
<b>Mothers who had full ANC (%)</b>	17.9	5.5	69.27
<b>Mothers who received postnatal care</b>	58.3	40.9	29.85

<b>Institutional births (%)</b>	81.6	57.3	29.78
<b>Children age 12-23 months fully immunized</b>	67	60.7	9.40
<b>Children under age 3 years breastfed within one hour of birth (%)</b>	30.4	33.8	-11.18
Indicators	<b>2015-16</b>		
	<b>India</b>	<b>Jharkhand</b>	<b>Dev, deficit</b>
<b>Children under age 6 months exclusively breastfed (%)</b>	63.1	65.2	-3.33
<b>Total children age 6-23 months receiving an adequate diet (%)</b>	9.6	6.7	30.21
<b>Total fertility rate (children per woman)</b>	1.8	2.8	-55.56
Coverage of Health promoting schemes and facilities			
<b>Households with any member covered by a health scheme or health insurance (%)</b>	13.7	13.2	3.65
<b>Mothers who received financial assistance under JSY (%)</b>	25.2	47.4	-88.10
Indicators of ill-being			
<b>Women age 20-24 years married before age 18 years (%)</b>	21.1	44.3	-109.95
<b>Teenage pregnancy</b>	6.6	13.9	-110.61
<b>Infant mortality rate (IMR)</b>	34	46	-35.29
<b>Under-5mortality rate (U5MR)</b>	38	58	-52.63
<b>Children under 5 years who are stunted (height-for-age) (%)</b>	33.7	48	-42.43
<b>Children under 5 years who are wasted (weight-for-height) (%)</b>	26.8	29.5	-10.07
<b>Children under 5 years who are underweight (weight-for-age)(%)</b>	39.3	49.8	-26.72
<b>Women whose Body Mass Index (BMI) is below normal (%)</b>	21.6	35.4	-63.89
<b>Men whose Body Mass Index (BMI) is below normal (%)</b>	19.4	25.6	-31.96
<b>Children age 6-59 months who are anaemic (%)</b>	63.2	71.5	-13.13
<b>All women age 15-49 years who are anaemic (%)</b>	59.6	67.3	-12.92
<b>Men age 15-49 years who are anaemic (%)</b>	22.5	33	-46.67
Health Hazardous Habits			
<b>Women who use any kind of tobacco (%)</b>	3.3	6.7	-103.03
<b>Men who use any kind of tobacco (%)</b>	44.5	50.3	-13.03
<b>Women who consume alcohol (%)</b>	0.6	5.5	-816.67
<b>Men who consume alcohol (%)</b>	33.2	42	-26.51

## Appendix 3: Inter Block Disparity in the Levels of Development in Jharkhand

Districts	Block_Name	Level of Development	Districts	Block_Name	Level of Development
<b>BOKARO</b>	Jaridih	<b>HIGH</b>	KODARMA	Kodarma	<b>HIGH</b>
<b>BOKARO</b>	Chandrapura	<b>HIGH</b>	KODARMA	Jainagar	<b>MODERATE</b>
<b>BOKARO</b>	Chas	<b>MODERATE</b>	KODARMA	Chandwara	<b>MODERATE</b>
<b>BOKARO</b>	Peterwar	<b>MODERATE</b>	KODARMA	Satgawan	<b>MODERATE</b>
<b>BOKARO</b>	Nawadih	<b>MODERATE</b>	KODARMA	Domchanch	<b>MODERATE</b>
<b>BOKARO</b>	Bermo	<b>LESS</b>	KODARMA	Markacho	<b>LESS</b>
<b>BOKARO</b>	Gumia	<b>LESS</b>			
<b>BOKARO</b>	Kasmar	<b>LESS</b>	LATEHAR	Balumath	<b>MODERATE</b>
<b>BOKARO</b>	Chandankiyari	<b>LESS</b>	LATEHAR	Mahuadanr	<b>MODERATE</b>
			LATEHAR	Latehar	<b>LESS</b>
<b>CHATRA</b>	Pathalgora	<b>MODERATE</b>	LATEHAR	Chandwa	<b>LESS</b>
<b>CHATRA</b>	Itkhori	<b>MODERATE</b>	LATEHAR	Barwadih	<b>LESS</b>
<b>CHATRA</b>	Shaligram Ram Narayanpur(Hunterganj)	<b>MODERATE</b>	LATEHAR	Bariyatu	<b>LESS</b>
<b>CHATRA</b>	Chatra	<b>MODERATE</b>	LATEHAR	Manika	<b>LESS</b>
<b>CHATRA</b>	Tandwa	<b>MODERATE</b>	LATEHAR	Herhanj	<b>LESS</b>
<b>CHATRA</b>	Pratappur	<b>MODERATE</b>	LATEHAR	Garu	<b>LEAST</b>
<b>CHATRA</b>	Simaria	<b>MODERATE</b>			
<b>CHATRA</b>	Gidhaur	<b>MODERATE</b>	LOHARDAG A	Lohardaga	<b>MODERATE</b>
<b>CHATRA</b>	Kanha Chatti	<b>LESS</b>	LOHARDAG A	Kuru	<b>MODERATE</b>
<b>CHATRA</b>	Mayur Hand	<b>LESS</b>	LOHARDAG A	Kairo	<b>LESS</b>
<b>CHATRA</b>	Lawalaung	<b>LESS</b>	LOHARDAG A	Bhandra	<b>LESS</b>
<b>CHATRA</b>	Kunda	<b>LEAST</b>	LOHARDAG A	Senha	<b>LESS</b>
			LOHARDAG A	Kisko	<b>LESS</b>
<b>DEOGHAR</b>	Deoghar	<b>HIGH</b>	LOHARDAG A	Peshrar	<b>LEAST</b>
<b>DEOGHAR</b>	Madhupur	<b>MODERATE</b>			
<b>DEOGHAR</b>	Sarath	<b>MODERATE</b>	PAKUR	Pakur	<b>LESS</b>
<b>DEOGHAR</b>	Karon	<b>MODERATE</b>	PAKUR	Maheshpur	<b>LESS</b>
<b>DEOGHAR</b>	Palojori	<b>MODERATE</b>	PAKUR	Hiranpur	<b>LESS</b>
<b>DEOGHAR</b>	Sarwan	<b>MODERATE</b>	PAKUR	Pakuria	<b>LESS</b>
<b>DEOGHAR</b>	Mohanpur	<b>LESS</b>	PAKUR	Amrapara	<b>LEAST</b>
<b>DEOGHAR</b>	Margo Munda	<b>LESS</b>	PAKUR	Litipara	<b>LEAST</b>
<b>DEOGHAR</b>	Devipur	<b>LESS</b>			
<b>DEOGHAR</b>	Sona Rai Tharhi	<b>LESS</b>	PALAMU	Haldernag	<b>HIGH</b>
			PALAMU	Mohammad Ganj	<b>HIGH</b>
<b>DHANBAD</b>	Dhanbad-Cum- Kenduadih-Cum-Jagata	<b>HIGH</b>	PALAMU	Hussainabad	<b>HIGH</b>

<b>DHANBAD</b>	Baghmara-Cum-Katras	<b>HIGH</b>	PALAMU	Medininagar(Daltonganj)	<b>HIGH</b>
<b>DHANBAD</b>	Gobindpur	<b>HIGH</b>	PALAMU	Hariharganj	<b>HIGH</b>
<b>DHANBAD</b>	Baliapur	<b>HIGH</b>	PALAMU	Pipra	<b>HIGH</b>
<b>DHANBAD</b>	Nirsa-Cum-Chirkunda	<b>MODERATE</b>	PALAMU	Padwa	<b>HIGH</b>
<b>DHANBAD</b>	Topchanchi	<b>MODERATE</b>	PALAMU	Untari Road	<b>HIGH</b>
<b>DHANBAD</b>	Tundi	<b>LESS</b>	PALAMU	Patan	<b>MODERATE</b>
<b>DHANBAD</b>	Purbi Tundi	<b>LESS</b>	PALAMU	Pandu	<b>MODERATE</b>
			PALAMU	Bishrampur	<b>MODERATE</b>
<b>DUMKA</b>	Dumka	<b>HIGH</b>	PALAMU	Satbarwa	<b>MODERATE</b>
<b>DUMKA</b>	Ramgarh	<b>MODERATE</b>	PALAMU	Panki	<b>MODERATE</b>
<b>DUMKA</b>	Saraiyahat	<b>LESS</b>	PALAMU	Nawa Bazar	<b>MODERATE</b>
<b>DUMKA</b>	Ranishwar	<b>LESS</b>	PALAMU	Nilambar-Pitambarpur(Lesliganj)	<b>MODERATE</b>
<b>DUMKA</b>	Jarmundi	<b>LESS</b>	PALAMU	Chhatarpur	<b>LESS</b>
<b>DUMKA</b>	Masalia	<b>LESS</b>	PALAMU	Chainpur	<b>LESS</b>
<b>DUMKA</b>	Jama	<b>LESS</b>	PALAMU	Tarhasi	<b>LESS</b>
<b>DUMKA</b>	Shikaripara	<b>LESS</b>	PALAMU	Nawadiha Bazar/Nawadiha*	<b>LESS</b>
<b>DUMKA</b>	Gopikandar	<b>LEAST</b>	PALAMU	Manatu	<b>LESS</b>
<b>DUMKA</b>	Kathikund	<b>LEAST</b>			
			PASHCHIMI SINGHBHUM	Chaibasa	<b>MODERATE</b>
<b>GARHWA</b>	Kandi	<b>HIGH</b>	PASHCHIMI SINGHBHUM	Jagannathpur	<b>LESS</b>
<b>GARHWA</b>	Majhiaon	<b>HIGH</b>	PASHCHIMI SINGHBHUM	Manoharpur	<b>LESS</b>
<b>GARHWA</b>	Nagaruntari	<b>HIGH</b>	PASHCHIMI SINGHBHUM	Chakradharpur	<b>LESS</b>
<b>GARHWA</b>	Garhwa	<b>MODERATE</b>	PASHCHIMI SINGHBHUM	Noamundi	<b>LEAST</b>
<b>GARHWA</b>	Ketar	<b>MODERATE</b>	PASHCHIMI SINGHBHUM	Jhinkpani	<b>LEAST</b>
<b>GARHWA</b>	Bhawnathpur	<b>MODERATE</b>	PASHCHIMI SINGHBHUM	Majhgaon	<b>LEAST</b>
<b>GARHWA</b>	Bishunpura	<b>MODERATE</b>	PASHCHIMI SINGHBHUM	khuntpani	<b>LEAST</b>
<b>GARHWA</b>	Kharaundhi	<b>MODERATE</b>	PASHCHIMI SINGHBHUM	Sonua	<b>LEAST</b>
<b>GARHWA</b>	Danda	<b>LESS</b>	PASHCHIMI SINGHBHUM	Tantnagar	<b>LEAST</b>
<b>GARHWA</b>	Ranka	<b>LESS</b>	PASHCHIMI SINGHBHUM	Kumardungi	<b>LEAST</b>

<b>GARHWA</b>	Ramna	<b>LESS</b>	PASHCHIMI SINGHBHUM	Bandgaon	<b>LEAST</b>
<b>GARHWA</b>	Bhandaria	<b>LESS</b>	PASHCHIMI SINGHBHUM	Hat Gamharia	<b>LEAST</b>
<b>GARHWA</b>	Meral (Pipra Kalan)	<b>LESS</b>	PASHCHIMI SINGHBHUM	Anandpur	<b>LEAST</b>
<b>GARHWA</b>	Chinia	<b>LESS</b>	PASHCHIMI SINGHBHUM	Manjhari	<b>LEAST</b>
<b>GARHWA</b>	Sagma	<b>LESS</b>	PASHCHIMI SINGHBHUM	Goilkera	<b>LEAST</b>
<b>GARHWA</b>	Bardiha	<b>LESS</b>	PASHCHIMI SINGHBHUM	Tonto	<b>LEAST</b>
<b>GARHWA</b>	Dandai	<b>LESS</b>	PASHCHIMI SINGHBHUM	Gudri	<b>LEAST</b>
<b>GARHWA</b>	Dhurki	<b>LEAST</b>			
<b>GARHWA</b>	Ramkanda	<b>LEAST</b>	PURBI SINGHBHUM	Golmuri-Cum-Jugsalai	<b>HIGH</b>
<b>GARHWA</b>			PURBI SINGHBHUM	Ghatshila	<b>HIGH</b>
<b>GIRIDIH</b>	Giridih	<b>HIGH</b>	PURBI SINGHBHUM	Musabani	<b>HIGH</b>
<b>GIRIDIH</b>	Gawan	<b>MODERATE</b>	PURBI SINGHBHUM	Baharagora	<b>MODERATE</b>
<b>GIRIDIH</b>	Dumri	<b>MODERATE</b>	PURBI SINGHBHUM	Dhalbhumgarh	<b>MODERATE</b>
<b>GIRIDIH</b>	Bagodar	<b>MODERATE</b>	PURBI SINGHBHUM	Chakulia	<b>MODERATE</b>
<b>GIRIDIH</b>	Bengabad	<b>MODERATE</b>	PURBI SINGHBHUM	Boram	<b>LESS</b>
<b>GIRIDIH</b>	Jamua	<b>MODERATE</b>	PURBI SINGHBHUM	Potka	<b>LESS</b>
<b>GIRIDIH</b>	Dhanwar	<b>LESS</b>	PURBI SINGHBHUM	Patamda	<b>LESS</b>
<b>GIRIDIH</b>	Gande	<b>LESS</b>	PURBI SINGHBHUM	Dumaria	<b>LESS</b>
<b>GIRIDIH</b>	Deori	<b>LESS</b>	PURBI SINGHBHUM	Gurbandha	<b>LESS</b>
<b>GIRIDIH</b>	Birni	<b>LESS</b>			
<b>GIRIDIH</b>	Sariya	<b>LESS</b>	RAMGARH	Chitarpur	<b>HIGH</b>
<b>GIRIDIH</b>	Tisri	<b>LESS</b>	RAMGARH	Mandu	<b>HIGH</b>

<b>GIRIDIH</b>	Pirtanr	<b>LESS</b>	RAMGARH	Patratu	<b>HIGH</b>
			RAMGARH	Gola	<b>MODERATE</b>
<b>GODDA</b>	Meherma	<b>MODERATE</b>	RAMGARH	Dulmi	<b>MODERATE</b>
<b>GODDA</b>	Thakurgangti	<b>MODERATE</b>	RAMGARH	Ramgarh	<b>MODERATE</b>
<b>GODDA</b>	Godda	<b>MODERATE</b>			
<b>GODDA</b>	Mahagama	<b>MODERATE</b>	RANCHI	Kanke	<b>HIGH</b>
<b>GODDA</b>	Pathargama	<b>MODERATE</b>	RANCHI	Khelari	<b>HIGH</b>
<b>GODDA</b>	Bashant Rai	<b>MODERATE</b>	RANCHI	Itki	<b>HIGH</b>
<b>GODDA</b>	Poreyahat	<b>LESS</b>	RANCHI	Nagri	<b>HIGH</b>
<b>GODDA</b>	Boarigor	<b>LEAST</b>	RANCHI	Namkum	<b>MODERATE</b>
<b>GODDA</b>	Sundarpahari	<b>LEAST</b>	RANCHI	Bero	<b>MODERATE</b>
			RANCHI	Chanho	<b>MODERATE</b>
<b>GUMLA</b>	Gumla	<b>MODERATE</b>	RANCHI	Ratu	<b>MODERATE</b>
<b>GUMLA</b>	Chainpur	<b>LESS</b>	RANCHI	Ormanjhi	<b>MODERATE</b>
<b>GUMLA</b>	Sisai	<b>LESS</b>	RANCHI	Mandar	<b>MODERATE</b>
<b>GUMLA</b>	Vemo	<b>LESS</b>	RANCHI	Silli	<b>MODERATE</b>
<b>GUMLA</b>	Dumri	<b>LESS</b>	RANCHI	Angara	<b>MODERATE</b>
<b>GUMLA</b>	Bishunpur	<b>LESS</b>	RANCHI	Burmu	<b>LESS</b>
<b>GUMLA</b>	Albert Ekka(Jari)	<b>LESS</b>	RANCHI	Bundu	<b>LESS</b>
<b>GUMLA</b>	Basia	<b>LESS</b>	RANCHI	Sonahatu	<b>LESS</b>
<b>GUMLA</b>	Kamdara	<b>LESS</b>	RANCHI	Rahe	<b>LESS</b>
<b>GUMLA</b>	Raidih	<b>LESS</b>	RANCHI	Tamar I	<b>LESS</b>
<b>GUMLA</b>	Ghaghra	<b>LEAST</b>	RANCHI	Lapung	<b>LEAST</b>
<b>GUMLA</b>	Palkot	<b>LEAST</b>			
			SAHIBGANJ	Sahibganj	<b>HIGH</b>
<b>HAZARIBAG</b>	Hazaribagh	<b>HIGH</b>	SAHIBGANJ	Rajmahal	<b>HIGH</b>
<b>HAZARIBAG</b>	Katamdag	<b>HIGH</b>	SAHIBGANJ	Barharwa	<b>MODERATE</b>
<b>HAZARIBAG</b>	Daru	<b>HIGH</b>	SAHIBGANJ	Udhwa	<b>MODERATE</b>
<b>HAZARIBAG</b>	Barkagaon	<b>MODERATE</b>	SAHIBGANJ	Mandro	<b>MODERATE</b>
<b>HAZARIBAG</b>	Katkamsandi	<b>MODERATE</b>	SAHIBGANJ	Talijhari	<b>LESS</b>
<b>HAZARIBAG</b>	Dadi	<b>MODERATE</b>	SAHIBGANJ	Pathna	<b>LESS</b>
<b>HAZARIBAG</b>	Chauparan	<b>MODERATE</b>	SAHIBGANJ	Borio	<b>LEAST</b>
<b>HAZARIBAG</b>	Ichak	<b>MODERATE</b>	SAHIBGANJ	Barhait	<b>LEAST</b>
<b>HAZARIBAG</b>	Barhi	<b>MODERATE</b>			
<b>HAZARIBAG</b>	Churchu	<b>MODERATE</b>	SARAIKELA	Adityapur(Ga mharria)	<b>HIGH</b>
<b>HAZARIBAG</b>	Bishungarh	<b>MODERATE</b>	SARAIKELA	Chandil	<b>MODERATE</b>
<b>HAZARIBAG</b>	Padma	<b>MODERATE</b>	SARAIKELA	Saraikele	<b>LESS</b>
<b>HAZARIBAG</b>	Keredari	<b>MODERATE</b>	SARAIKELA	Kharsawan	<b>LESS</b>
<b>HAZARIBAG</b>	Tati Jhariya	<b>MODERATE</b>	SARAIKELA	Ichagarh	<b>LESS</b>
<b>HAZARIBAG</b>	Chalkusa	<b>MODERATE</b>	SARAIKELA	Nimdih	<b>LESS</b>
<b>HAZARIBAG</b>	Barkatha	<b>LESS</b>	SARAIKELA	Kukru	<b>LESS</b>
			SARAIKELA	Gobindpur(R ajnagar)	<b>LEAST</b>
<b>JAMTARA</b>	Jamtara	<b>MODERATE</b>	SARAIKELA	Kuchai	<b>LEAST</b>
<b>JAMTARA</b>	Nala	<b>MODERATE</b>			
<b>JAMTARA</b>	Kundhit	<b>LESS</b>	SIMDEGA	Simdega	<b>MODERATE</b>
<b>JAMTARA</b>	Karma Tanr Vidyasagar	<b>LESS</b>	SIMDEGA	Kolebira	<b>LESS</b>
<b>JAMTARA</b>	Fatehpur	<b>LESS</b>	SIMDEGA	Kurdeg	<b>LESS</b>
<b>JAMTARA</b>	Naryanpur	<b>LESS</b>	SIMDEGA	Pakar Tanr	<b>LESS</b>
			SIMDEGA	Kersai	<b>LESS</b>
<b>KHUNTI</b>	Torpa	<b>LESS</b>	SIMDEGA	Bolba	<b>LESS</b>

<b>KHUNTI</b>	Murhu	<b>LESS</b>	SIMDEGA	Thethaitangar	<b>LESS</b>
<b>KHUNTI</b>	Khunti	<b>LESS</b>	SIMDEGA	Jaldega	<b>LESS</b>
<b>KHUNTI</b>	Karra	<b>LESS</b>	SIMDEGA	Bansjor	<b>LESS</b>
<b>KHUNTI</b>	Rania	<b>LESS</b>	SIMDEGA	Bano	<b>LEAST</b>
<b>KHUNTI</b>	Erki(Tamar II)	<b>LEAST</b>			

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