सत्यमेव जयते

Government of India

Ministry of Minority Affairs

Committee on the Establishment of Educational Institutions for Educationally Backward Minorities

Report
May, 2017

Maulana Azad Education Foundation
(Ministry of Minority Affairs, Government of India)

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Maulana Azad Education Foundation

Maulana Azad Campus, Chelmsford Road, New Delhi - 110055

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Foreword

"You have to dream before your dreams come true"

— Maulana Abul Kalam Azad

The General Body of the Maulana Azad Education Foundation (MAEF) in its 52nd meeting held on 29.12.2016 constituted a Committee to go into the modalities for establishment of institutions in different parts of the country with a view to facilitate educational development of the minorities. The formal order, after approval of the Government, was issued by the Secretary, MAEF on 10.01.2017.

The MAEF functions under the Ministry of Minority Affairs, Government of India and is registered as a society under the Societies Registration Act, 1860. Its prime objectives are to formulate and implement educational schemes and plans for the benefit of the educationally backward minorities, to promote research and encourage other efforts designed to mould educational policies of the State that are advantageous to the educationally backward minorities and to work towards removal of their educational backwardness.

The Committee met eight times, on 12th January, 25th January, 16th February, 2nd March, 15th March, 29th March, 6th April and 8th May 2017. Apart from its own deliberations and discussions, the Committee also interacted with experts. It has also gone through the reports of various committees that have looked

at educational backwardness of minority communities. The ailments which we seek to mitigate are the low levels of education, low quality of education and low access to education that plague this community.

If we consider literacy rate, enrollment rates, mean years of schooling and differentials in higher education of all minorities, we find that the Muslims are the most disadvantaged. The literacy rate among Muslims in 2001 was 59.1% and in 2011 it was 68.53% against the national average of 64.8% and 72.98% respectively. The difference in enrollment rate between Muslims (74%) and the remaining population (83%) is also sharp.

While the mean years of schooling of Muslim children is only 83% of all children, the disparities are highest in the case of rural boys which is only 78 % that of all rural children closely followed by rural girls. Differential in higher education reveals the same grim picture. While only 7% of population aged 20 years and above are graduates or diploma holders, this proportion is less than 4% among Muslims.

This Committee recognized the fact that school education is most important for the deprived children of minority communities, and there is urgent need to ensure that these children have access to quality primary, secondary and higher secondary education. And hence our suggestion for setting up of 167 high quality Central Schools (class 1 to 12) in all rural areas of minority dominant and concentrated districts having > 2 lakh minority population and 20 % or more of total population, and 44 central schools in all of minority dominant and concentrated cities having

more than 2 lakh minority population and more than 20% of total population. We also recommend a Central School Organization under the MAEF to operationalize and administrate these schools.

The Committee also noted the fact that the majority of these minority children drop out or fail to clear the matriculation examination or have been unable to continue with further studies. These children thus needed to be appropriately brought back into the education system through the institution of community colleges to be administered by the MAEF.

This recommendation of ours, would need further technical advice from the appropriate bodies and we feel that Community Colleges should be started on an experimental basis in one minority concentrated city in each of the 25 identified states. We also recommend immediate setting up of community colleges on priority basis in those identified cities where infrastructure becomes readily available.

Our discussions regarding initiatives in higher education has led us to recommending the setting up of 5 National Institutes for (a) Science & Technology; (b) Health & Allied Sciences; (c) Architecture Planning & Design; (d) Climate Change & Disaster Management; and (e) Renewable Energy & Food Security under the MAEF with sufficient autonomy to each institute. We believe that these would develop into top class institutions, having, as per Jameel Salmi's definition a) higher concentration of talent of both faculty and students, b) abundant resources to offer rich learning environment and conduct advance research, and c) favorable

governance feature that encourage strategic vision, innovation and flexibility that enable institutions to take decisions and to manage resources without being encumbered by bureaucracy. We are also of the opinion that it would be advisable to set up the 5 Institutes under an Act of Parliament with the prime objective of promoting higher education amongst the minorities.

We feel that this three tier model of 211 Central Schools, 25 Community Colleges and 5 National Institutes would have a very positive and salutary effect in tackling educational backwardness of the minorities and getting their children into the mainstream where they become proud contributors to the development of our Nation.

In the end we feel the need to emphasize that these recommendations can be effectively implemented only if proper structures are put in place which have enough flexibility and limited bureaucratic oversight. The MAEF which is an autonomous organization, but also has the presence of Government is ideally suited to be the body responsible for the schools, colleges and institutes. It is equally important that Government (MoMA) provides for enough recurring grants each year (through the annual budget) after the establishment of these institutions so that they can thrive and deliver. Our experience has shown that it has been easy for Governments and Organizations to setup infrastructure one time, but what has killed the institution is the non-provisioning of yearly and timely adequate recurring grants for them.

I wish to thank all my Committee Members Prof. Syed Iqbal Hasnain, Lt. Gen. (Retd.) Zameeruddin Shah, Prof. Talat Ahmad, Shri Sirajuddin Qureshi, Shri Shahid Siddiqui, Shri Udayan Bose, Shri Firoz Bakht Ahmed, Shri Qamar Agha and Smt. Kulsoom Noor Saifullah, the Member Secretary Shri D. Madhukar Naik, special invitee Prof. S. N. Pathan, Research Associate Shri Saidalavi Kundupuzhakkal, Accounts Officer of MAEF Shri Syed Jamal Ali, Academic Contributors of Jamia Millia Islamia Prof. Sushant G. Ghosh, Prof. Shafeeque Ahmed Ansari, Prof. M. Ejaz Hussain, Prof. Saranjit Singh Bhasin, Prof. S.M. Akhtar, Ar. Mohammad Ziauddin, Prof. Atiqur Rahman, Prof. Haroon Sajjad, Dr. Lubna Siddiqui, Prof. Saeed Uddin Ahmad, Prof. Mohammad Mazhar Ali Khan and Prof. Mehtab Alam who have been very helpful and have given their valuable time, effort and input.

We wish to place on record our gratitude to Shri Mukhtar Abbas Naqvi, Minister of Minority Affairs, who has had the vision of forming this Committee to look into an issue that is vital and urgent for the Minority community. He has encouraged us and given us the freedom to function and give our recommendations.

Afzal Amanullah

Dated : 10th May, 2017

Acknowledgement

The preparation of this report was successful due to the effort of a number of academicians and organizations. The committee would like to express sincere gratitude to them for their valuable contribution. A number of institutions and organizations and individuals helped us by providing required information or permission for accessing data. The Kendriya Vidyalaya Sangathan, the Jawahar Navodaya Vidyalaya Samitee, the University Grants Commission, the Registrar General's Office of the Indian Census, the National Commission for Minorities, the National Commission for Minority Educational Institutions, the Jamia Millia Islamia, the National Council of Educational Research and Training, the National University of Educational Planning and Administration and the NCAER shared valuable data with us.

Most of the Committee's formal sittings were held at the India Islamic Cultural Centre (IICC), New Delhi and the Committee extends its thanks to the IICC.

We are grateful to Shri Mukhtar Abbas Naqvi, Minister of Minority Affairs for taking this initiative for the establishment of educational institutions for the educationally backward minorities. Thanks are also due to Prof. S.N. Pathan for participating in discussions and giving inputs in the committee meetings like a regular member.

Prof. Sushant G. Ghosh, Prof. Shafeeque Ahmed Ansari, Prof. M. Ejaz Hussain, Prof. Saranjit Singh Bhasin, Prof. S.M. Akhtar, Ar. Mohammad Ziauddin, Prof. Atiqur Rahman, Prof. Haroon Sajjad, Dr. Lubna Siddiqui, Prof. Saeed Uddin Ahmad, Prof. Mohammad Mazhar Ali Khan and Prof. Mehtab Alam - Faculty Members, Jamia Millia Islamia - have all provided valuable academic support for preparing National Institute's programme structure. Thanks are due to Prof. Ilyas Husain, Dean, Faculty of Education, Jamia Millia Islamia who made available the services of Saidalavi, Research Scholar for the entire duration of the Committee's tenure.

Preamble

Education or “Taálim”, is the single most important instrument for social and economic transformation. A well-educated community equipped with knowledge and skill is not only essential to support and advance economic growth but also essential for inclusive growth. The educated and skilled person is much better placed to derive benefit from employment opportunities. Education enables people to be conscious of the socio-political issues in a society and to find solutions to the problems. The ability to think and act arouses greater political consciousness in people. Education helps to increase functional ability of people especially those who are deprived from being in the mainstream. Education has come to be viewed not only in terms of filling basic intellectual gaps, but also as a way of strengthening peoples' critical abilities which enhance their capacity to diagnose their needs, assert their rights, and have greater control over the decision makings that affect their lives.

Education has to serve as an engine for development, especially for the minorities of the country. Obviously the development of a nation hinges on how much its minorities have been mobilized to contribute to the over-all growth. Despite government efforts towards the development of minorities, there still remains a visible gap particularly in the case of the Muslim community in India. As education is

a key factor for their development, attention should specifically be given to Minority communities in national and state educational schemes.

The educationally most disadvantaged community amongst the minorities in India are Muslims. They are lagging behind in literacy, enrollments and in successful completion of courses at primary, secondary and tertiary levels. Quality institutes such as Kendriya Vidyalayas, Jawahar Navodaya Vidyalayas etc are less accessible to minorities specially Muslim students. A large number of their youth are dropouts from schools and colleges. The majority of dropouts are seen in the States of Uttar Pradesh, Assam and West Bengal. Unfortunately, every year large numbers are added to the growing army of unemployed youth. School dropouts among Muslims in India are mostly due to "Low per capita income, low socio-economic status, children engaged in household activities, lack of awareness (ignorance) about the importance of education, large family size, problems of schools (and curriculum), social problems like insecurity of girls, etc."

Human resources are the basis for wealth creation of any region. Providing educational facilities in minority concentrated areas will help to increase their availability and quality and lead to better use of human resources of the country. The role of education is paramount in community development, impacting on

employment and income. Education increases an individual's capacity for production and provides opportunity to develop the personality and leadership quality. Education has a desirable controlling influence over improving the standard of living of any community or society. So, the assurance of quality and standard of education should be a fundamental pre-requisite of any educational scheme. Accessibility and universalization of education plays key roles in community development in developing nations such as India. Institutions in minority concentrated areas such as central schools and community colleges can be helpful for the accessibility of education to the minority students.

The Constitution of India, Article 30 (1) mandates that, Minorities have the right to establish and administer educational institutions of their own. Ministry of Minority Affairs, Government of India is committed to address the existing backwardness in education of minorities, especially the Muslims. The earlier reports also revealed that one fourth of Muslim children in the age group of 6-14 years have either never attended school or have dropped out. For children above the age of 17 years, the educational attainment of Muslims at matriculation is 17%, as against the national average of 26%. Only 50% of Muslims who complete middle school are likely to complete secondary education, compared to the national average of 62%. The Report has also drawn attention to the low levels of educational attainment

among Muslim women, Muslims in rural areas, as well as in technical and higher education. The Committee has also made a number of recommendations for improvement of the educational status of the Muslim community. Further, the Committee mentions that education is an area of great concern for the Muslim community. The popular perception that religious conservatism among Muslims is a major factor for not accessing education is incorrect. The recognition of their educational backwardness is quite acute among a large section of Indian Muslims and they wish to rectify it urgently.

The Ministry of Human Resource Development (MHRD) has taken several significant initiatives through schemes such as ' Scheme for Providing Quality Education in Madrasas' (SPQEM), 'Infrastructure Development of Minority Institutions' (IDMI) and 'Scheme for Madarsas and Maktabs' (SMM). MHRD has also taken action for strengthening of the 'National Council for Promotion of Urdu Language' (NCPUL) and establishment of the 'National Commission for Minority Educational Institutions' (NCMEI).

Among minorities Muslims have been identified as the biggest community and educationally the least advantaged group in the country. Therefore special focus on this particular community is necessary to pull them up to the national level and get

them accessibility to quality education. In this scenario the Ministry of Minority Affairs, Government of India constituted a Committee vide F.No. XIII/23/Misc./MAEF-2016/1, dated 10.01.2017(Annexure I) to look into the modalities for the establishment of Educational Institutions in different parts of the country for facilitating educational development of minorities.

The committee focuses on the following objectives:

1) To strengthen the school base of Minorities.

2) To provide skill development courses and avenues of completing graduation to the minority students.

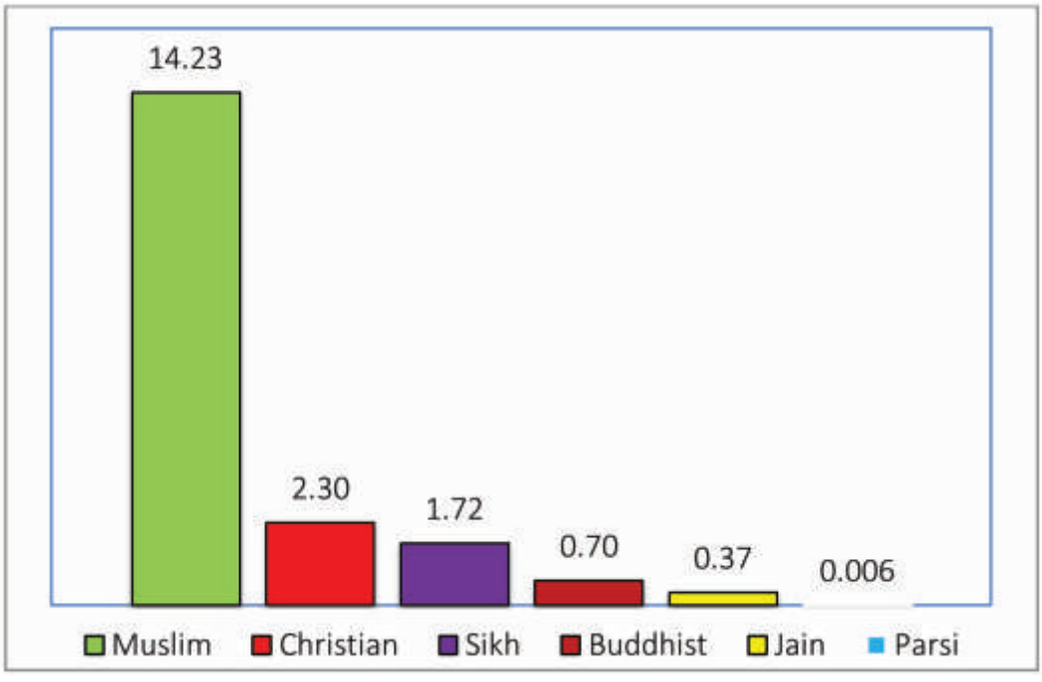
3) To create opportunities of higher education for the Minorities.

The Committee's recommendations are in line with these objectives.

Chapter - 1 : Educational Status of Minorities

Six religious communities i.e. Muslim, Christian, Sikh, Buddhist, Jain and Parsi are notified as Minorities in India by the Union Government. As per Census 2011, the total population of Minorities in the country is approximately 19.3 % out of a total population of 1210 million.

Figure 1.1 Population of Minorities in India
(% of total population Census 2011)



Among Minorities, the population divisions are: Muslim 14.23 %, Christian 2.30 %, Sikh 1.72 %, Buddhist 0.70 %, Jain 0.37 % and Parsi 0.006 %. Muslims are the largest minority community of India with a population 172.24 million.

It is to be noted that among all the minorities, Muslims are educationally, the most disadvantaged community in India. Besides economic reasons, low

accessibility to educational institutions is a major cause for the backwardness of the community.

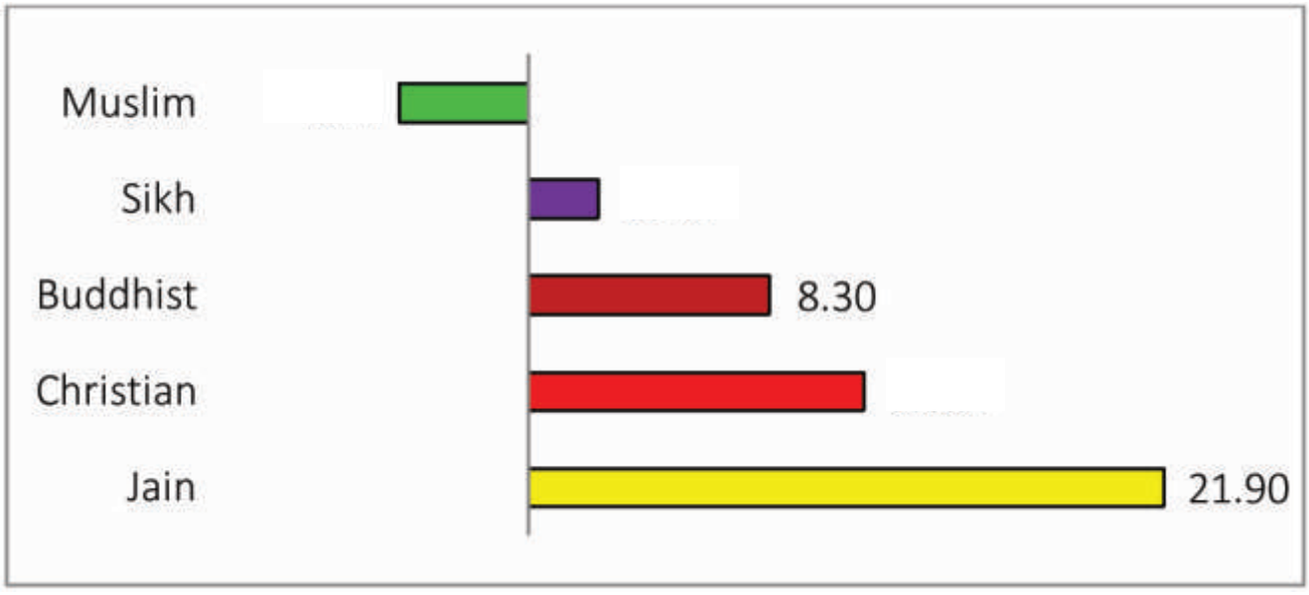
1.1 Literacy

Literacy is one of the standard tools to measure the development of a society or a community.

1.1.1 Literacy Rate of Minorities

As per Census 2011, literacy percentage rates of Minorities are: Jain 94.88, Christian 84.53, Buddhist 81.28, Sikh 75.39 and Muslim 68.53 against the national average of 72.98%.

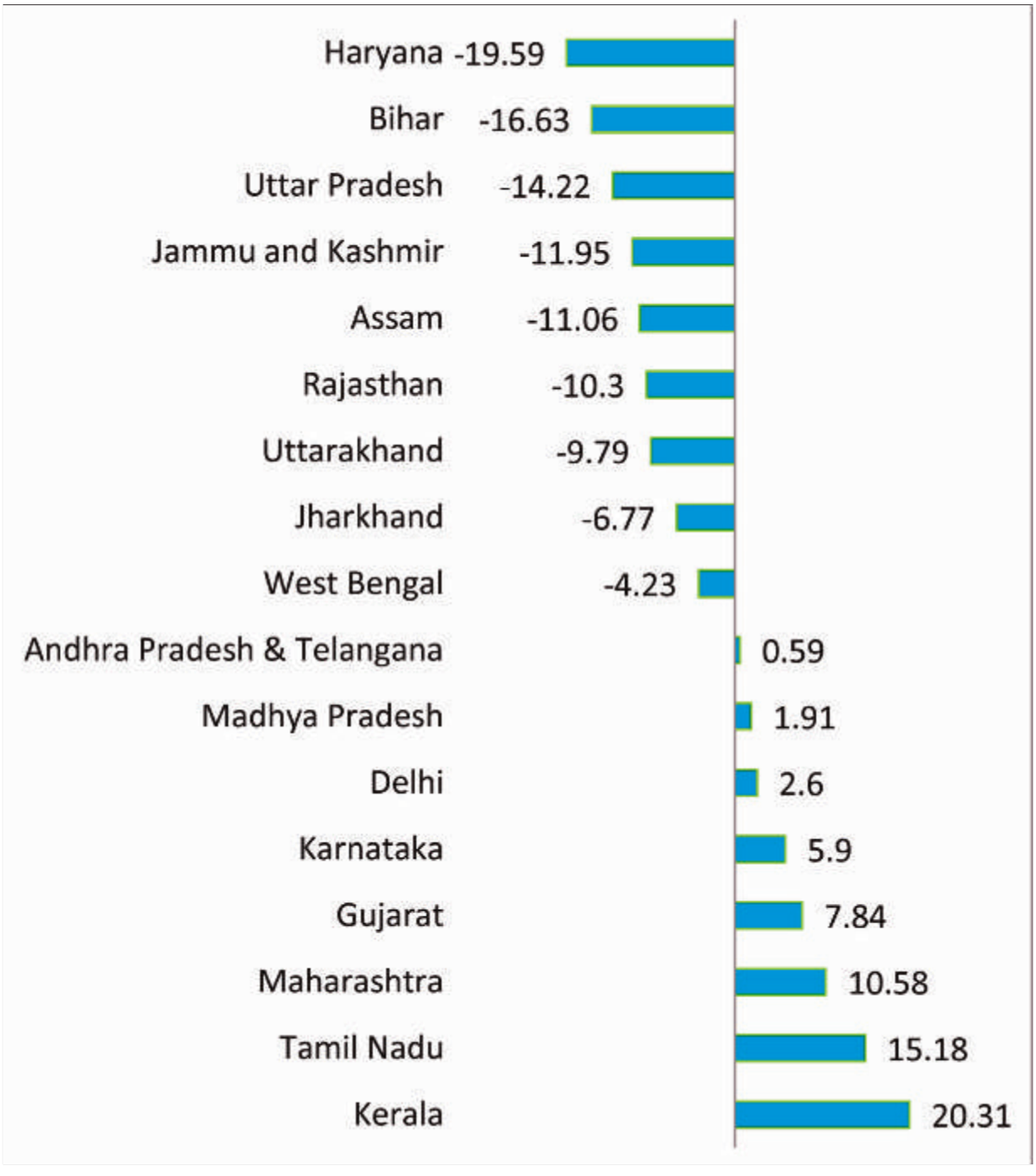
Figure 1.2 Minority Literacy Gap against National Average (Census 2011)



The figures show that among all minorities, it is the literacy rate of only the Muslims that is less than the national average. Muslims are the only minority community that has a literacy gap in minus points as compared to the National

Average. Muslim Literacy is less than the National Average in the States of Haryana, Bihar, Uttar Pradesh, Jammu & Kashmir, Assam, Rajasthan, Uttarakhand, Jharkhand and West Bengal.

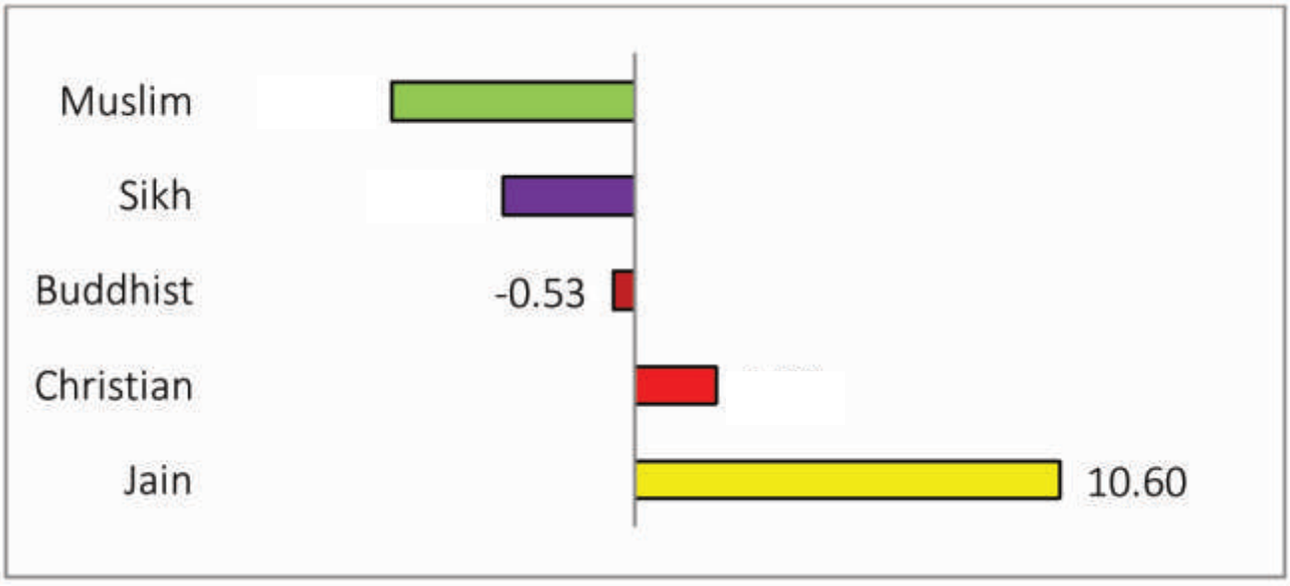
Figure 1.3 State wise Muslim Literacy Gap against National Average (Census 2011)



1.1.2 Minorities at Primary School Level Education

As per Census 2011, status of primary level education (class 1-5) of minorities (Age group 9-11) are: Muslims (26.70%), Christians (34.82%), Sikhs (29.49%), Buddhists (32.25%), and Jains (43.38%)l against the National Average of 32.78%. The gaps of primary level education among minorities against the national average are illustrated below.

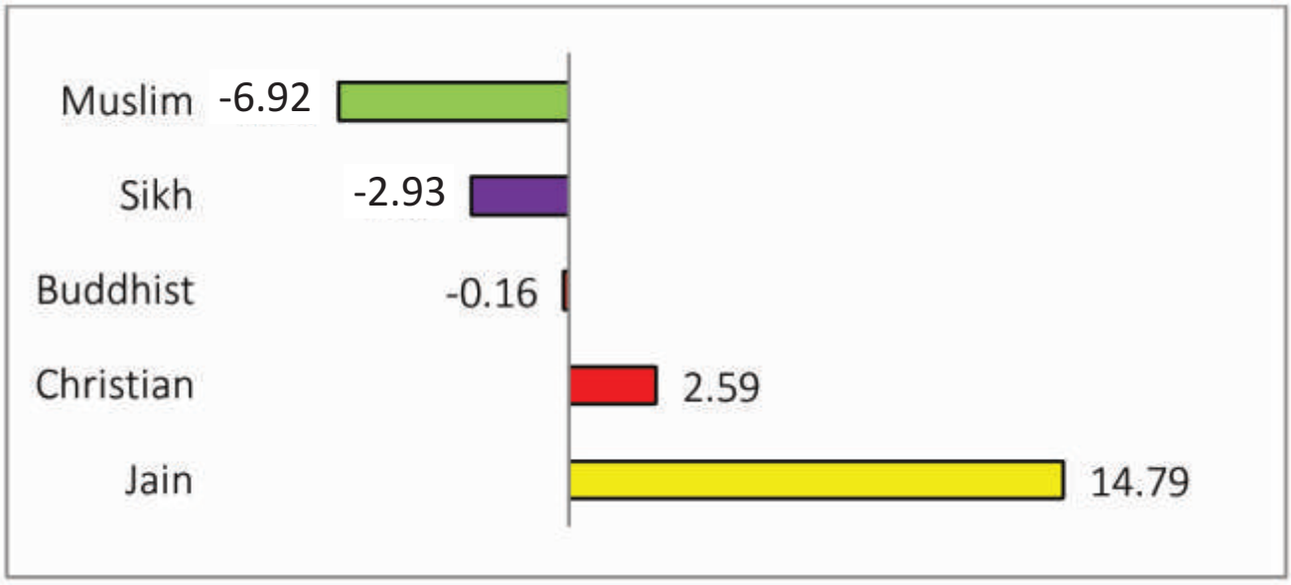
Figure 1.4 Gap at Primary School Level Ed



1.1.3 Minorities at Middle School Level Education

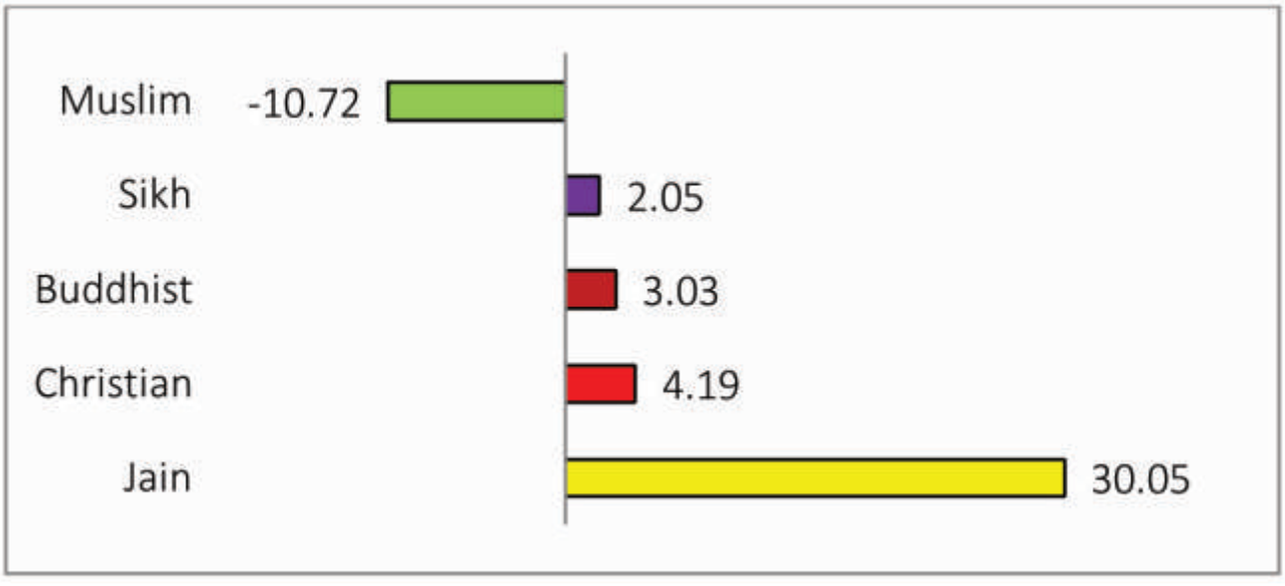
As per Census 2011, status of middle schoo level education (class 6-8) of minorities (Age group 12-14) are: Muslims (22.14%), Christians (31.65%), Sikhs (26.13%), Buddhists (28.90%), and Jains (43.85%) against the National Average of 29.06%. The gaps of primary level education among minorities against the national average are illustrated below.

Figure 1.5: Gap at Middle School Level Education among Minorities - Census 2011



1.1.4 Minorities at Secondary Level (Matric) Education

Figure 1.6: Gap at Secondary Level Education among Minorities - Census 2011



As per Census 2011, status of secondary level education (class 9-10) of minorities (Age group 15-17) are: Muslims (24.39%), Christians (39.30%), Sikhs

(37.16%), Buddhists (38.14%), and Jains (65.16%) against the National Average of 35.11%. The gaps of secondary level education among minorities against the national average are illustrated above.

1.1.5 Minorities at Higher Secondary (10+2) Level

As per Census 2011, status of higher secondary level education (class 11-12) of minorities (Age group 18-19) are: Muslims (19.37%), Christians (37.73%), Sikhs (33.10%), Buddhists (31.98%), and Jains (70.19%) against the National Average of 29.15%. The gaps of higher secondary level education among minorities against the national average are illustrated below.

Figure 1.7: Gap at Higher Secondary Level Education among Minorities - Census 2011

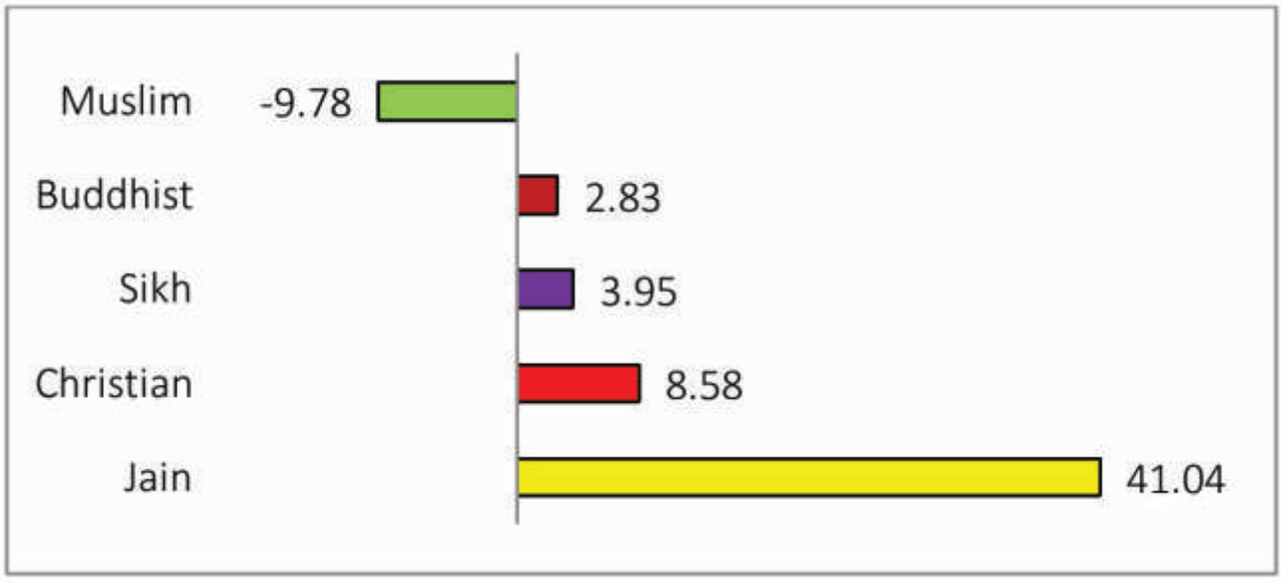
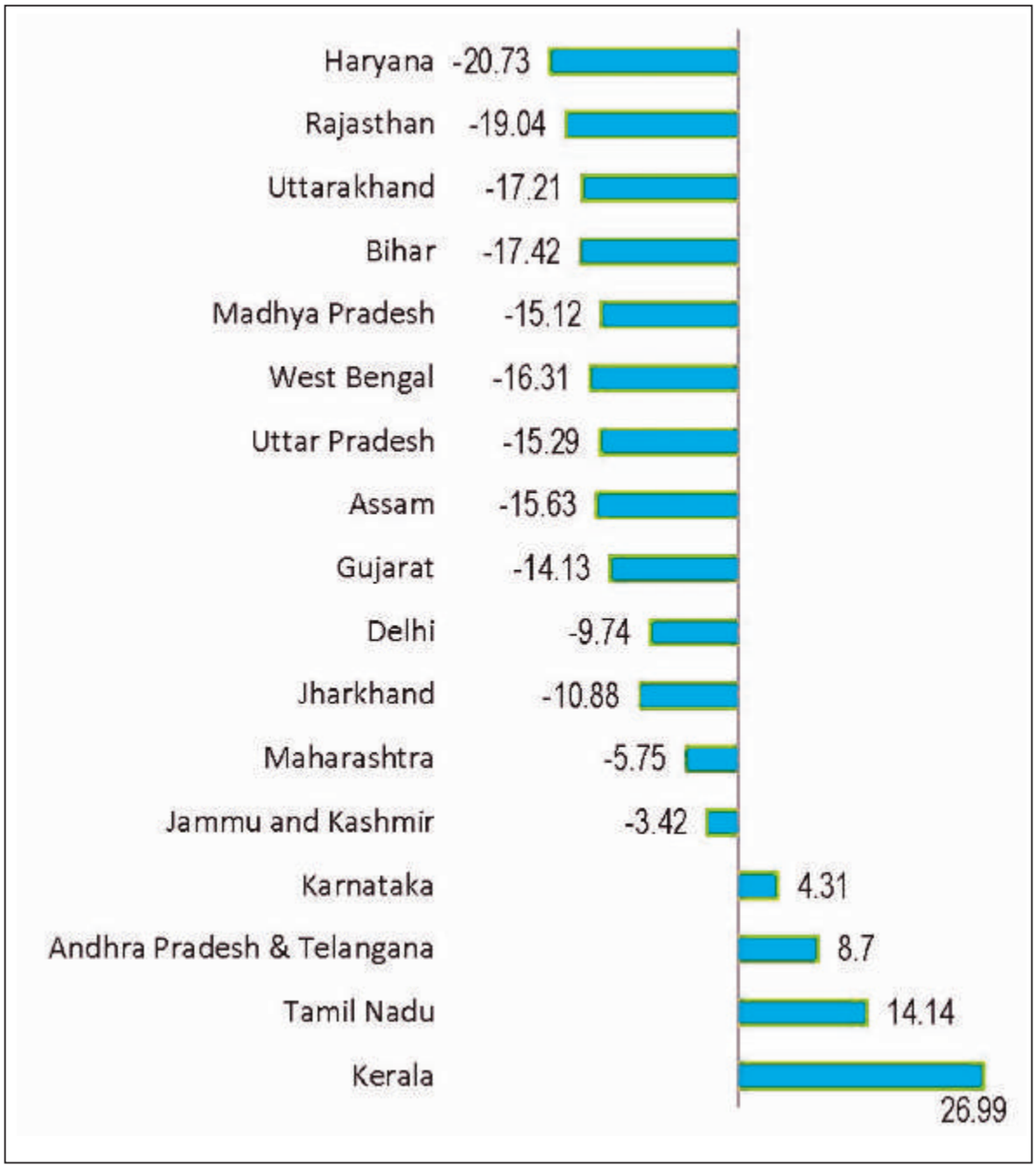


Figure 1.8 Higher Secondary Education Gaps of Muslims (Census 2011)



These figures show that if we look at the higher secondary level, Muslims are the only minority who are less than the national average and also that higher

secondary education status of Muslims are less than the National Average in the states of Haryana, Rajasthan, Uttarakhand, Bihar, Madhya Pradesh, West Bengal, Uttar Pradesh, Assam, Gujarat, Delhi, Jharkhand, Maharashtra and Jammu & Kashmir.

1.1.6 Minorities at Graduate Level

As per Census 2011, status of graduate level education status of minorities (Age group 20-24) are: Muslims (6.74%), Christians (16.26%), Sikhs (12.82%), Buddhists (10.70%), and Jains (43.45%) against the National Average of 11.81%. The gaps of graduate level education among minorities against the national average are illustrated below.

Figure 1.9 Gap at Graduate Level Education among Minorities - Census 2011

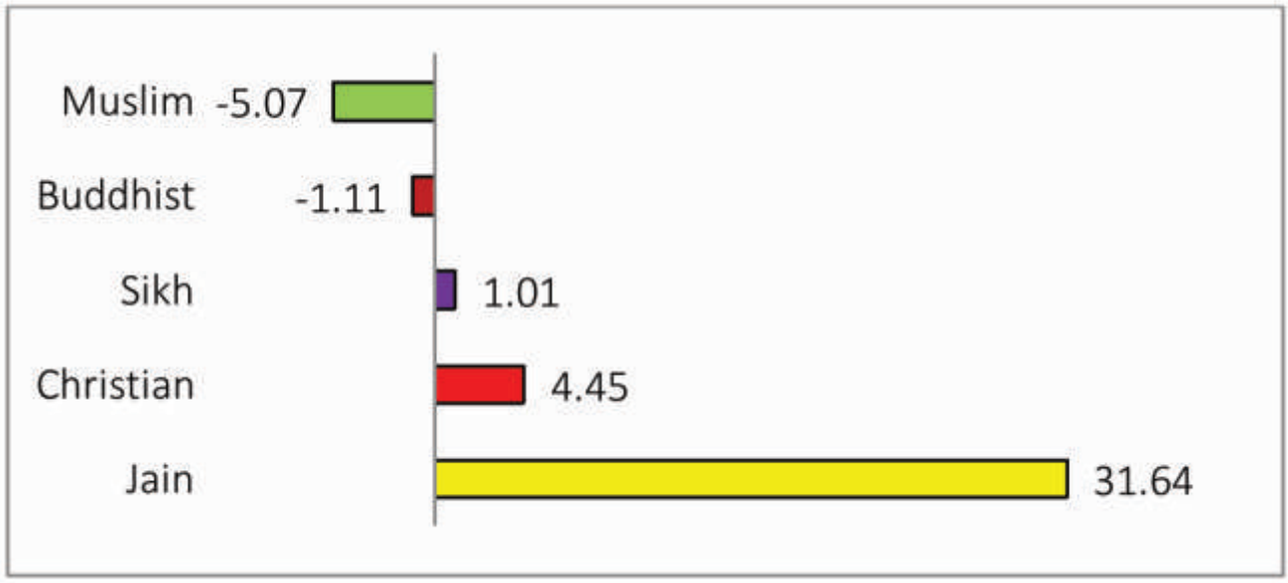
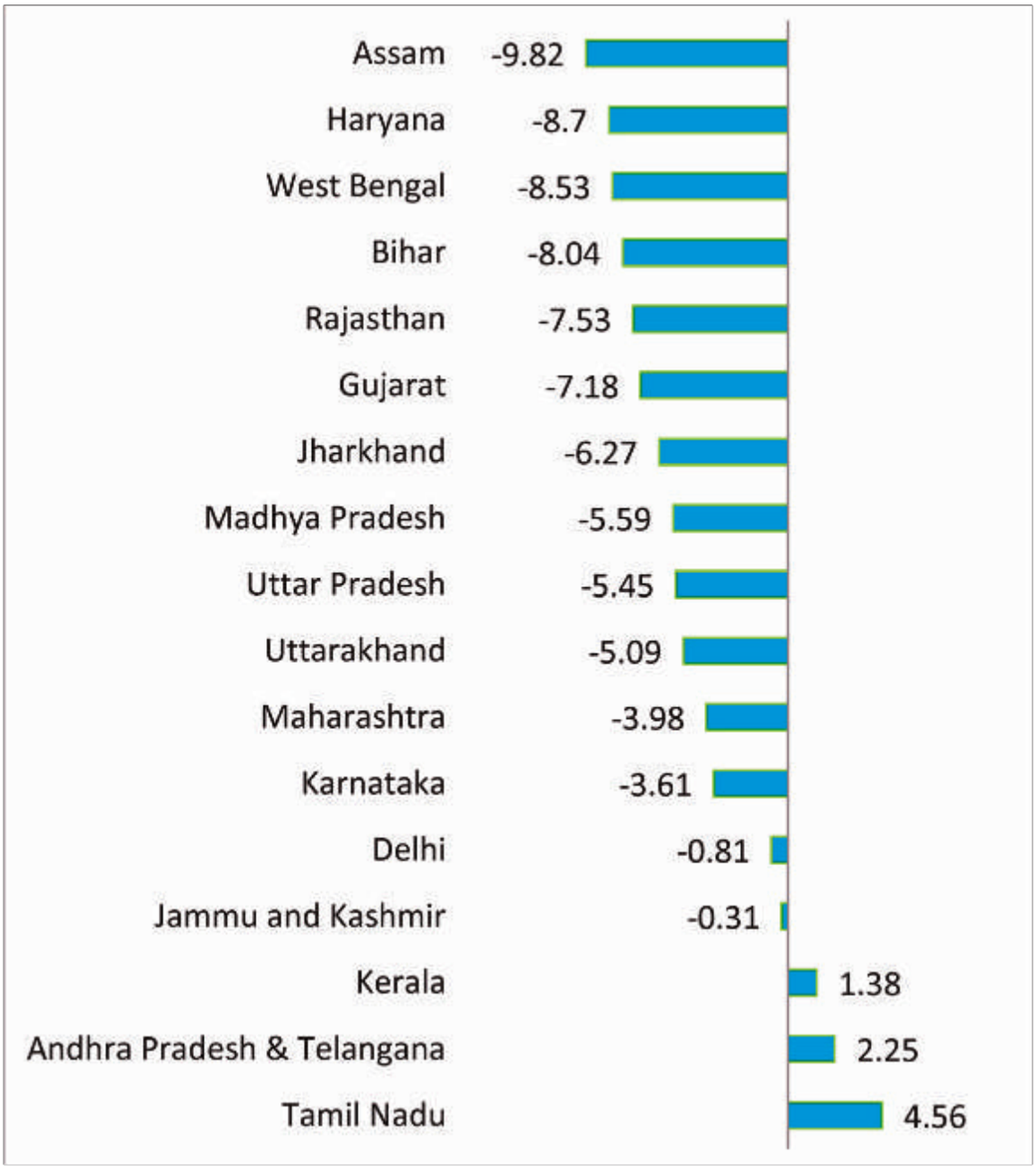


Figure 1.10 Gap of Graduates among Muslims (Census 2011)

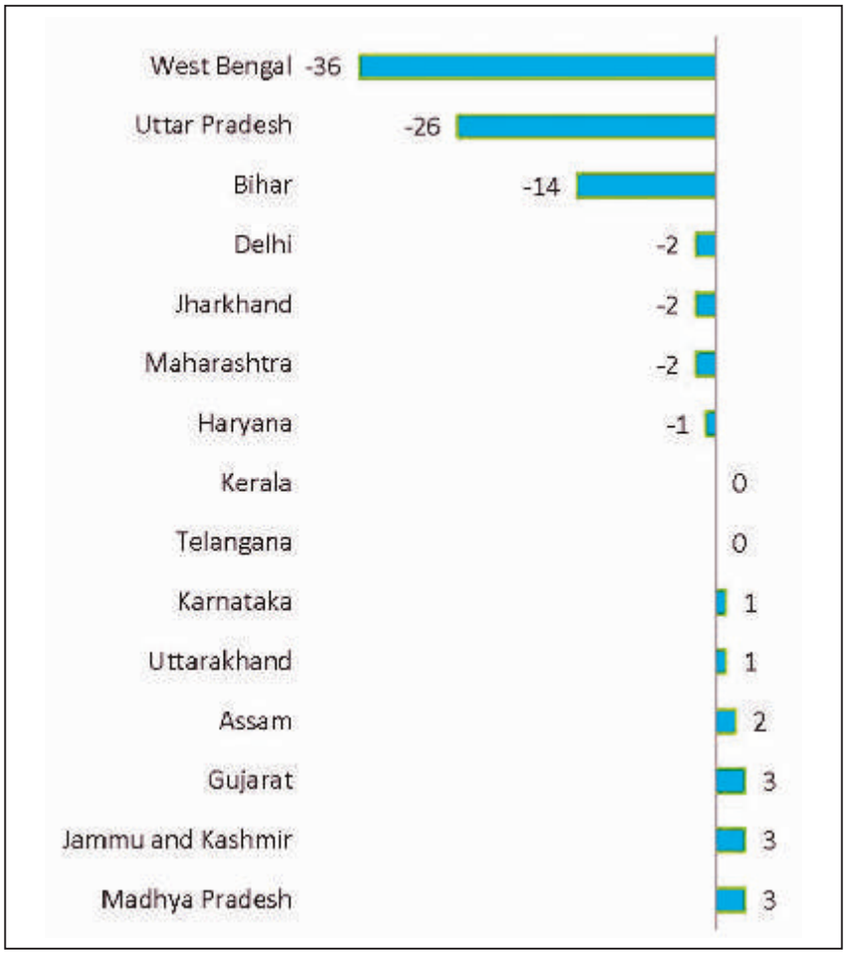


These figures show that if we look at graduate levels, Muslims are the only minority who are less than the national average, and also that graduate education status of Muslims are less than the National Average in the states of Haryana, Rajasthan, Uttarakhand, Bihar, Madhya Pradesh, West Bengal, Uttar Pradesh, Assam, Gujarat, Delhi, Jharkhand, Maharashtra, Karnataka and Jammu & Kashmir.

1.2 Accessibility

The proportionate share of Kendriya Vidyalayas (KV) in minority concentrated areas is significantly less as compared to other areas. The figure given below shows the state wise list of shortage of KVs in Muslim dominant and concentrated districts having >2 lakh Muslim population and >20% of total population as per 2011 Census.

Figure 1.11 Gap of Kendriya Vidyalayas at Muslim dominant and concentrated districts - State wise (KVS, 2015)



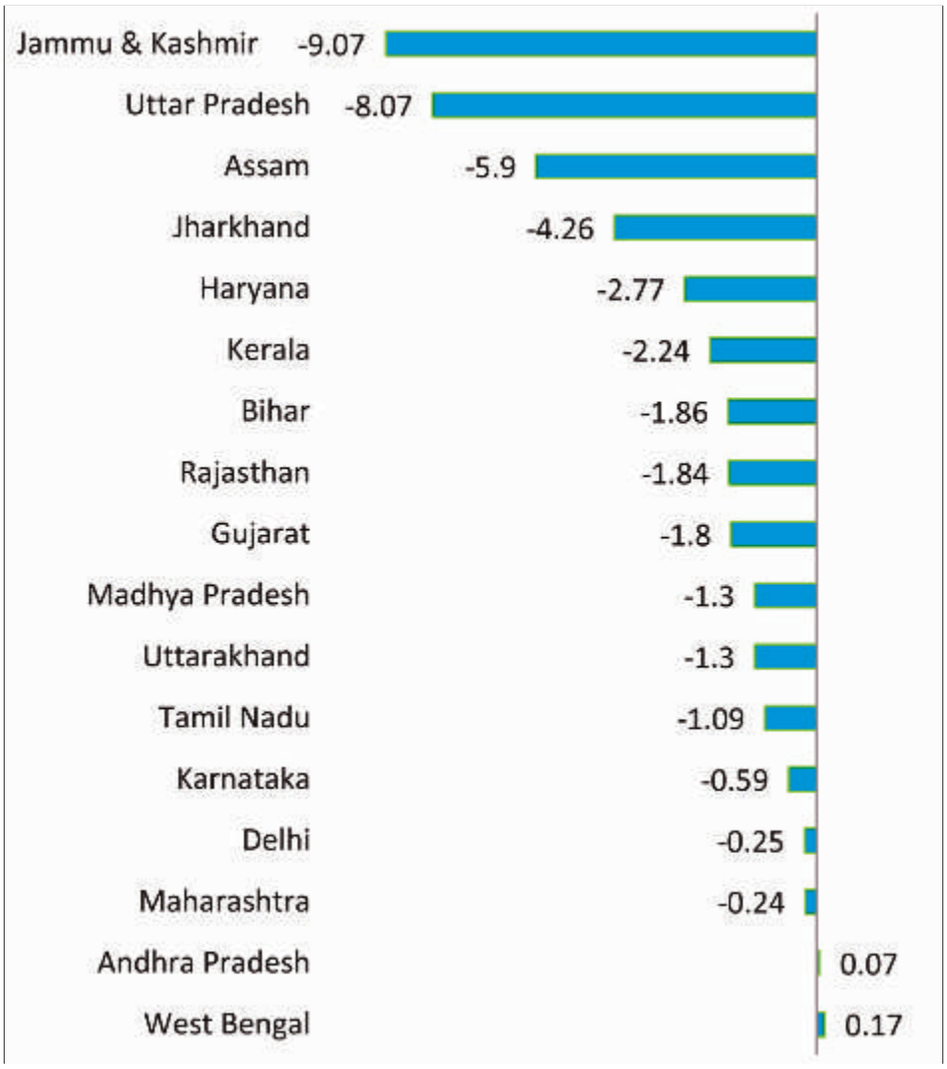
The figure shows the existence of gap of KVs in Muslim dominant and concentrated districts in the States of West Bengal, Uttar Pradesh, Bihar, Delhi, Jharkhand, Maharashtra and Haryana.

1.2.1 Enrollment

a) Minority Enrollment at Primary School

Among the minorities, it is the Muslim enrollment that is negative i.e. below average.

Figure 1.12 Gap of Muslim Enrollment at Primary School Level according to Child Population (DISE 2015-16)



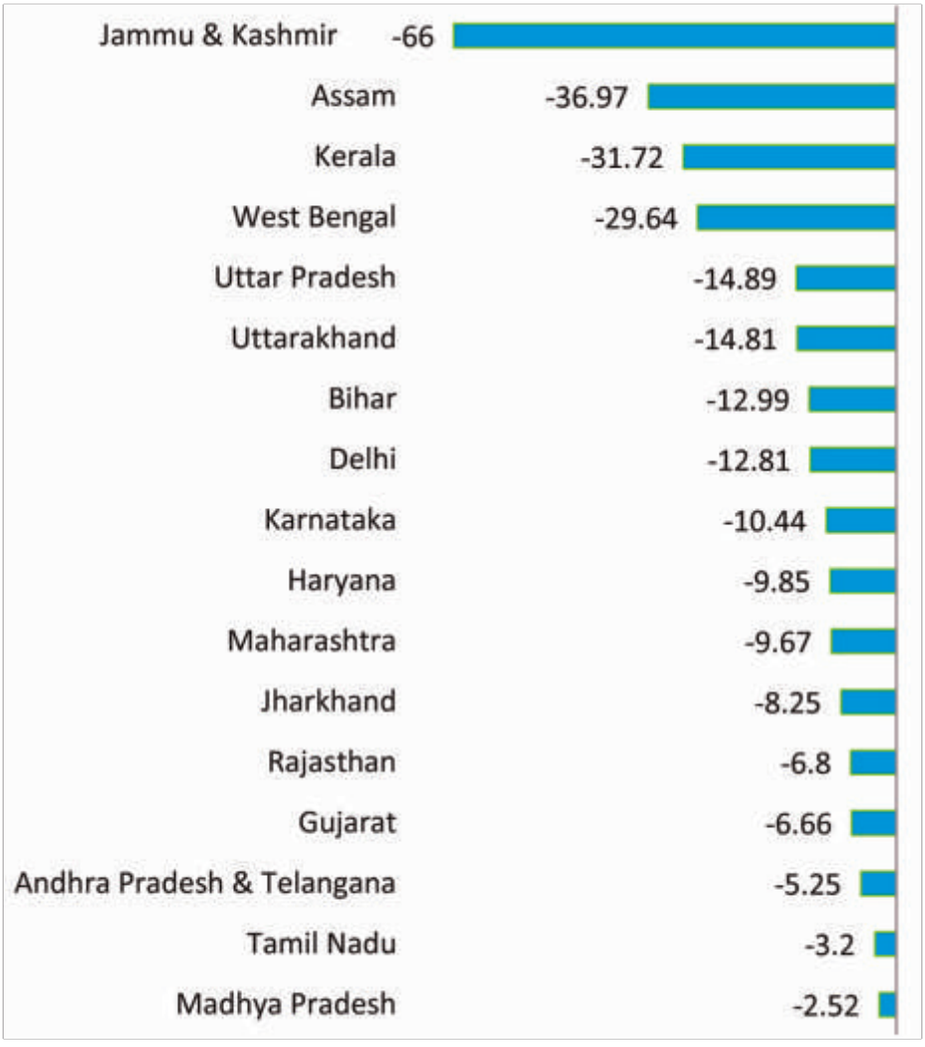
This figure shows the Muslim enrollment gap at Primary School (2015-16) according to the population of Muslim children of 0-6 age group in 2011 Census. The enrollment gap is negative in Jammu Kashmir, Uttar Pradesh, Assam, Jharkhand,

Haryana, Kerala, Bihar, Rajasthan, Gujarat, Madhya Pradesh, Uttarakhand, Tamil Nadu, Karnataka, Delhi, and Maharashtra.

b) Minority Enrollment at Kendriya Vidyalayas

Available figures show an adverse enrollment scenario for Muslim students.

Figure 1.13 Gap of Muslim Enrollment at Kendriya Vidyalayas (KVS 2015)



The figure shows that the enrollment of Muslim students in Kendriya Vidyalays is proportionally lower in all the states. In 2015 the enrolment of Muslims in the Kendriya Vidyalaya was 4.66% (Boys 4.88 % and girls is 4.44%).

c) Minority Enrollment at Navodaya Vidyalayas

Jawahar Navodaya Vidyalaya (JNV) is meant to provide opportunity for high quality education to underprivileged classes especially in rural areas. Minorities should have benefitted from these schools. But this has not happened. The number of minority students, who have got admission into these schools, are very few. The representation of minority girls is still lesser. A survey of JNVs in Patna region reveals that only 3.8% of the students were Muslims, whereas the actual Muslim population share was 7.54% according to 2011 census.

d) Minority Enrollment at Kasturba Gandhi Balika Vidyalayas

In 2008, only 3.27% Muslim girls enrolled in Kasturba Gandhi Balika Vidyalayas (KGBV). KGBV are basically residential upper primary schools specially designed for girls from the SC, ST, OBC and Minority communities and for girls from the Below the Poverty Line (BPL) families. In 2009, there were 2,578 KGBV across the country. Of these, 427 KGBVs have been sanctioned in 726 minority concentration blocks. 75% enrollment in these institutions is reserved for girls from SC, ST, OBC and Minority communities and the other 25% for girls from families below the poverty line from other social groups. (SSA)

In 2009 total 23,231 girls were enrolled in 397 KGBV schools which were operational till then (against the sanctioned 427 schools) in 726 Community

Development Blocks and 94 towns having a Muslim representation of 20 per cent and above. Of the total, 6,047 or 26.02% girls were from the Muslim community.

A study conducted in 2009 in Rampur district of Uttar Pradesh shows that there is big gap in Muslim girl's enrollment in KGBV. The study revealed that Muslim girls enrolled were 35.06 % while the minorities population was 49% in the district.

It is thus clear that in premier government schools across the country (Kendriya Vidyalayas, Navodaya Vidyalayas and Kasturba Balika Vidyalayas) there is under representation of Muslim students.

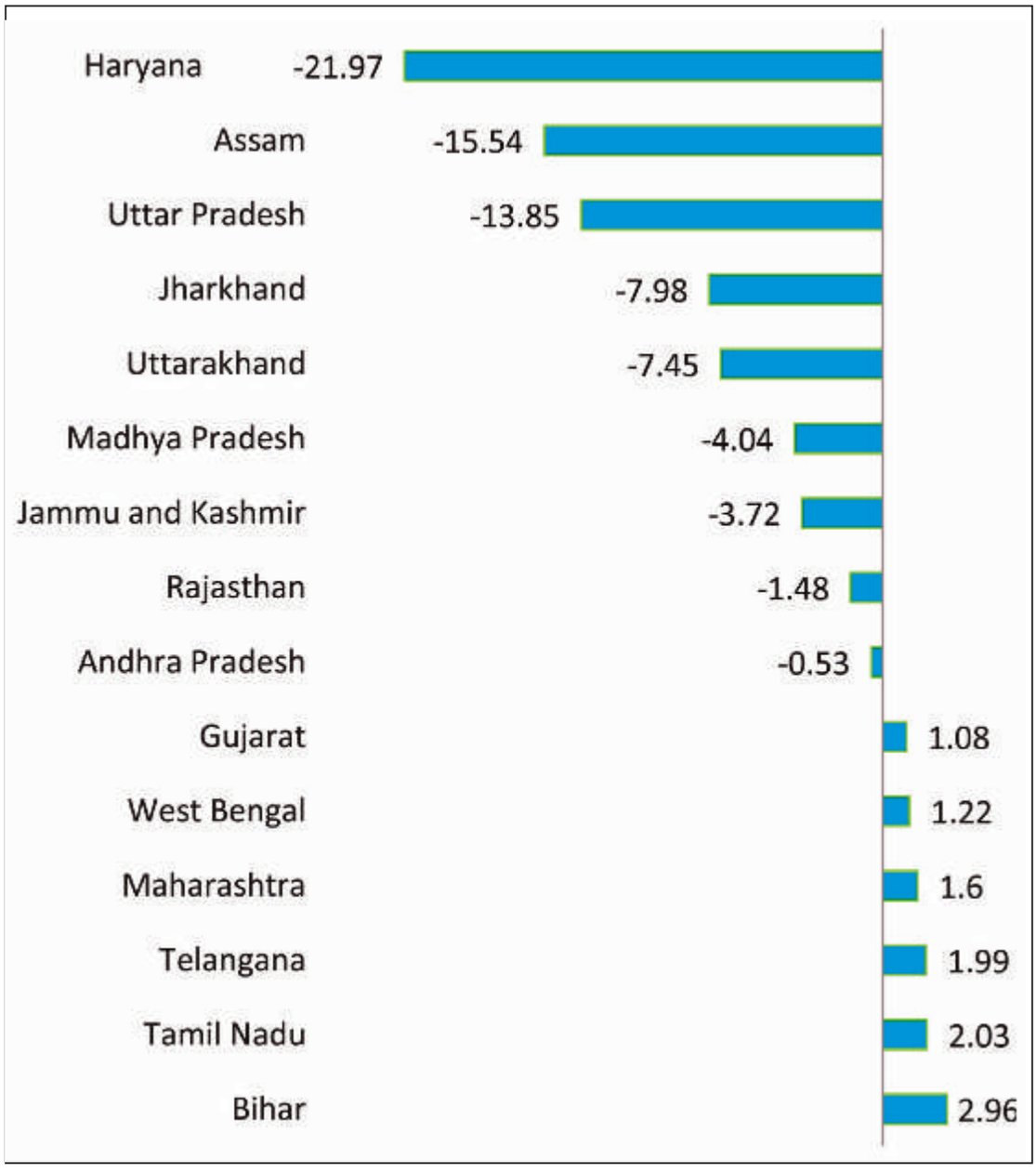
1.2.2 Dropout

Among the minorities, the dropout rate of only Muslims is adverse.

a) Dropout Gap of Muslim Students at Primary (1-8) Level

The figure shows that dropout gap of Muslims students at Primary Level is negative in the states of Haryana, Assam, Uttar Pradesh, Jharkhand, Uttarakhand, Madhya Pradesh, Jammu & Kashmir, Rajasthan and Andhra Pradesh. This means that in these states Muslim dropout is higher than the national average. (4.10 %)

Figure 1.14 Dropout Gaps of Muslim Students at Primary Level (DISE 2014-15)

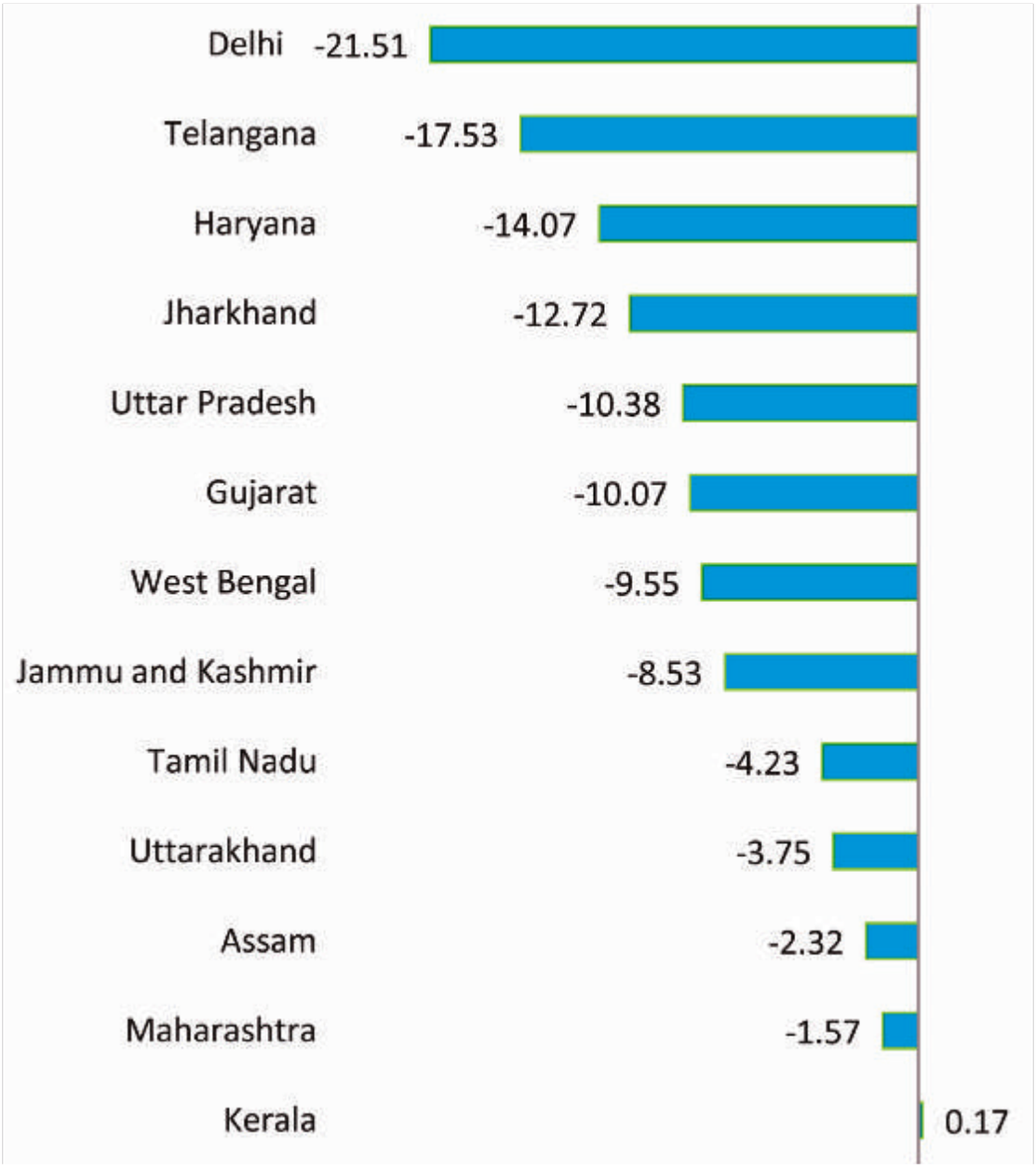


b) Dropout Gap of Muslim Students at Higher Secondary (10+2) Level

The figure shows that dropout gap of Muslims students at Higher Secondary Level is negative in the states of Delhi, Telangana, Haryana, Jharkhand, Uttar

Pradesh, Gujarat, West Bengal, Jammu & Kashmir, Tamil Nadu, Uttarakhand, Assam and Maharashtra. It means that in these states Muslim dropout is higher than the National Average (0.27 %)

Figure 1.15 Dropout Gaps of Muslim Students at Higher Secondary Level (DISE 2014-15)



Chapter - 2 : Demography of Minority Communities

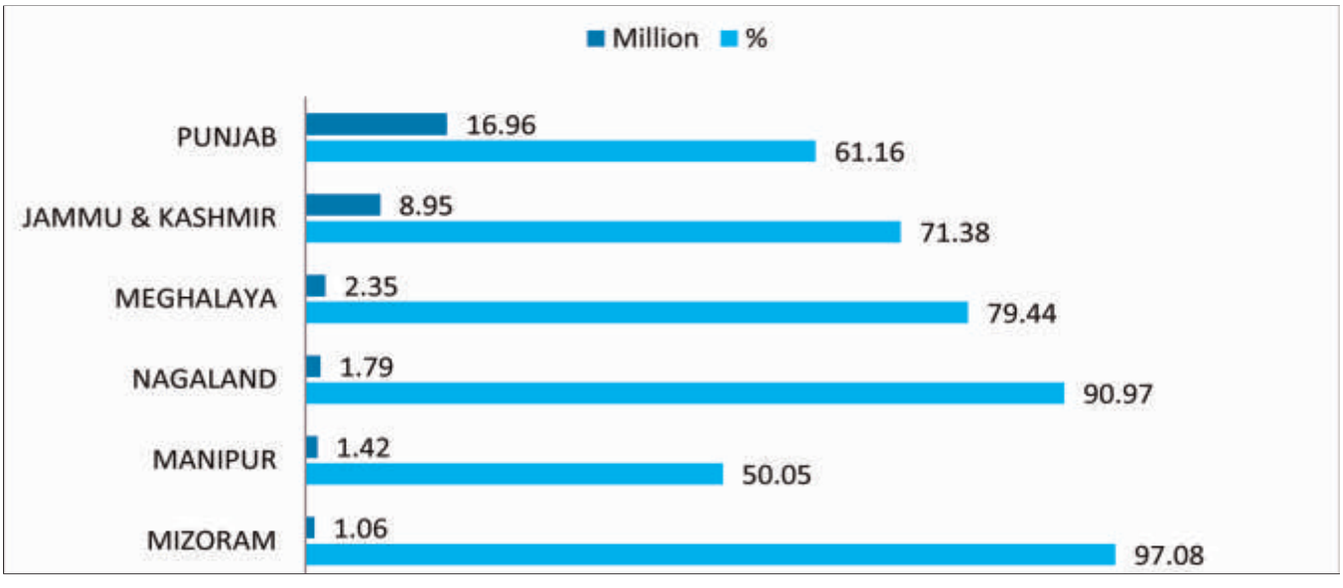
The Census 2011 identified 6 States and 1 Union territory (Lakshadweep) with Minority domination and 18 States and 1 Union territory having minority concentrations.

65 districts in India are minority dominant, 102 districts have minority concentration of 20-50% of total population. The term "concentration" means a large number of population together in one particular area. The Committee's criterion for identifying "concentration"was those having at least 1 million minority population in case of States and 2 lakh minority population in case of districts.

2.1 Minority Dominant States (MDS)

The following six States viz., Punjab, Jammu Kashmir, Meghalaya, Nagaland, Manipur and Mizoram are Minority Dominant States (MDS) as per 2011 census.

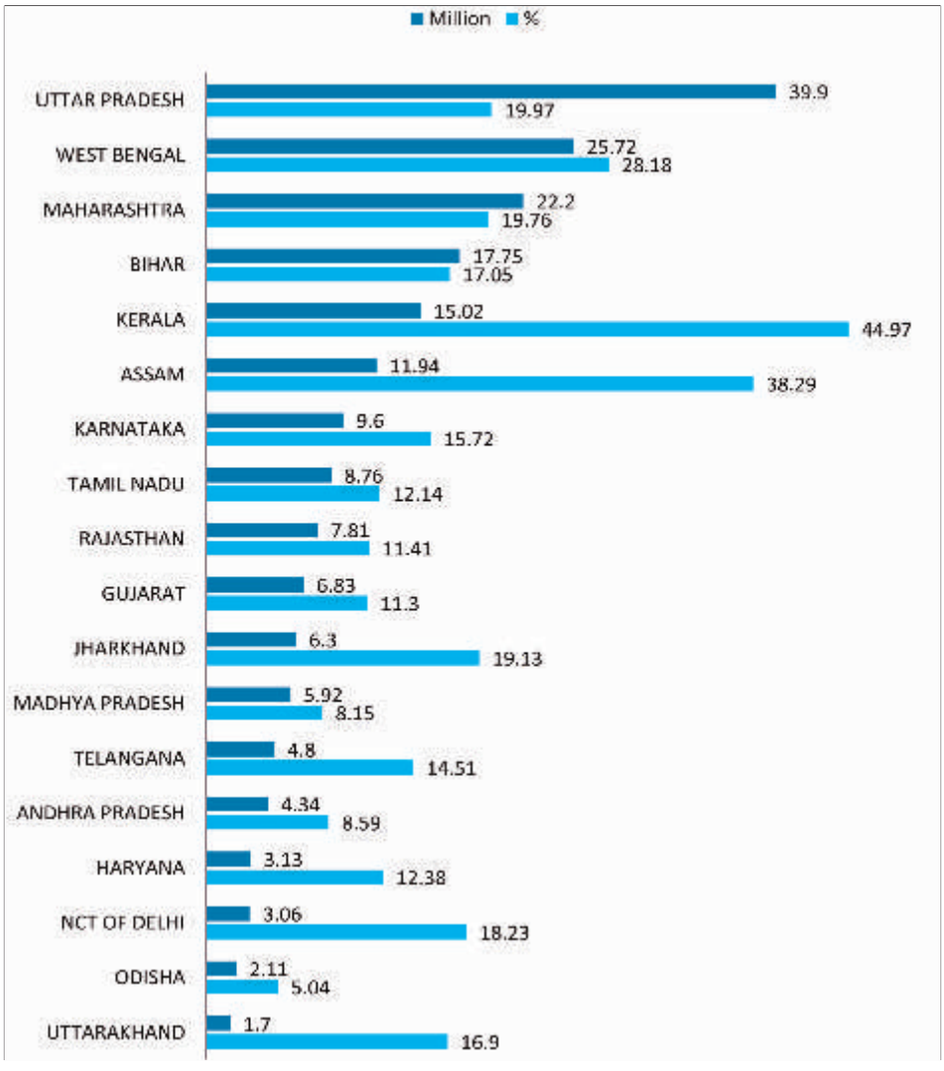
Figure 2.1 Minority Dominant States (MDS) – Census 2011



Among these Minority Dominant States (MDS) Punjab is having Sikh majority population, Jammu Kashmir is having Muslim majority population, and Meghalaya, Nagaland, Manipur and Mizoram are having Christian majority population. The Union Territory of Lakshadweep has a population of 64,473 out of which Muslims account for 96.5%.

2.2 Minority Concentrated States (MCS)

Figure 2.2 Minority Concentrated States (MCS) Having>1 million Minority Population & 5-50% of total population of the State– Census 2011



Minority Concentrated States (MCS) are those with at least 1 million Minority population.

The figure shows that among the 24 MDS & MCS (Figures 2.1 & 2.2 above) Uttar Pradesh, West Bengal, Maharashtra, Bihar, Punjab, Kerala and Assam are in top position in case of population numbers and Mizoram, Nagaland, Meghalaya, Jammu Kashmir, Punjab, Kerala, Assam, and West Bengal are in top position in case of population percentage. West Bengal, Punjab, Kerala and Assam are included in top list of both population number and population percentage.

Zonal Concentrations

We can divide the Minority Dominant States (MDSs) and Minority Concentrated States (MCSs) into 4 zones.

(i) North zone, which will include Uttar Pradesh (UP), Jammu & Kashmir (JK), Uttarakhand (UK), Punjab (PB) and Delhi (DL),

(ii) West zone, which will include Haryana (HR), Rajasthan (RJ), Gujarat (GJ), Madhya Pradesh (MP) and Maharashtra (MH),

(iii) East zone, which will include West Bengal (WB), Bihar (BH), Jharkhand (JH), Odisha (OR), Nagaland (NL), Manipur (MN), Mizoram (MZ), Meghalaya (ML) and Assam (AS) and

(iv) South zone, which will include Kerala (KL), Karnataka (KA), Tamil Nadu (TN), Telangana (TS) and Andhra Pradesh (AP), the minority concentration will be seen to be:

Figure 2.3 Minority Population in MDS and MCS Zone-wise (%)

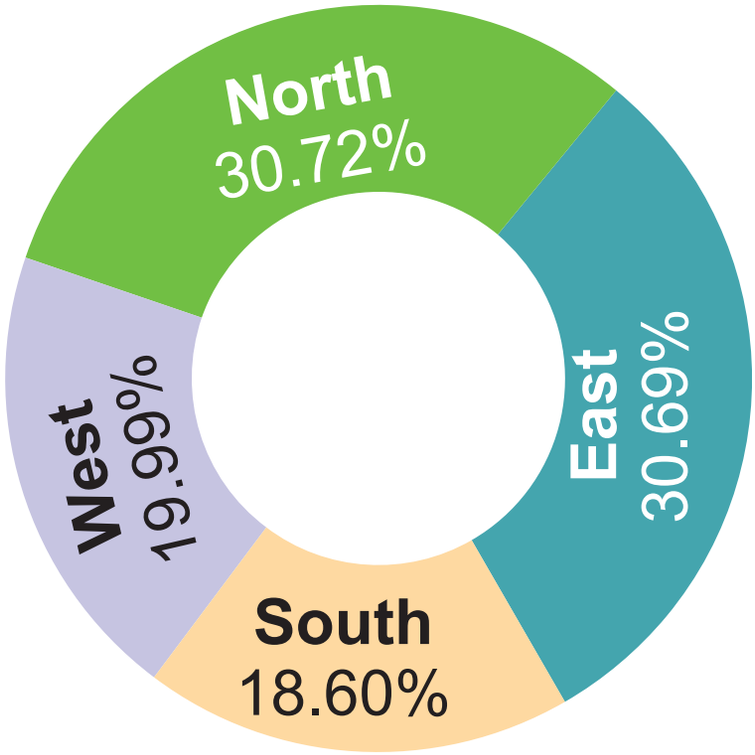


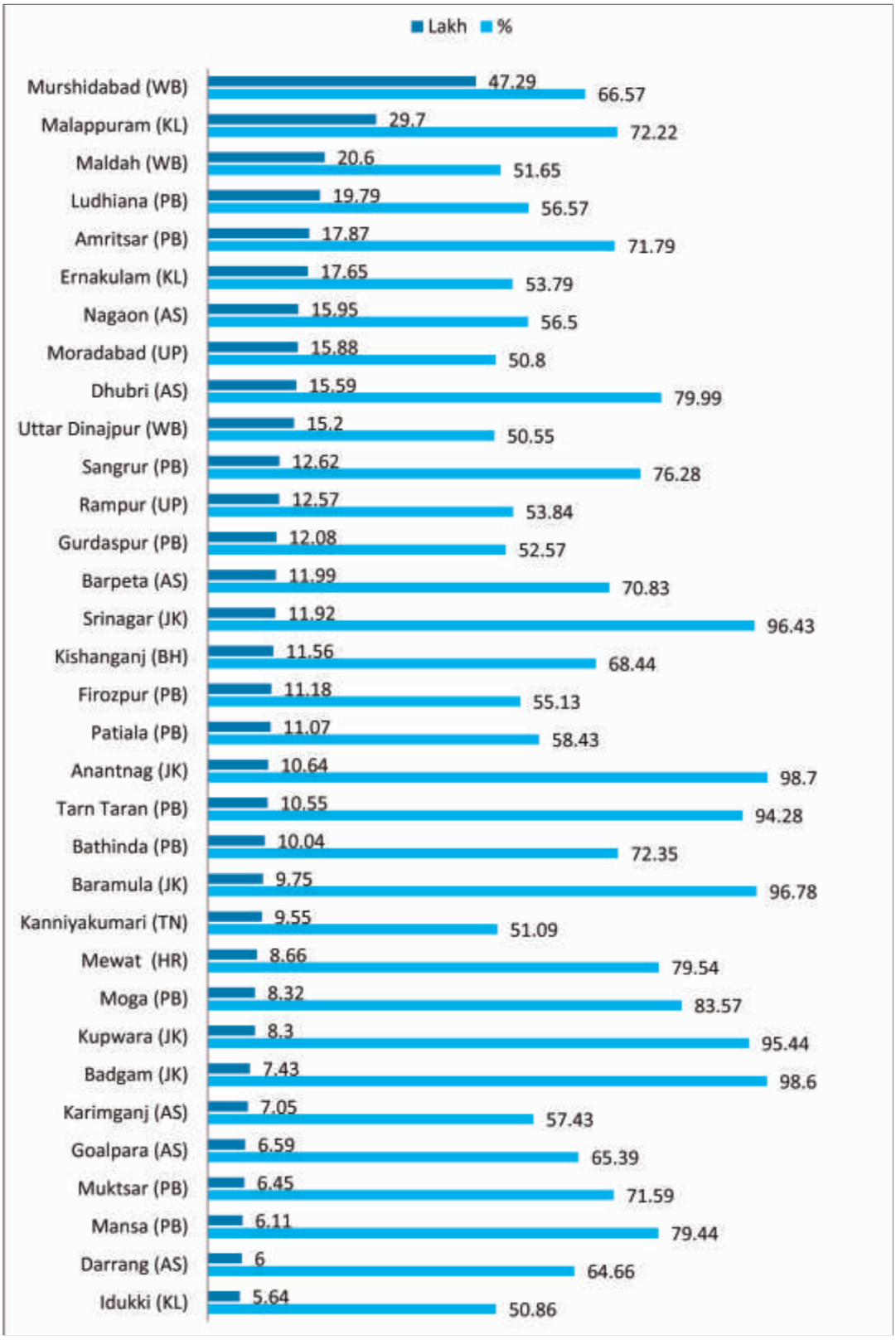
Table 2.1 Minority Population in MDS and MCS Zone-wise

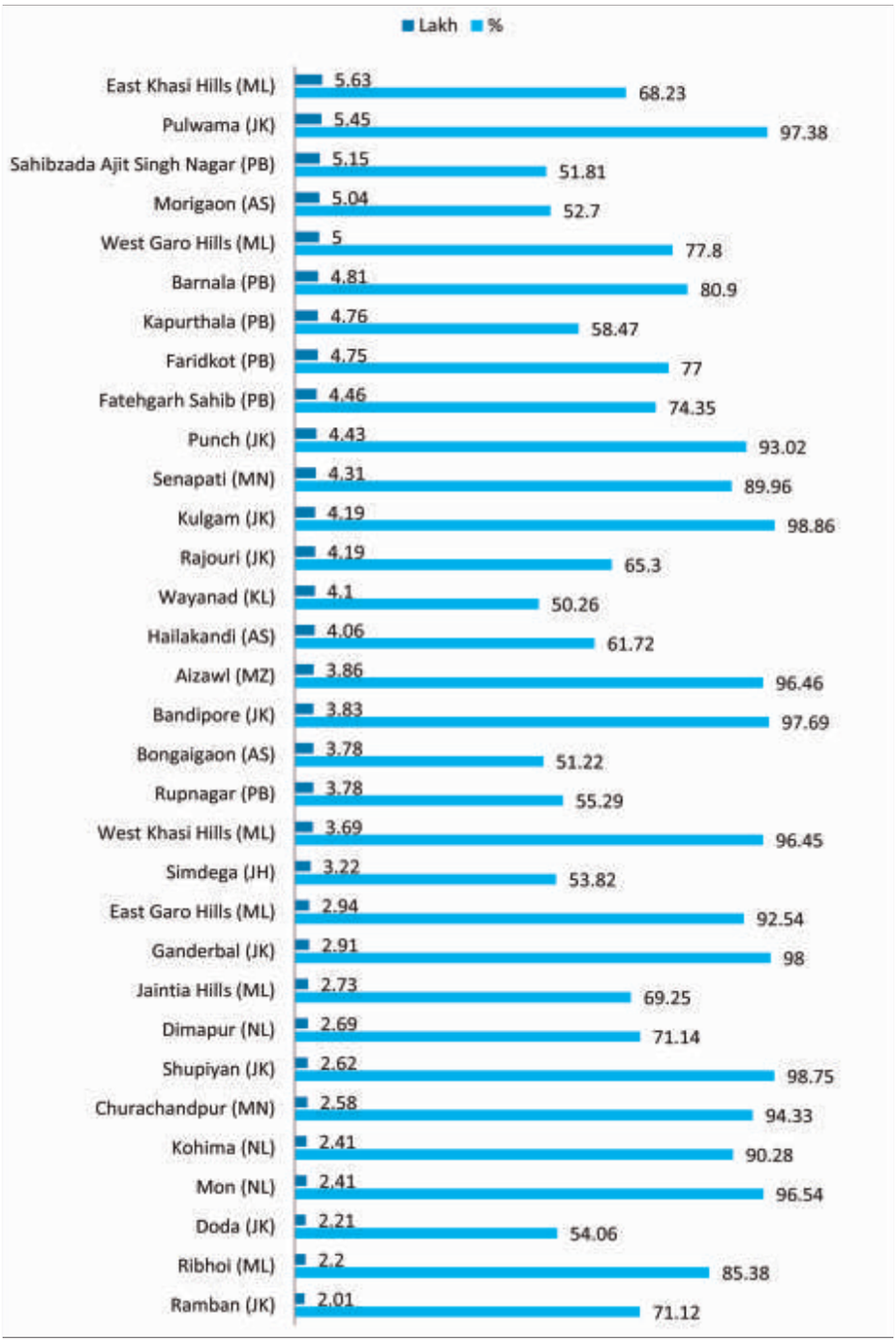
Zone	Minority Population (Million)
East	70.49
North	70.58
West	45.91
South	42.73

2.3 Minority Dominant Districts (MDDs)

According to the 2011 census, 65 districts are minority dominant having minority population of more than 2 lakhs.

Figure 2.4 Minority Dominant Districts (MDDs) having >2 lakh Minority Population- Census 2011

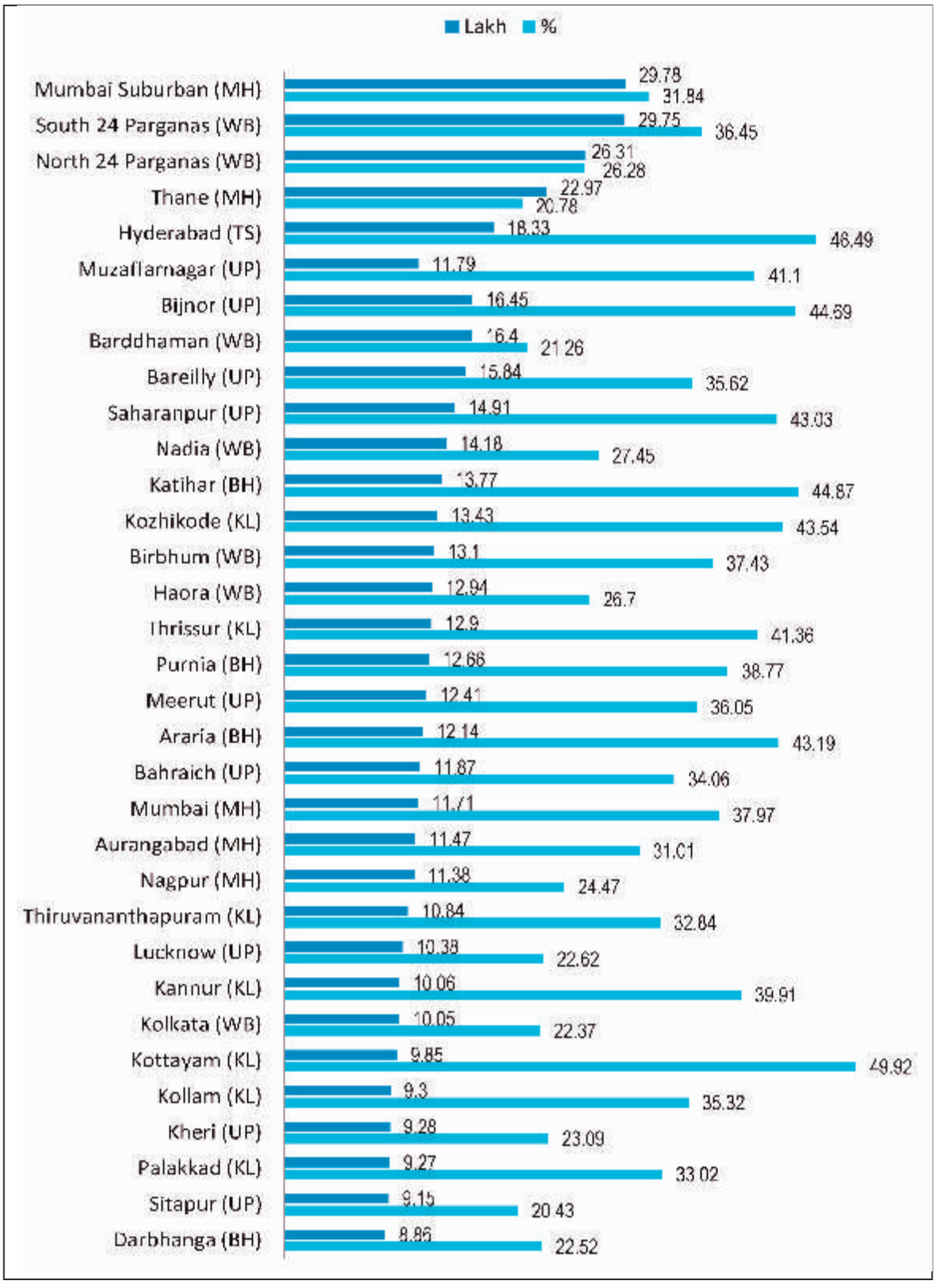


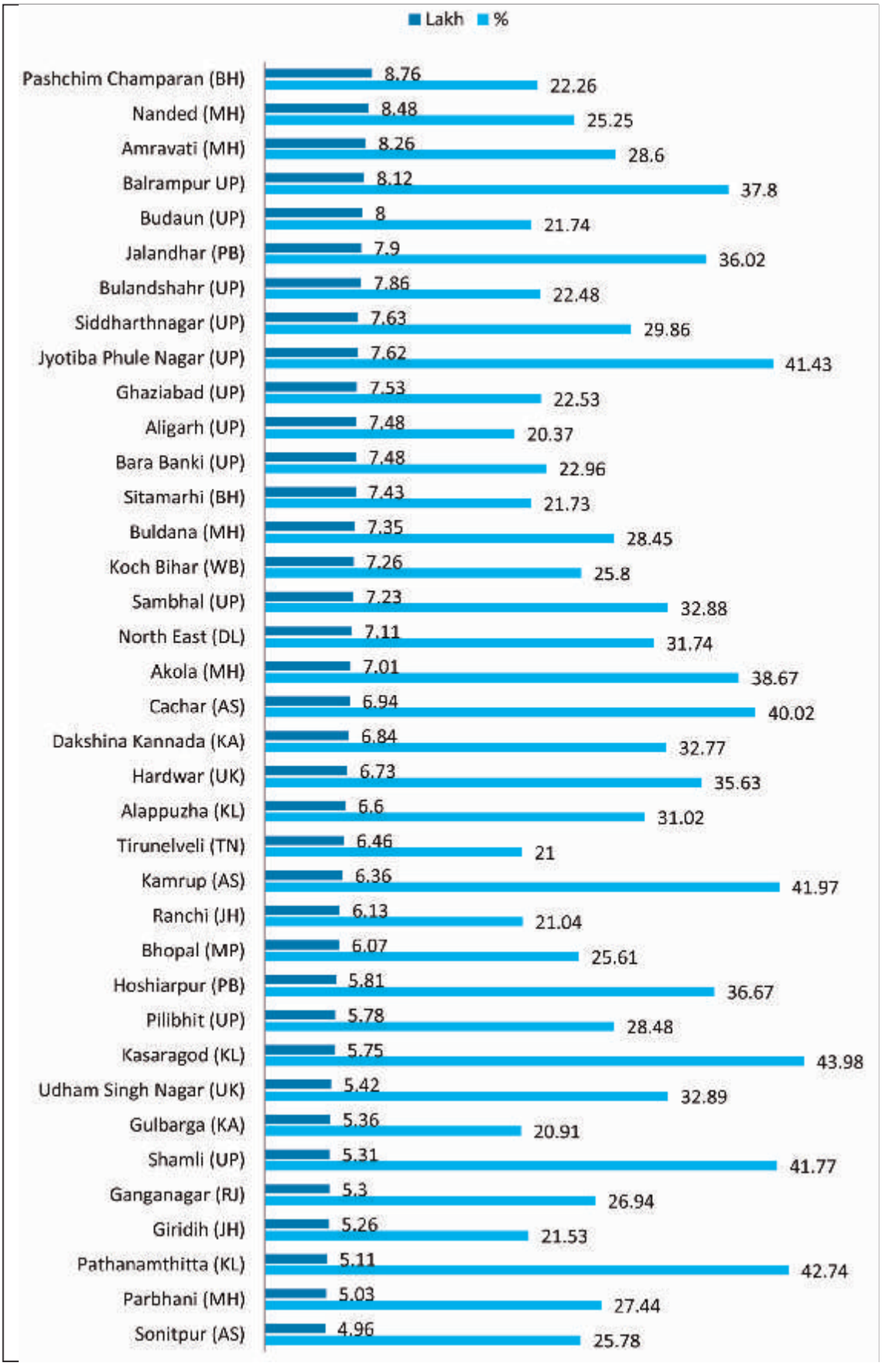


2.4 Minority Concentrated Districts (MCDs)

For our purpose, we have taken 102 Minority Concentrated Districts (MCDs) to mean districts having > 2 Lakh population of Minorities and 20-50% concentration of minorities in total population of the districts.

Figure 2.5 Minority Concentrated Districts (MCD) having >2 lakh Minority Population & 20-50% of the District Population- Census 2011



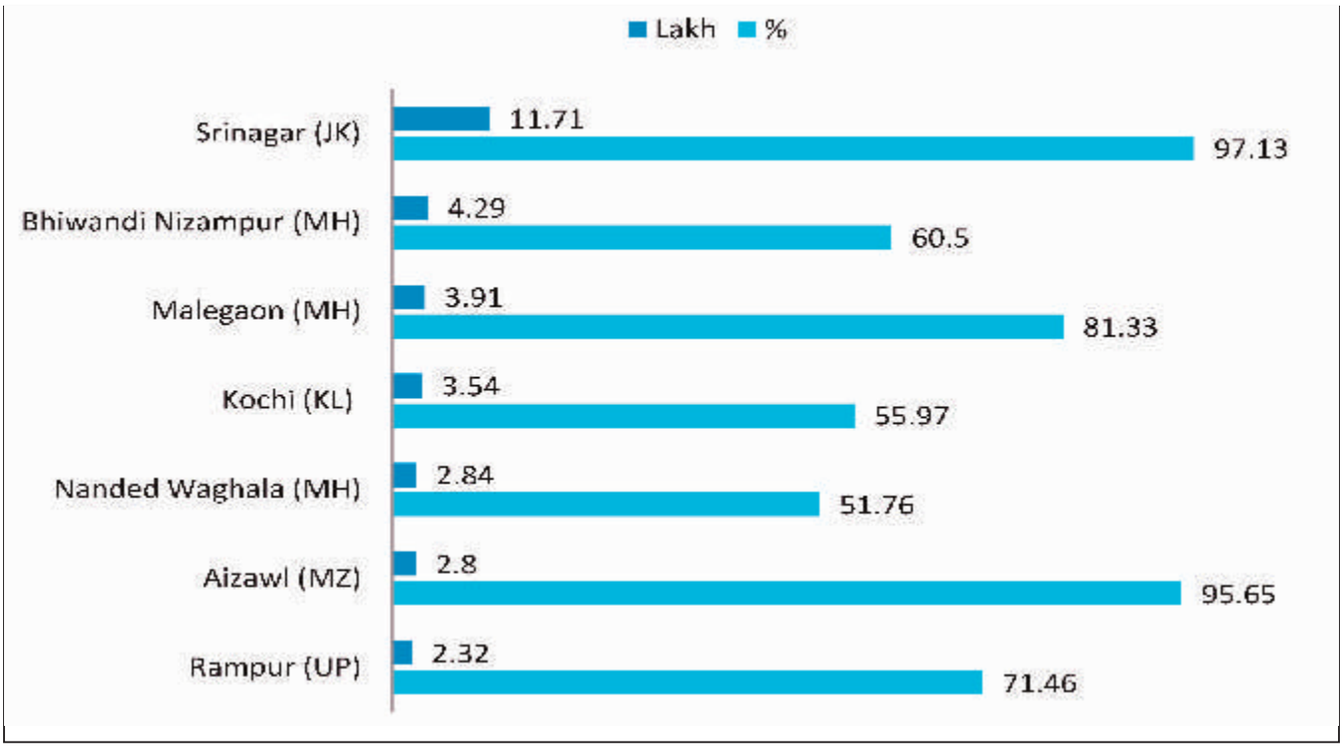

Lakh
%
Pashchim Champaran (BH) 8.76 22.26
Nanded (MH) 8.48 25.25
Amravati (MH) 8.26 28.6
Balrampur UP) 8.12 37.8
Budaun (UP) 8 21.74
Jalandhar (PB) 7.9 36.02
Bulandshahr (UP) 7.86 22.48
Siddharthnagar (UP) 7.63 29.86
Jyotiba Phule Nagar (UP) 7.62 41.43
Ghaziabad (UP) 7.53 22.53
Aligarh (UP) 7.48 20.37
Bara Banki (UP) 7.48 22.96
Sitamarhi (BH) 7.43 21.73
Buldana (MH) 7.35 28.45
Koch Bihar (WB) 7.26 25.8
Sambhal (UP) 7.23 32.88
North East (DL) 7.11 31.74
Akola (MH) 7.01 38.67
Cachar (AS) 6.94 40.02
Dakshina Kannada (KA) 6.84 32.77
Hardwar (UK) 6.73 35.63
Alappuzha (KL) 6.6 31.02
Tirunelveli (TN) 6.46 21
Kamrup (AS) 6.36 41.97
Ranchi (JH) 6.13 21.04
Bhopal (MP) 6.07 25.61
Hoshiarpur (PB) 5.81 36.67
Pilibhit (UP) 5.78 28.48
Kasaragod (KL) 5.75 43.98
Udham Singh Nagar (UK) 5.42 32.89
Gulbarga (KA) 5.36 20.91
Shamli (UP) 5.31 41.77
Ganganagar (RJ) 5.3 26.94
Giridih (JH) 5.26 21.53
Pathanamthitta (KL) 5.11 42.74
Parbhani (MH) 5.03 27.44
Sonitpur (AS) 4.96 25.78


Lakh
%
Sahibganj (JH) 4.82 41.89
Kachchh (GJ) 4.8 22.97
Sundargarh (OR) 4.63 22.13
Darjiling (WB) 4.6 24.91
Jalna (MH) 4.5 23
Dharwad (KA) 4.46 24.19
Dakshin Dinajpur (WB) 4.38 26.16
Sant Kabir Nagar (UP) 4.11 23.98
Bidar (KA) 4.02 23.66
Pakur (JH) 3.99 44.39
Baghpat (UP) 3.83 29.41
Thoothukkudi (TN) 3.73 21.32
Bharuch (GJ) 3.59 23.21
Kokrajhar (AS) 3.55 40.08
Sirsa (HR) 3.53 27.28
Shrawasti (UP) 3.46 31
Washim (MH) 3.32 27.79
Godda (JH) 3.27 24.93
Hingoli (MH) 3.11 26.42
Deoghar (JH) 3.09 20.72
Ramanathapuram (TN) 2.99 22.12
South Goa (GA) 2.97 46.44
Nalbari (AS) 2.79 36.16
Gumla (JH) 2.54 24.84
Lakhimpur (AS) 2.41 23.16
Gajapati (OR) 2.23 38.65
Central (DL) 2.17 37.28
Udalguri (AS) 2.17 26.15
Palwal (HR) 2.14 20.59
Shahid Bhagat Singh Nagar (PB) 2.07 33.93
Jashpur (CT) 2.06 24.25
Burhanpur (MP) 2.04 27.03

2.5 Minority Dominant Cities (MDCs)

According to the 2011 census, 7 cities are minorities dominant having 2 lakh and above minority population.

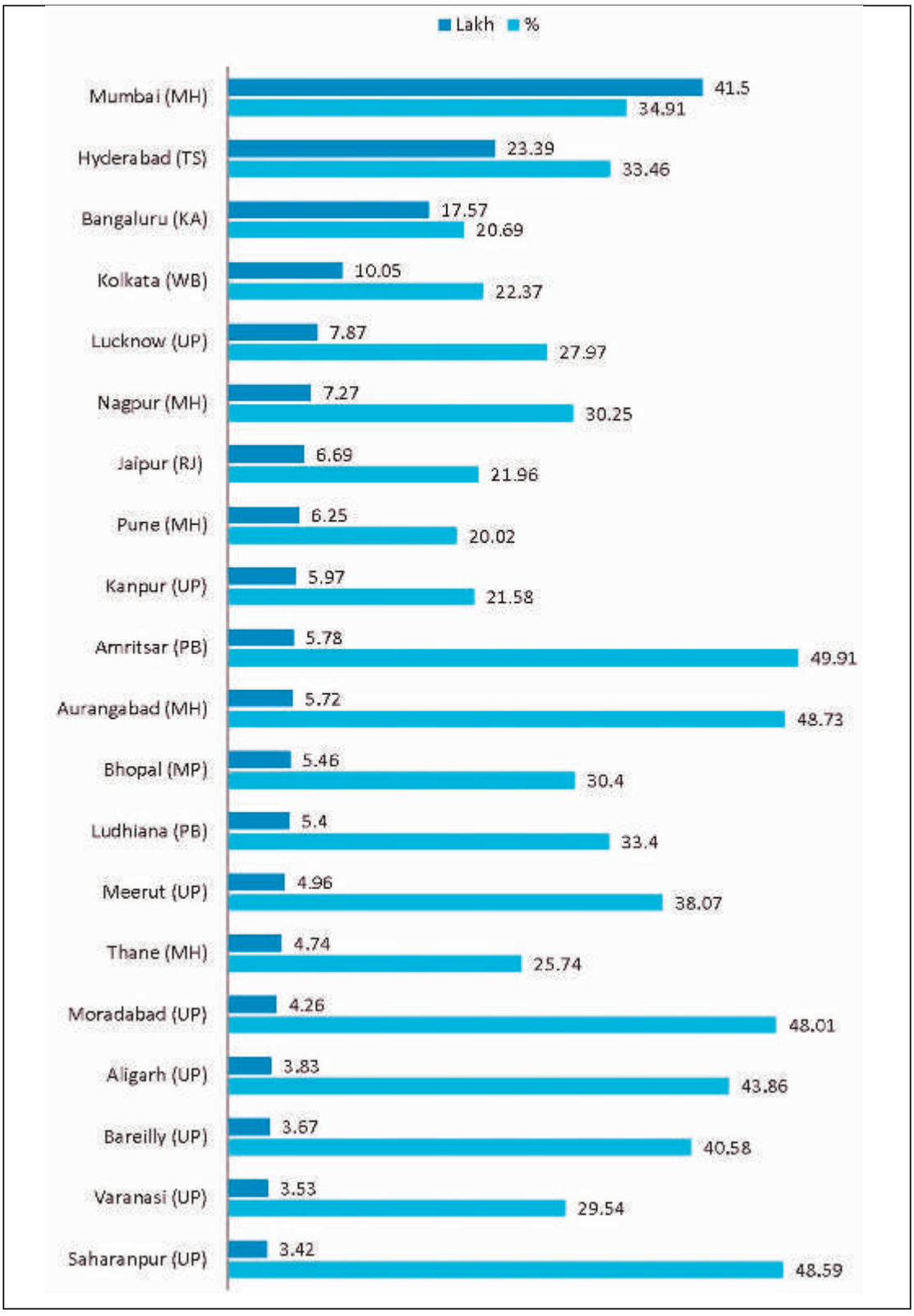
Figure 2.6 Minority Dominant Cities (MDCs) having >2 Lakh Minority Population- Census 2011

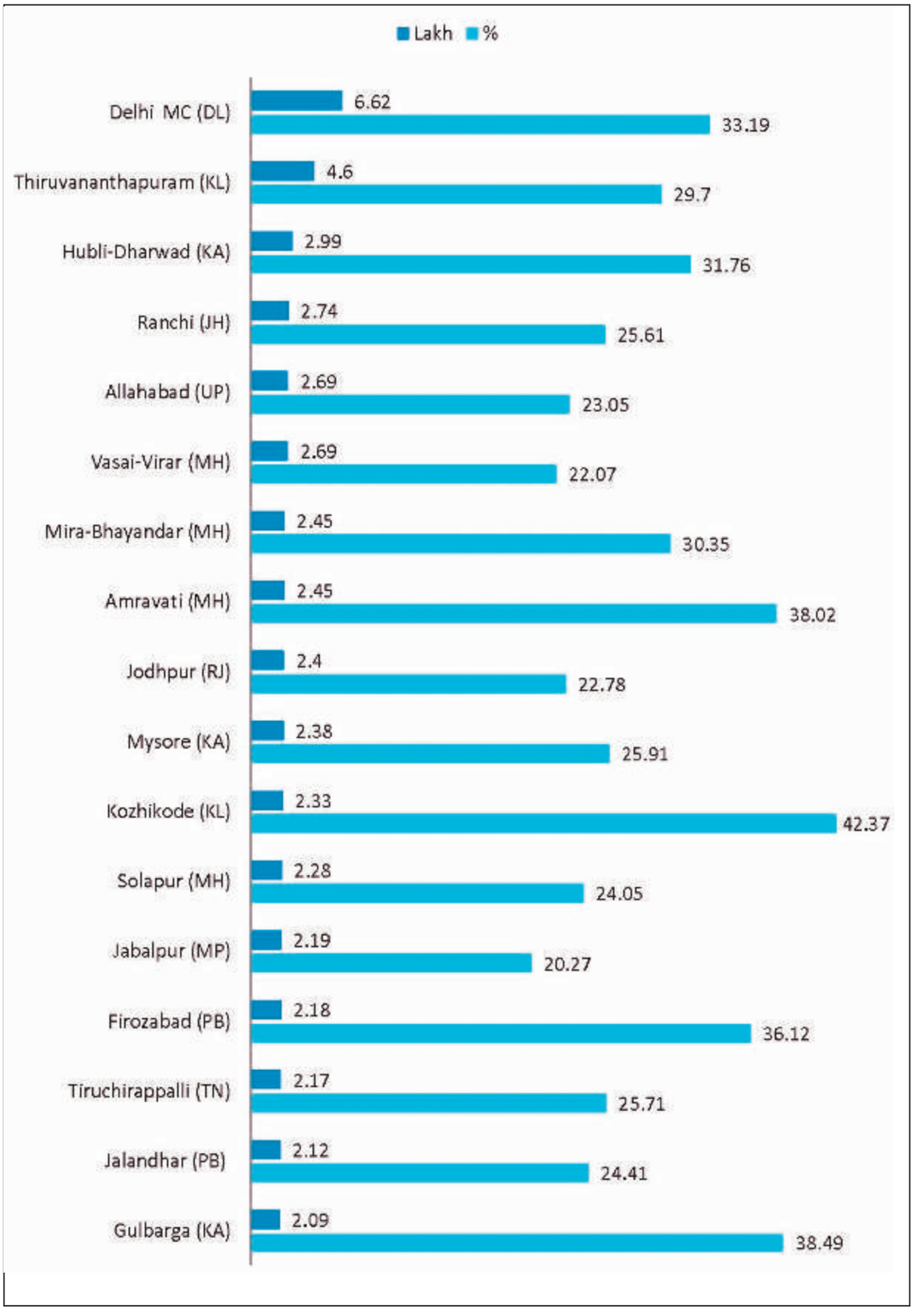


2.6 Minority Concentrated Cities (MCCs)

For our purposes, we have taken 37 Minority Concentrated Cities (MCCs) to mean those which have 2 lakh and above total minority population with 20-50% percent concentration of Minority population.

Figure 2.7 Minority Concentrated Cities(MCCs) having >2 Lakh Minority Population & 20-50% of the City Population - Census 2011




Lakh
%
Delhi MC (DL)
6.62
33.19
Thiruvananthapuram (KL)
4.6
29.7
Hubli-Dharwad (KA)
2.99
31.76
Ranchi (JH)
2.74
25.61
Allahabad (UP)
2.69
23.05
Vasai-Virar (MH)
2.69
22.07
Mira-Bhayandar (MH)
2.45
30.35
Amravati (MH)
2.45
38.02
Jodhpur (RJ)
2.4
22.78
Mysore (KA)
2.38
25.91
Kozhikode (KL)
2.33
42.37
Solapur (MH)
2.28
24.05
Jabalpur (MP)
2.19
20.27
Firozabad (PB)
2.18
36.12
Tiruchirappalli (TN)
2.17
25.71
Jalandhar (PB)
2.12
24.41
Gulbarga (KA)
2.09
38.49

Chapter - 3 : Recommendations

In view of the facts and figures, and after deliberations and discussions, this committee recommends for establishing schools, colleges and institutes as per details below:

3.1 Central Schools

The deprived children from the minority communities with talent and aptitude should be provided quality education at primary and secondary level free of cost. Such education would enable them to compete with other community students on an equal footing.

The main causes of low level of education that are apparent are:

- poverty,
- the perception that returns from education are not worthwhile,
- poor access to schools,
- poor quality of teaching, problem of absentee teachers and dissatisfaction regarding content of school text books.

Many a times Madrasas are the only educational option available to Muslim children, especially those belonging to the poor. The three language formula has not been implemented properly.

On issues relating to the education of Muslims in India, it appears that among all communities, Muslims are "at a double disadvantage with low levels of education combined with low quality of education and their deprivation increases manifold as the level of education rises". It has thus been realized that "such relative deprivation calls for a significant policy shift in the recognition of the problem and in devising corrective measures, as well as in the allocation of resources".

Literacy rates, proportion of population completing specified level of education, mean years of schooling and enrollment rates have been used to measure differentials in attainments at various levels of education between Muslims and other minority and socio-religious communities. It is found that:

The literacy rate among Muslims as per the 2001 census was 59.1% and as per the 2011 census was 68.53% which were far below the national average of 64.8% and 72.98%; and that the levels of literacy are lower in rural areas for the Muslims. It is important to note that evaluation studies have found that many so called literates did

not have the ability to apply their reading and writing skills to real life situations and often a substantial proportion reverted to illiteracy within 4-5 years after leaving school.

The National Sample Survey(NSS) 2004-05 data for age groups 6-13, 14-15, 16-17, 18-22 and 23 years shows that percentage of literates as proportion of population by these age groups are much lower in all the categories for Muslims, as opposed to all others.

The Mean Years of Schooling (MYS) for children aged 7-16 years, which corresponds to the population that should have completed matriculation, shows that on an average, a child goes to school for only 4 years and that the MYS of Muslims was the lowest at about 3 years and 4 months. Comparisons across socio-religious communities, both by gender and place of residence, also reveal consistently lower levels of MYS for the Muslim community. The MYS of Muslim children is only 83% that of the MYS of all children and the disparity is highest in the case of rural boys, closely followed by rural girls.

The enrollment rates provided by the Human Development Survey (HDS) 2004-05, estimated by the National Council of Applied Economic Research Survey

(NCAERS), estimates the difference between Muslims (74%) and the remaining population (83%). As many as 25% of Muslim children, in the 06-14 year age group, have either never attended school or have dropped out; this is higher than that of any other socio-religious community.

Regarding the educational attainment levels of Muslims at primary level education (persons of age 12 years and above who have completed at least 5 years of education), middle level education (persons of age 15 years and above who have completed at least 8 years of education), matriculation (persons who have matriculated and are at least 17 years of age), and higher secondary (persons who have completed the higher secondary or equivalent examination and are of 19 years of age or more), it is found that at all these levels the percentage attainment levels of Muslims as compared to the all-India percentage is consistently low. At the all-India level the educational attainment of Muslims worsens in relative terms as one move from lower to higher levels of school education.

If we look at the matriculation completion rates, 26% of persons who are 17 years and above, have completed matriculation; however this percentage in only 17% for Muslims. If we look at the Jawahar Navodaya Vidyalayas which were set up to provide high quality education for talented rural children with the objective of

excellence coupled with equity and social justice, Muslim participation in these schools is only 4% as a percentage of all children, which is not satisfactory at all.

Given the relative deprivation in education of Muslims as compared to other socio-religious communities, various works have emphasized on provisioning of a minimum level of school education by the state. One of their main recommendations is that high quality government schools should be set up in all areas of Muslim concentration.

3.1.1 Recommendation

To bridge this vital gap in quality and affordable school education for minority children, especially those in rural areas, this Committee after much deliberation, proposes establishing 211 Central Schools, one in each identified minority concentrated block of each of the 167 identified Minority Dominant & Minority Concentrated districts and one in each of the 44 identified Minority Dominant & Minority Concentrated Cities across the country. The numbers could be increased later as per need. These Central Schools to be patterned on the Kendriya Vidyalaya/ Navodaya Vidyalaya setup would have sufficient infrastructure like buildings, class rooms, library, laboratory, and facilities such as mess, staff quarters, playground etc.

under the Maulana Azad Education Foundation. The Foundation is an autonomous body under the Ministry of Minority Affairs and has a specific mandate to work for the educational upliftment of the educationally backward minority communities. Thus the Foundation has the required mandate and the requisite autonomy for this purpose. However it will have to be supplemented financially to undertake such a huge project, both for infrastructure as well as yearly recurring expenditure.

The expected capital expenditure for a single school would be about Rs. 20 crores and the operational cost per annum around Rs. 3 crores. The requirement of land would be around 8-10 acres per school in rural areas and will have to be arranged by the State governments, waqf boards, private institutions or individuals.

The project design would be basically a mix between the Kendriya Vidyalaya and the Navodaya Vidyalaya with school buildings, dining hall, kitchen, staff quarters, playground etc. It will be co-educational and only have day scholars. The schools will give free education and follow the CBSE curriculum from class 1 to 12, with three streams of education (arts, science, commerce); follow the 3 language formula (English, Hindi, Mother tongue) and have one or two sections of 30 students in each section. There will be emphasis on sports, arts, crafts and extra-curricular activities. The staff, both teaching and non-teaching, would be recruited centrally and

will have to necessarily stay on the campus in the residential accommodation provided. Students' admission norms shall include an economic criterion. The norms of Navodaya Vidyalaya and Kendriya Vidyalaya would be suitably amended by the MAEF and made applicable to these schools, as also for recruitment, service conditions, conduct rules, pay scales of all teaching and non-teaching staff and the Maulana Azad Education Foundation will create a structure for the management of these schools at the central level and have a local committee at each school which will ensure that the school runs smoothly and purposefully. We also suggest that school timings should be from 9.30 am so that children who are interested in going to Madrasas/ Pathashalas etc. can do so before 9.30 am.

Ideally, young and eager graduates could also be encouraged to do social work by opting to become teachers in these schools for one / two years on stipend basis. The recruitment of regular teaching and non-teaching staff should be done centrally by the MAEF for each school.

It will be open to MAEF to start schools, even before a formal central school organization structure comes up, at those selected places where infrastructure is made available. It will also be open to MAEF to explore possibilities of Public Private Partnership.

Location

The committee has followed the following criteria for selecting location of Central Schools:-

1) The Central Schools should be established in rural minority concentration blocks having the maximum minority population in the 167 Minority Dominant Districts (MDDs) and Minority Concentrated Districts (MCDs).

2) The Central Schools should be established in 44 Minority concentrated locations in the Minority Dominant Cities (MDC) and Minority Concentrated Cities (MCC).

Table 3.1 List of 167 Districts and Blocks for establishment of Central Schools

Sl. No.	State Code	District	Suggested Block
1.	AS	Nagaon	Juria
2.	AS	Dhubri	Gauripur
3.	AS	Barpeta	Mandia
4.	AS	Karimganj	South Karimganj
5.	AS	Goalpara	Jaleswar
6.	AS	Darrang	Dolgaon-Sialmari
7.	AS	Morigaon	Laharighat
8.	AS	Hailakandi	Lala
9.	AS	Bongaigaon	Tapattary
10.	AS	Cachar	Sonai
11.	AS	Kamrup	Chamaria
12.	AS	Sonitpur	Barchala
13.	AS	Kokrajhar	Kachugaon
14.	AS	Nalbari	Barkhetri
15.	AS	Lakhimpur	Karunabari
16.	AS	Udalguri	Udalguri
17.	BH	Kishanganj	Kochadhamin
18.	BH	Katihar	Barsoi
19.	BH	Purnia	Amour
20.	BH	Araria	Jokihat
21.	BH	Darbhanga	Keotiranway

22.	BH	Pashchim Champaran	Narkatiaganj
23.	BH	Sitamarhi	Parihar
24.	CT	Jashpur	Kunkuri
25.	DL	North East Delhi	North East Delhi
26.	DL	Central Delhi	NA
27.	GA	South Goa	Salcete
28.	GJ	Kachchh	Bhuj
29.	GJ	Bharuch	Bharuch
30.	HR	Mewat	Punhana
31.	HR	Sirsa	Odhan
32.	HR	Palwal	Hathin
33.	JH	Simdega	Thethaitangar
34.	JH	Ranchi	Kanke
35.	JH	Giridih	Dhanwar
36.	JH	Sahibganj	Udhwa
37.	JH	Pakur	Pakaur
38.	JH	Godda	Mahagama
39.	JH	Deoghar	Madhupur
40.	JH	Gumla	Chainpur
41.	JK	Srinagar	Srinagar
42.	JK	Anantnag	Breng
43.	JK	Baramula	Pattan
44.	JK	Kupwara	Kupwara
45.	JK	Badgam	Khansahib
46.	JK	Pulwama	Pulwama

47.	JK	Punch	Mendhar
48.	JK	Kulgam	D.H Pora
49.	JK	Rajouri	Budhal
50.	JK	Bandipore	Bandipora
51.	JK	Ganderbal	Kangan
52.	JK	Shupiyan	Shopiyan
53.	JK	Doda	Gandoh
54.	JK	Ramban	Ramsoo
55.	KA	Dakshina Kannada	Mangalore
56.	KA	Gulbarga	Chitapur
57.	KA	Dharwad	NA
58.	KA	Bidar	Bidar
59.	KL	Malappuram	Nilambur
60.	KL	Ernakulam	Angamaly
61.	KL	Idukki	Kattappana
62.	KL	Wayanad	Sulthan Bathery
63.	KL	Kozhikode	Koduvally
64.	KL	Thrissur	Kodakara
65.	KL	Thiruvananthapuram	Parassala
66.	KL	Kannur	Taliparamba
67.	KL	Kottayam	Pallom
68.	KL	Kollam	Vettikkavala
69.	KL	Palakkad	Attappady
70.	KL	Alappuzha	Champakkulam
71.	KL	Kasaragod	Nileshwar

72.	KL	Pathanamthitta	Ranni
73.	MH	Mumbai Suburban	NA
74.	MH	Thane	Bhiwandi
75.	MH	Mumbai	NA
76.	MH	Aurangabad	NA
77.	MH	Nagpur	Nagpur(Rural)
78.	MH	Nanded	Nanded
79.	MH	Amravati	Chandurbazar
80.	MH	Buldana	Khamgaon
81.	MH	Akola	Akola
82.	MH	Parbhani	Jintur
83.	MH	Jalna	Jalna
84.	MH	Washim	Malegaon
85.	MH	Hingoli	Hingoli
86.	ML	East Khasi Hills	Mylliem
87.	ML	West Garo Hills	Selsella
88.	ML	West Khasi Hills	Mawshynrut
89.	ML	East Garo Hills	Resubelpara
90.	ML	Jaintia Hills	Thadlaskein
91.	ML	Ribhoi	Umsning
92.	MN	Senapati	Mao Maram
93.	MN	Churachandpur	Lamka
94.	MP	Bhopal	NA
95.	MP	Burhanpur	Burhanpur
96.	MZ	Aizawl	Darlawn

97.	NL	Dimapur	Medziphema
98.	NL	Kohima	Tseminyu
99.	NL	Mon	Tobu
100.	OR	Sundargarh	Kuanrmunda
101.	OR	Gajapati	Mohana
102.	PB	Ludhiana	Ludhiana-I
103.	PB	Amritsar	Rayya
104.	PB	Sangrur	Sunam
105.	PB	Gurdaspur	Batala
106.	PB	Firozpur	Jalalabad
107.	PB	Patiala	Nabha
108.	PB	Tarn Taran	Tarn Taran
109.	PB	Bathinda	Bathinda
110.	PB	Moga	Baghapurana
111.	PB	Muktsar	Muktsar
112.	PB	Mansa	Budhlada
113.	PB	Sahibzada Ajit Singh Nagar	Kharar
114.	PB	Barnala	Barnala
115.	PB	Kapurthala	Kapurthala
116.	PB	Faridkot	Kot Kapura
117.	PB	Fatehgarh Sahib	Amloh
118.	PB	Rupnagar	Rupnagar
119.	PB	Jalandhar	Nakodar
120.	PB	Hoshiarpur	Tanda
121.	PB	Shahid Bhagat Singh Nagar	Banga

122.	RJ	Ganganagar	Karanpur
123.	TN	Kanniyakumari	Munchirai
124.	TN	Tirunelveli	Radhapuram
125.	TN	Thoothukkudi	Thoothukkudi
126.	TN	Ramanathapuram	Mandapam
127.	TS	Hyderabad	NA
128.	UK	Hardwar	Roorkee
129.	UK	Udham Singh Nagar	Rudrapur
130.	UP	Moradabad	KundarkiDingpur
131.	UP	Rampur	Suar
132.	UP	Muzaffarnagar	Muzaffarnagar
133.	UP	Bijnor	Kotwali
134.	UP	Bareilly	Bithrichainpur
135.	UP	Saharanpur	Muzaffarabad
136.	UP	Meerut	Sarurpur Khurd
137.	UP	Bahraich	Risia
138.	UP	Lucknow	Malihabad
139.	UP	Kheri	Phoolbehar
140.	UP	Sitapur	Laharpur
141.	UP	Balrampur	Tulsipur
142.	UP	Budaun	Dahgavan
143.	UP	Bulandshahr	Bulandshahr
144.	UP	Siddharthnagar	Domariyaganj
145.	UP	Jyotiba Phule Nagar	Joya
146.	UP	Ghaziabad	Razapur

147.	UP	Aligarh	Jawan Sikanderpur
148.	UP	Bara Banki	Fatehpur
149.	UP	Sambhal	Sambhal
150.	UP	Pilibhit	Puranpur
151.	UP	Shamli	Kairana
152.	UP	Sant Kabir Nagar	Semariyawan
153.	UP	Baghpat	Baraut
154.	UP	Shrawasti	Jamunaha
155.	WB	Murshidabad	Domkal
156.	WB	Maldah	Kaliachak - I
157.	WB	Uttar Dinajpur	Goalpokhar - I
158.	WB	South 24 Parganas	Bhangar - II
159.	WB	North 24 Parganas	Deganga
160.	WB	Barddhaman	Manteswar
161.	WB	Nadia	Nakashipara
162.	WB	Birbhum	Murarai - II
163.	WB	Howrah	Domjur
164.	WB	Kolkata	NA
165.	WB	Koch Bihar	Cooch Behar - I
166.	WB	Darjiling	Phansidewa
167.	WB	Dakshin Dinajpur	Gangarampur

Table 3.2 List of 44 Cities for establishment of Central Schools

Sl. No.	State	District	Name of the City
1.	**Uttar Pradesh**	Moradabad	Moradabad
2.		Rampur	Rampur
3.		Saharanpur	Saharanpur
4.		Bareilly	Bareilly
5.		Meerut	Meerut
6.		Lucknow	Lucknow
7.		Aligarh	Aligarh
8.		Allahabad	Allahabad
9.		Varanasi	Varanasi
10.		Firozabad	Firozabad
11.		Kanpur	Kanpur
12.	**West Bengal**	Kolkata	Kolkata
13.	**Maharashtra**	Mumbai	Mumbai
14.		Aurangabad	Aurangabad
15.		Amravati	Amravati
16.		Malegaon	Malegaon
17.		Nanded	Nanded Waghala
18.		Pune	Pune
19.		Thane	Thane
20.		Thane	Mira Bhayandar
21.		Thane	Bhiwandi
22.		Palghar	Vasai Virar
23.		Solapur	Solapur
24.		Nagpur	Nagpur

25.	**Kerala**	Kozhikode	Kozhikode
26.		Ernakulam	Kochi
27.		Thiruvanathapuram	Thiruvanathapuram
28.	**Jammu and Kashmir**	Srinagar	Srinagar
29.	**Karnataka**	Gulbarga	Gulbarga
30.		Dharwad	Hubli & Dharwad
31.		Mysore	Mysore
32.		Bangaluru	Bangaluru
33.	**Madhya Pradesh**	Bhopal	Bhopal
34.		Jabalpur	Jabalpur
35.	**Telangana**	Hyderabad	Hyderabad
36.	**Mizoram**	Aizawl	Aizawl
37.	**Rajasthan**	Jaipur	Jaipur
38.		Jodhpur	Jodhpur
39.	**Punjab**	Amritsar	Amritsar
40.		Ludhiana	Ludhiana
41.		Jalandhar	Jalandhar
42.	**Jharkhand**	Ranchi	Ranchi
43.	**Delhi**	Delhi	Delhi MC
44.	**Tamil Nadu**	Tiruchirappalli	Tiruchirappalli

3.2 Community Colleges

The minority youth with talent and aspiration who have till now been deprived should be provided quality education at tertiary level. Such education would enable them to achieve their life goals. The Committee recommends establishing 25 Community Colleges across the country. According to UGC Guidelines (2012) a Government/ society/ trust can set up Community Colleges with the aim to make higher education relevant to the learner of the community and to integrate relevant skills into the higher education system. The Community Colleges should therefore be established under the Maulana Azad Education Foundation (MAEF) which is an autonomous body under the Ministry of Minority Affairs and a registered society under the Society Registration Act.

These colleges will be like low-hanging fruits for the deprived minority youth as they will provide tertiary education opportunities in Arts, Commerce and Science Streams and Skill Based Courses in Health Sciences, Hospitality, Textile & Leather Technology, Costume and Fashion Designing, Media and Entertainment Industry etc. Community Colleges will be an open access model with low tuition fees to train workforce in new technologies. Students can do credit and non-credit courses. Those who are interested in pursuing higher education will have an option to register in degree courses in Arts, Commerce and Science streams. The other option will be to pursue skill based courses in traditional and new trades for certificate and one / two year Diploma programs with an option to continue in degree programs.

The main objectives of the proposed Community Colleges will be:

1) To give relevant education to the deprived among the minority students giving preference to minority girls;

2) To integrate relevant skills into the tertiary education system;

3) To provide opportunities for life-long learning by offering courses of community interest;

4) To ensure quality in tertiary education by providing facilities of high standards.

3.2.1 Governance

It is suggested that the Community Colleges may have the following committees to ensure proper management of academic, financial and general administrative affair:

1) Governing Body

Governing Body (GB) will be constituted by the MAEF. It will consist of 6 members nominated by MAEF drawn among Educationists, Industrialist and Social Workers, 2 members nominated by the Community Colleges Principal from College Teachers based on seniority, 1 member nominated by the respective State Government (Total: 9 Members). The GB will have a tenure of 2 years or till a new GB is constituted.

2) Academic Council

Academic Council will be constituted by the College Principal. It will consist of the Principal as Chairman, all the Heads of Departments (HoD), 4 Teachers

from Community Colleges representing different categories of teaching staff by rotation on the basis of seniority of service in College, 4 Experts from outside the college (Law, Education, Medicine and Industry), 1 member nominated by Governing Body. The Academic Council will have a tenure of 3 years.

3) Board of Studies

The Board of Studies will constitute the concerned Head of the Department (HoD), entire Faculty of each specialization, 2 Experts in the subject from outside College nominated by the Academic Council, 1 representative from Industry/ Corporation, 1 Expert from concerned profession.

4) Finance Committee

The Finance Committee constituted by the College Principal will advise the Governing Board on financial matters and shall meet at least twice a year.

3.2.2 Programs and Curricula

As per UGC Scheme of Community Colleges (SCC) 2012-2017, in order to make education relevant and to create skilled workforce, the Community Colleges will be having constant dialogue with the regional offices of Skill Corporation of India (SCI) so that they remain updated on the requirements of the workforce for the local economy. These colleges will also preserve and promote the cultural heritage of the region, be it art, craft, handicraft, music, architecture or any such thing, through appropriately designed curriculum with proper assurance of employment including self-employment and entrepreneurship development.

As the CBSE and many other school boards are initiating skill based vocational courses with certification at the National Skills Qualifications Framework (NSQF) Level 4 for students completing 10+2, there may be three types of learners getting admission to first semester of Community College courses:

Category 1: students who have already acquired NSQF certification Level 4 in a particular industry sector and opted for admission in the courses under Community College in same trade with job role for which he/ she has been previously certified at school level.

Category 2: students who have acquired NSQF certification Level 4 but who may like to change their trade and may enter into Community College in a different industry sector.

Category 3: students who have passed 10+2 examination with conventional schooling without any background of vocational training.

The community colleges will develop curriculum and arrange for skill intensive training/ teaching for the learners belonging to the category-2 and 3 above during the first six months who will be assessed and certified for NSQF Level 4 of skill competency by concerned Sector Skills Councils (SSC) at the end of first semester. However, learners belonging to category-1 will not require such certification as they already have NSQF level 4 certificates in same industry sector/ job role required for specified skill credits.

All the learners continuing to Diploma courses or further will be treated at par from second semester onwards. Students may exit after six months with a Community Colleges Certificate NSQF Level 4 or may continue for diploma or

advanced diploma level courses. An academic progression for the student's skill stream is illustrated below:

Table 3.3

NSQF Level	Skill Component Credits	General Education Credits	Normal Duration	Exit Points / Awards
6	72	48	Four semesters	Advanced Diploma
5	36	24	Two semesters	Diploma
4	18	12	One semester	Certificate

The NSQF Levels in above illustrations indicate that there should be at least one job role at the concerned NSQF Level in the curriculum to be assessed and certified for skill component. The normal training hours for skilling should be proportionate to the weightage for skill credits and an appropriate component of skill training may be imparted as on-site training at actual workplace. Skill component of the programmes/ courses shall be employment oriented. The Community Colleges will offer Programmes/ Courses in domain areas which have significant demand in the job market locally. Community Colleges may also refer to the skill gap reports of National Skill Development Corporation (NSDC)/ industry associations or such other relevant reports.

With a view to make the skills acquired by the learners acceptable nationally, the curricula and system of certification for the skill component has to be done as per the National Occupational Standards set up by Sector Skills Councils. The

Community College Scheme will lead up to Advanced Diploma Level only. The Community Colleges, in consultation with the industry partner(s) and based upon skills Gap analysis report published by the NSDC, industry associations, Sector Skills Councils, Government agencies etc, may decide specific Job Role(s) to be embedded in curriculum. The exit profiles of the learners at different levels i.e. Certificate/ Diploma/ Advanced Diploma should be clearly defined in output terms.

For skills component, the Community Colleges may adopt the model curriculum developed by the concerned Sector Skill Councils wherever available or adapt it in consultation with the local industry partners. Wherever the curriculum is not available, the same may be developed in consultation with the relevant Sector Skill Councils and local industry partners. The general education component of the curriculum shall be decided by the Board of Studies of the community college concerned. While doing so, they may work towards aligning the curriculum with the National Occupational Standards being developed by the respective/allied Sector Skill Councils. This would promote national and even global mobility of the learners, as well as higher acceptability by the industry for employment purposes. The curriculum for courses under Community College running in affiliated colleges shall be finalized by BoS as mentioned above and separate approval from affiliating University may not be required.

Community Colleges are to offer knowledge - skill mixed programmes of different durations depending on the need of the local industry leading to certification at various levels of the NSQF. The skill component of these programmes

will conform to the NSQF and the general education component may conform to the university norms. The practical/ hands-on portion of the skills component of the curriculum shall be transacted in face to face mode. The Community Colleges will offer credit-based modular programmes, wherein banking of credits for skill and general education components shall be permitted so as to enable multiple exit and entry. This would enable the learner to seek employment after any level of Award and join back as and when feasible to upgrade his/her qualification/ skill competency either to move higher in his/her job or in the higher educational system. This will also provide the learner an opportunity for vertical mobility to second year of B.Voc degree programme after one year diploma and to third year of B.Voc degree programme after a two year advanced diploma.

Recognition of Prior Learning (RPL): Community Colleges may also provide for Recognition of Prior Learning (RPL) framework for job roles at NSQF Level 4 onwards by conducting assessment and certification through respective SSC(s)/Directorate General of Employment and Training (DGET). Relevance of programmes offered, along with that of the curriculum is important. Therefore, monitoring, evaluation and updating of the curriculum needs to be done periodically in consultation with all stake holders, particularly the industries and SSCs keeping in view their requirements and changes in National Occupational Standards (NOS). The Community Colleges shall incorporate this as a continuous and dynamic process, in-built in their system. All the programmes offered under Community

College will be full time/ part time courses and should not be conducted as add-on programmes. The Community Colleges may like to appropriately use Technology(e-content lessons) to improve the effectiveness of the delivery of courses.

3.2.3 Infrastructure and Faculty

The Community Colleges will be operating in identified buildings and premises. The Community Colleges should be set-up and have proper infrastructure prior to the starting of courses. Each Community College will be having modern laboratory/workshop facilities for face-to-face delivery of skills and hands-on practices. In the Community Colleges, the faculty will be chosen after careful evaluations of individuals' academic record and work experiences.

3.2.4 Recommendation

Among the minorities a noticeable feature of the Muslim minority community is that sizeable number of them practice traditional skills, but have no modern academic institution where traditional and new skills can be imparted by using modern technology. By establishing Community Colleges having both skills based and regular degree courses in relevant traditional areas pursued by them over hundreds of years will enhance their employability. The profile of current Indian and global job market is in favor of multidimensional service sector and hence the committee strongly recommends for establishing 25 of those autonomous community colleges in the states listed below:

Table 3.4 List of States for establishing Community Colleges

S.No.	State
1.	Uttar Pradesh (Eastern)
2.	Uttar Pradesh (Western)
3.	West Bengal
4.	Bihar
5.	Maharashtra
6.	Assam
7.	Kerala
8.	Jammu and Kashmir
9.	Karnataka
10.	Gujarat
11.	Jharkhand
12.	Madhya Pradesh
13.	Telangana
14.	Delhi
15.	Haryana
16.	Uttarakhand
17.	Manipur
18.	Mizoram
19.	Nagaland

20.	Odisha
21.	Tamil Nadu
22.	Andhra Pradesh
23.	Meghalaya
24.	Rajasthan
25.	Punjab

Selection of Location of Community Colleges

The committee also recommends that all the Community Colleges should be established in minority concentrated areas of major towns/cities of the identified states. They should then be in a position to attract quality teachers/ instructors.

Care should also be taken to ensure that the Community Colleges are established in suitable cities in Minority Dominant Districts (MDDs) with literacy levels below the national average and where building / land is available and there is an identified need for the Community College.

3.3 National Institutes

The idea is that highly skilled Minority youth should be provided world class facilities for pursuing tertiary education and research with minimum cost. Such a space would enable them to contribute for the nation's developmental activities. The Committee recommends for establishing 5 Institutes to be called the National Institutes in the following spheres:-

1) National Institute of Science & Technology (NISTEC)

2) National Institute of Health and Allied Sciences (NIHAS)

3) National Institute of Architecture, Planning & Design (NIAPD)

4) National Institute of Climate Change and Disaster Management (NICCDM)

5) National Institute of Renewable Energy and Food Security (NIREFS)

The model of National Institutes will be unique and different from the university system or the IITs/ IIMs. The proposed Institutes will foster education and research in multidisciplinary/interdisciplinary areas without any boundaries or constraints of academic departments. The Institutes will offer programmes of Masters, Doctorate and Post-Doctorate and there may be Research Chairs as well. The research infrastructure of the Institutes will be at par with international standards and would attract the best talents from within the country and outside, as well as encourage successful Indian scientists to return from abroad and take up faculty

positions in the proposed institutions. The proposed Institutes will be established as National Centers of Excellence and will be able to award Master's and Doctoral degrees.

National Institutes will be successful if they attract the best talent from amongst teachers and students, have abundant resources and autonomous governance structures.

The main objectives of the proposed National Institutes will be:

1) To provide opportunities for tertiary education to minority community by offering programmes in applied sciences, arts, technology, industry, commerce, management and social sciences etc.

2) To promote research in applied science, arts, technology, industry, commerce, management and social sciences etc.

3) To ensure quality in tertiary education by providing facilities of international standards.

The academic activities in the institutes will emphasize on class room teaching, research labs, computer labs, site visits and public participation. Exchange programs of faculty and students both at national and international levels including Public-Private participation. Workshops specially focused on hands on training and Awareness programs so that new technologies are accepted and applied.

3.3.1 National Institute of Science & Technology (NISTEC)

The capacity of countries to compete in the global market depends more and more on their ability to innovate and apply the relevant technology to industries and productive sectors. A country's ability to innovate is often based on the adoption of new technologies from abroad, or the results of local research and development; both scenarios require investments in Science and Technology and Innovation. Internationally, India is becoming a leading nation in the emerging knowledge economy scenario. It is necessary to train young students in the emerging fields of science and technology and hence there is a need to establish a set of high-quality education and research institutions in these fields especially for the minorities, which constitutes nearly 20% of our population.

The idea of establishing an Institute in Science and Technology is to formulate courses/ programs that are based upon inherit/ traditional skills of minorities and are focused toward job creation and empowerment of minorities.

The proposed Institute shall provide leadership, best practices, research, support and/or training for a focus area. The focus area might be a technology, a business concept, a skill or a broad area of study. Within an organization it may refer to a group of people, a department or a shared facility. It may also be known as a competency Centre or a capability Centre.

Objectives of NISTEC

To build the Institute as a Centre of excellence in Science and Technology for minorities, this would be at par with institutes like IITs with emphasis on research and

technology. It would be a good demonstration of the fact that an institute could harbor and nurture world class research in its fold. This is very important for building up the Institutes academic zest and esteem. It could be a trendsetter of academic empowerment and rejuvenation.

Traditionally, in a university system, the primary focus remains on knowledge expansion and reasoning and lags in hands on training especially in the field of Science and Technology. As India aspire to become a leading nation in the knowledge based economy, it is imperative to improve quality of higher education among minorities. Therefore, there is a need to establish an institute with focus in the field of science and technology. The objective of such initiative will be to cultivate, promote and innovate in the traditional skill-sets of minorities. The primary goal is to educate and train students, which can be achieved by and are focused towards job creation and empowerment of minorities.

The proposed Institute would

- Have academic mission integral to government of India vision for minorities
- Acquire critical mass in terms of faculty and activity in the focus areas of science and technology visitors programme on the lines of inter-university Centre
- Develop infrastructural support which is comparable to other world class institute/universities

Identify core areas of traditional skill-set of minorities.

- Identify experts from academia, industry as well as entrepreneurs and engage them in developing a curriculum/syllabus for application oriented scientific studies.
- Facilitate Intellectual property rights towards innovations of specifically target skill-set areas.
- Create and provide opportunities for international exchange of scientists/researchers and students, and make collaborative arrangements within India, particularly for minorities.
- Disseminate knowledge through series of seminars / workshops / conferences / extension lectures.
- Each institute will have its own separate identity and may look at having five year integrated courses in identified specialities.

And will also:

- Increase the emphasis on existing research, innovation and higher education
- Continue and strengthen core activities of traditional universities
- Expand into new, relevant areas of science and technology to empower the minorities

- Secure national/international research projects to generate funds
- Enlarge and consolidate academic activities in research, teaching and training
- Establish collaborations and participate in major new projects nationally and internationally
- Strive to build on its reputation and visibility internationally.

In pursuing the above stated objectives, it would however be kept in mind that the institute has to remain focused and committed on its basic theme so that it makes a mark and impact. For effective and smooth functioning of such a facility, it is important to have adequate administrative and infrastructural support.

Thrust Areas

The proposed areas of academic program and research are in traditional sectors like Leather, Textile, Metallurgy, Ceramic (pottery) Carpet, Jewelry etc. wherein the following issues will be of concern;

- Science & Technology from industrial perspective
- Technology Development and Transfer
- Protection of Intellectual Property Rights and Traditional Knowledge
- Academia-Industry Partnership for Technological Development and Innovation
- Science and Technology for Society with emphasis on underprivileged industries

Program Structure of NISTEC

The programme structure of NISTEC and specialized areas would be:

I School of Science

1) Centre for Physics and Applied Physics (Nano-Science, Nano-Technology, Astronomy and Astrophysics)

2) Centre for Mathematics (Applied Industrial Mathematics, Applied Economics & Finance Mathematics, Applied Computational Mathematics, Discrete Models & Algorithms and Stochastic & Data Science)

3) Centre for Chemistry (Chemistry of Materials, Applied Physical & Analytical Chemistry, Applied Inorganic, Organic/ Macromolecular Chemistry and Applied Formulation chemistry - Polymers, Colorants & Fine Chemicals)

4) Centre for Statistics (Statistical Learning Theory, Business Statistics and Applied Statistics)

II School of Technology

1) Centre for Computer Science and Technology (Wireless & Tele Communications, Computer & Information Security, Software & Data Engineering and Cognitive Sciences & Technologies)

2) Centre for Electrical and Electronic Communication (Advanced Embedded Sensor Systems, Quantum Information Technologies, Digital

Electronics & Advanced Communication, Electrical Power Engineering and Electronics & Nano-electronics)

3) Centre for Civil and Metallurgy (Extraction & Modern Metallurgy, Thermal Engineering & Ceramic Materials, Industrial Art & Design and Materials Engineering)

4) Centre for Leather, Textile, Petroleum and Clay (Product Design & Textiles engineering, Petroleum & Mining, Advanced Clay & Industrial Ceramics and Leather Engineering)

5) Centre for Mechanical Engineering (Design & Development, Applied Computational Mechanics, Materials Processes & Technology of Composites and Automatic Control & Robotics Science)

Activities Related to Enriching Academic Program

In addition to the routine academic and research activities, the institute will develop a mechanism to enrich the academic programs with following activities at individual faculty level as well as at institutional level.

- Invite Industrialist/Technocrat to interact with students
- Provide a platform for sharing success stories of Entrepreneurs
- Provide consultancy services in several areas
- Develop a concept of in-house production
- Provide training across disciplines.

- Provide Testing services backed up by sophisticated Infrastructure and specialist staff, ensuring authenticity, accuracy and confidentiality.
- Dissemination to Industry through Publications, Research reports, Technical Leaflets, Papers in Journals, Own Periodicals, Booklets and Books, Bulletins and Magazines.

Research Activities

The quality of research in Science and Technology is important for any country, especially for its economy. In India, high quality research in Science and Technology should be paramount to generate intellectual property in the area of research, where India is still lagging.

The quality of research in applied science in Indian universities hasn't made significant improvement in last decade or so. The major obstacles being, lack of research based applied science courses; hands on training in latest technology tools among young researchers; and dearth of quality teachers and researchers. Therefore, it is necessary to establish new institutes of research and education that are dedicated towards nurturing young talents in the field of science and technology. The priority of these institutes should be quality education and research training by the best minds in specific Research area. This can only be achieved, by recruiting best researchers in the world and provide them the world class infrastructure, sustained core funding and autonomy. A constant evaluation of progress among such institutes should be done by a group of peer reviewers, experts of specific area, who will not only comment and suggest on-going research activity but also make recommendation for further improvement as well as introducing a new course/program.

Research can be broadly classified into four areas: (i) pure basic research or theoretical research which develops knowledge, (ii) strategic basic research which also develops new ideas but with the potential of applications being derived from such research, (iii) applied research that grows from already known principles to develop new applications and (iv) experimental research that attempts to validate known principles or develop new products and technology.

The Institute will establish high quality research at least five research centres in these areas. Several research groups will be created to develop research labs. Each group would function with post doc fellows, short term visiting overseas researchers, visiting professors, Eminent Professors/Chairs. The focus of these groups would be to

- To establish world class Research and Development laboratory
- Developing Academic and Industry partnership through joint research projects, consultancy, internship and several interactive programs.
- Organize seminar/conferences/workshop/training programs
- Establish network of researchers/technocrats within and outside country through exchange of students/faculty/researchers.

Postdoctoral Fellows and Research Chairs

Postdoctoral research is scholarly research conducted by a person who has recently completed doctoral studies, normally within the first five years. It is intended to further deepen expertise in a specialist subject, including acquiring novel skills and methods. Postdoctoral research is often considered essential to acquire advanced

training while advancing the scholarly mission of the host institution; it is expected to produce relevant publications. Postdoctoral research may be funded through an appointment with a salary or an appointment with a stipend or sponsorship award.

It is not unusual for some of the freshest and most original ideas to come from the youngest and bright students. Newly minted Ph.D's can be a source of inspiration for colleagues and students alike. The Institute would have funds for a vigorous postdoctoral program that will attract talented and top candidates.

The establishment of Research Chairs shall be designed to attract and retain excellence in research and innovation at the Institute. The main goal of the Research Chairs initiative is to strengthen and improve research and innovation capacity of the Institute for producing high quality Ph.D's and research and innovation outputs. The key objectives of Research Chair shall be:

- Expand and Improve the scientific research and innovation capacity of the Institute;
- Attract and retain excellent researchers and scientists;
- Increase the production of high quality doctoral graduates; and
- Create research career pathways for young and mid-career researchers, with strong research and innovation.

Research Chairs shall be established researchers that are recognised internationally as a leader in their field and/or have received international recognition for their research contributions.

Expected Outcomes

The government of India has made a significant investment for establishing several centrally funded institutes like IITs, IIMs, NITs, IISERs and universities. However it is difficult to claim that quality higher education has reached the masses, specially the minorities.

It is expected that NISTEC shall support frontier fields of science and technology mentioned in this concept paper. It shall have internationally competitive (world class) research capabilities and shall connect researchers/academician across fields and across the globe. It will attract talented Indian people aboard to work in home and shall generate more avenues of assured quality career for young minorities.

Further, it shall be responsible for Cooperation between researchers and public sector/industry, and also for the transfer of research and development capacity across sectors. It shall also have an effect on innovation and socio-economic development, especially for the minorities. Therefore, the NISTEC shall stimulate the education and research system in a holistic way for the minorities. It may later on chose to start UG/ PG/ integrated/ diploma courses.

3.3.2 National Institute of Health and Allied Sciences (NIHAS)

Since Independence the major thrust areas in health sciences has been in mainstream courses such as MBBS, BDS, MD, MS, MDS, DM, MCh, BPT, MPT BOT, MOT and others. These have churned large number of doctors and health professionals for the country. At present there are already 460 Medical Colleges and

300 Dental Colleges in the country. However, an acute shortage of health professionals both medical and in allied areas is felt in the rural areas populated by minority community, especially Muslims.

Due to increase in emphasis on wellness and preventive care, there is a great demand of skilled professionals in areas like Medical Genetics, Lab Technology, Bio Technology, Pharmaceutics Sciences, Bio Medical Engineering, Imaging Technology, first responders, Ambulance Personnel, Public Health Professionals, Counselors, Chair Side Attendants, Nursing Orderlies, OT Technicians etc.

Moreover, due to increase in numbers of professionals in mainstream healthcare, the indigenous industry is trying hard to replace the medical equipment and dental materials reliance on imports by providing credible substitutes.

In the last few decades there has been an enormous increase in knowledge in the areas of health sciences due to research and innovation in inter disciplinary areas of health and biological sciences in addition to development in areas of biomedical engineering. However, Muslim community is lagging in health science researches.

Objectives of NIHAS

The objectives of NIHAS would be:

1) Produce Post graduate skilled professionals/ human resource in the interdisciplinary areas of health & allied sciences.

2) To conduct research in thrust areas like clinical, allied and policy development by providing PhD/ Post-Doctoral program/ fellowships in health and allied sciences.

3) Invite persons of eminence to advice and guide the institution and augment its profile by providing intellectual and technical support.

4) To conduct National and International seminars, conferences, workshops, CME in the areas of interest.

5) Collaboration with other National/ International Institutions/ Bodies/ Universities/ Industry to establish long lasting collaboration for absorption/ recruitment of the students in tandem with demands of these organizations and industry.

Proposed Program Structure

1) Centre for Pharmacology/ Pharmaceutics:

The discipline of Pharmacology/ Pharmaceutics is an emerging area of Biomedical Sciences due to the evolving role of Generic Medicines and Biotechnology based drug development for different diseases specially vaccine development. There is a huge demand of Professionally trained pharmacologist and pharmaceutic professionals in R & D as well as in Industry. The Pharmaceutical Industry in India has grown by leaps and bounds and looks forward to Academia to provide Human Resource to sustain its growth in the nation

2) Centre for Medical Microbiology:

Microbiology is a basic medical para-clinical specialty being taught in all Medical/ Bio-medical sciences at UG and PG level. The demand for professionally qualifies and trained medical microbiologist in R & D, industry and academia is

potentially high. Moreover, there is also a developing industry in the form of stand-alone medical microbiology and pathology labs, wherein the UG and PG students may start even as entrepreneurs. The employment opportunities as microbiologist in new academic avenues are promising in biomedical colleges across the country and abroad.

3) Centre for Clinical Biochemistry:

Biochemistry is mother of Life Sciences and Chemical language of life processes. The discipline of biochemistry is well established in India and globally. Most of the good universities in India are offering Masters in Biochemistry; however, there are quite a few places where Masters in Clinical Biochemistry is offered besides MD (Biochemistry) being offered in Medical Colleges. The role of Clinical Biochemist in any diagnosis of diseases is very significant and clinicians heavily depend on Biochemical reporting. To generate these reports, every diagnostic centre requires a clinical biochemist, who is conversant with the modern diagnostic tools like molecular diagnostics. Therefore introducing a course in Clinical Biochemistry will be welcome step.

4) Centre for Medical Biotechnology:

The discipline of biotechnology in the last decades has emerged as an important area of allied health sciences. Enormous information has been generated about the application of basic processes of life and its application in the industry to produce large numbers of drugs for human benefit using microbes as a living tool with the help of fermentation, genetic manipulation, and development of vaccine. In

view of this there is a great demand of professionally trained medical biotechnologist in biotechnology based pharma industry, research and teaching.

5) Centre for Dental Biomaterials:

The field of dentistry both in teaching as well as manufacturing of dental consumables required specialist exclusively in dental material sciences and also having domain knowledge of various subjects like metallurgy, ceramics, and polymer sciences amongst a plethora of evolving subjects. Since the indigenous industry is trying to meet the demand of dental professionals across the nation, it is felt that such a program would yield professionals who shall be easily absorbed both in teaching and industry.

6) Centre for Nutritional Sciences:

The discipline of nutritional sciences an evolving area, identified by Indian Council of Medical Research and Dept. of Biotechnology, GOI. There is a great need for this discipline and its trained professionals to bridge the gap between the patients and the practitioners. In India, there are variety of food being consumed by the people is not normally in sync with the prescribed dietary requirements. These individuals may also help in contributing and changing food production and food security of the nation.

7) Centre for Medical Laboratory Technology

Area of medical Lab technology has grown enormously because of the development in technology of diagnostic sciences. Without a trained medical

laboratory technologist, no pathology lab can function effectively. Hence, there are huge employment prospects of these professionals in India and abroad. Introducing this subject at Masters Level shall produce professionals for the country will bring a sea change in diagnostic services available in the country.

8) Centre for Medical Imaging technology:

The field of Imaging Technology has been the greatest beneficiary from the digital era, rapidly moving from film to sensors to composite platforms across technologies. Hence, there is an urgent need to produce professional manpower in this area to service the mushrooming medical imaging scenario with emphasis on skill and training.

9) Centre for Masters in Physiotherapy and Geriatrics:

Physiotherapy has gained importance in the present day, nationally and internationally because of modern lifestyle. Large number of diseases like Diabetes, hypertension, neurological disorders, ageing issues etc. can be managed very well using the tools of physiotherapy and rehabilitation approach. There is a huge employment opportunity globally as the demographic dividend of our country is likely to slowly transform into demographic liability in terms of an ageing population being a considerable chunk of the total population.

10) Masters in Medical Genetics

Genetics is an identified and established discipline of biomedical sciences. The use of the knowledge of Genetics is being utilized in diagnosis and patient care for various congenital and developmental disorders. Its role in pre-natal diagnosis for

detecting various genetic predispositions is well established. The role is also significant in the field of Genetic Counseling. Introducing this course at master's level will provide professionals for consumption in health care industry, bridging the gap between clinicians and patients both locally as well as globally

Doctoral & Post-Doctoral program

Research work leading to PhD and Post-Doctoral work will be offered in all the above mentioned areas focusing the health issues of Indian population. The faculty shall be incomplete without its attachment to a major Hospital / Research Centre. A state of the art research facility in the focused areas modern Biomedical Sciences may be setup to cater the need of teaching/training and conducting high quality research work in all the areas mentioned above including clinical trials. Highly qualified and skilled Faculty members would be recruited from Medical/ Dental/ Life Sciences/ Physiotherapy/ Occupational Therapy/ Nursing etc. The institution may choose to run conventional MBBS/ BDS/ BPT/ BOT/ Nursing courses/ integrated courses.

3.3.3 National Institute of Architecture, Planning & Design (NIAPD)

The objective is to create and explore newer areas of architecture, planning and design for masses to bring a reform in spaces and improve the quality of life in and around the minority concentrated areas. The aim is towards the formulation of Institute for Excellence in the above mentioned domains thereby enhancing the provision for academic-industry interface and also thereby acting as a National Resource Institute in Research and Training. The Institute for Excellence will be an organization committed to be at the forefront of research, innovation and technical skills irrespective of its field of expertise.

The minority communities living in the concentrated areas have developed skills and resources for their livelihood. But of late these have proved to be insufficient for their development and progress. As a result there is a significant depletion in their socio economic status. Intervention by the Government will help to solve these problems to a greater extent. Government has already begun working on these thrust areas and the proposed institute for excellence in architecture and planning will be very helpful in this direction. It can contribute in helping in providing housing to all, energy efficient housing which require less energy, local material and technology (vernacular architecture) in accordance with the local climate, generating electricity from the solar energy and helping in the smart cities initiative of the government of India.

In alignment with the vision and mission of the Ministry of Minority Affairs regarding inclusive development and promotion of education, employment, and economic activities for a holistic upliftment of the concentrated areas, the following institutes can be established as Institute for Excellence to focus on the habitat, skill development, infrastructural development, sustainable policies, and vulnerability to disasters.

Programme Structure of NIAPD

The following thrust areas are proposed to be developed under three schools namely:

I School of Architecture

1) Centre for Energy Efficient Buildings,

2) Centre for Vernacular Architecture

3) Centre for Low Cost Habitat Studies

4) Centre for Islamic Arts & Architecture

Vernacular architecture refers to the kind of architecture that is deeply rooted in nature. It is based on traditional and indigenous building practices. It is based on local needs and reflects the environmental, cultural, technological, and historical context in which it exists. Vernacular architecture has evolved through ages, where climate and available materials have played an important role. In present context, where sustainable building practices have become the order of the day, there is a need to revisit the vernacular architecture simply because they are time tested.

A major focus in physical progress indicator of the minority concentrated areas by the Ministry of Minority Affairs has been on the identification of kutchha/pucca habitats thereby laying down a very significant presence of uneven resources and economy resulting in the presence of weaker habitats. A institute focusing on the techniques and technologies in the construction and development of low cost habitat studies and its implementation can result in a major contribution towards a healthy habitat for all in alignment with the government vision of 'housing for all'. A huge lacuna in the field of low cost measures of construction exists in the minority concentrated areas of the country.

Under the IAY scheme a total of 301221 units were sanctioned for construction in the year 2015-16 and MoMA has already begun working on Energy Conservation and Efficiency which emphasizes to incentivize new energy efficient buildings to cover at least 30% constructions and also on the Existing Government buildings to reduce energy use by 25%. Working on Energy Efficiency alone may not result in low cost construction which is the need in concentrated areas as they witness very low economic strata. The energy efficient techniques have to be in sync with the low cost housing techniques thereby making the construction and its maintenance affordable. A research in vernacular & low cost materials keeping the locally available resources and techniques in focus would be the major thrust of this institute, along with its execution and regulation. Development of manuals on low cost habitats and the supervision of the housing development in the concentrated areas would be the other major thrust areas of the Institute of Vernacular & Low Cost Habitat Studies.

The extent of the minority concentrated areas in India can be clubbed into regions with diverse practices of arts and architecture. The medieval period witnessed a great advancement in the Islamic arts and architecture of many regions of India. The mandate of the Institute for Excellence for Islamic Arts and Architecture would be to educate architects, planners, teachers, and researchers who can contribute directly to meeting the building and design needs of Muslim communities today. Besides, the teaching and scholarship will also serve to increase sympathetic cross-cultural interest in Islamic arts and culture.

In the Indian context, particularly in minority concentrated areas, Islamic art brought in a rich heritage of geometric design, interplay of light and shade and refined technological skills lending dynamism to architectural rendition. When mingled with the Indian tradition of botanical ornamentation with its intricate renditions of flowers, leaves, stylized foliage along with other life forms symbolizing the essential aspects of divine persona, the resultant was like nothing seen outside of India.

The institute would focus on documenting and formulating regulations for the development of arts and architecture in the minority concentrated areas besides acting towards advancing the quality of knowledge, expertise and services in Islamic Arts & Architecture which makes a difference at the ground level in terms of ongoing practices, research and education and skill development.

II School of Holistic Planning

1) Centre for Indigenous Urbanism & Holistic Planning (Informal Settlements & Social Design, Infrastructural Development, Landuse Policies).

Every area has its own system of forces which shape the human settlement resulting in indigenous urbanism. In contemporary times unregulated growth and haphazard development in many minority concentrated areas can be witnessed because of the high density and low economic generation. A controlled measure for efficient land use and required infrastructural development can result in a harmonious and inclusive society. Besides housing, effective landuse planning of the concentrated areas as per the need

and carrying capacity of the land with desired infrastructural development can result in a holistic development of the area in the light of the ecological considerations of the greater region.

The centre can work towards the 'Swasth Bharat-Shikshit Bharat' initiative by supervising the necessary infrastructural growth towards health and education, regulated through land use policies, and act as control towards the formation of slums in the concentrated areas.

The centre shall also focus on the concept of mixed land use as a traditional urban scheme emphasizing on nature and organization of mixed land use in minority concentrated areas besides working towards spatial organization of mixed land use at building level and city level. A special emphasis of the institute will also be towards the traditional knowledge systems of human settlements in the minority concentrated areas towards people-centric development. A holistic planning approach of weaving the five elements of anthropos, nature, shell, society & network will be emphasised on focusing on social, economical, environmental upliftment of the society.

2) Centre for Remote Sensing & Geospatial Planning (Geo-Spatial Technologies, GIS & Remote Sensing)

The use of spatial technologies in contemporary times has emerged as one of the most powerful tool of mapping and analysis, and accordingly for the management of human and natural resources. A centre of Remote Sensing and Geo-Spatial Technologies can help the dissemination of this technology, thereby training

people and helping in propagating the tool for a holistic growth of the society. The centre shall focus on technical advancements in the field and towards advanced study in planning.

The centre shall be a mix of academic & technical that delves deeper into teaching, training and research. The main functions of the centre shall be focusing on advance knowledge and expertise on different aspects of the respective institutes and enhance communications for effective study on the ground across vertical and horizontal scales. It shall emphasize on transfer knowledge across local, state, national and global contexts to create new solutions and creation of databases and expertise to be readily used besides identification and documentation of best practices; and development of local resources for their implementation. The centres shall also conduct research that is at the forefront of respective institutes in India and create new pathways for further research and applications of the findings. Further it can play the role of an incubator – identifying and nurturing institutions that have the ability to be institutes of importance in long-term. Another major objective shall be to serve as a platform for public policy consultation.

III School of Design

1) Centre for Advanced Study in Industrial, Product & Textile Design (Product Design, Industrial Design, Textile Design, Energy Efficient Buildings, Solar Architecture, Climatology, Urban Management. Smart Energies, Energy Efficiency and Skill Development)

As there remains a critical shortage of skilled personnel to develop, design, finance, build, operate and maintain products through skill development, representing one of the greatest barriers to the wider diffusion of technologies.

The centre shall focus on Skill Mapping Studies to assess skill deficit, and sector requirements and the incorporation of smart energies, besides focusing on the various domains of advanced studies in the field of industrial design, product design and textile design. The output of such study would include suggestions regarding strategies for bridging the gaps besides focusing on the adoption and dissemination of advance technology which requires skills in technology application, adaptation and maintenance. The adoption of sustainable behaviors through workshops, seminars, training courses and conducting skill development trainings in line with the overall objectives and framework that will be agreed upon with the industry.

A large portion of economic generation in minority concentrated areas is through household industries wherein the use of traditional skills is still a very major contributor to their industry. A major highlight of the Annual Report of MoMA is the Solar Lantern/Solar Light Project wherein 30,314 units were sanctioned for the physical progress of the minority concentrate areas. The use of smart energies has been one of the major thrust areas of the government along with the "Make in India" initiative. The skill richness of the areas if coupled with smart energies can lead to a very sustainable and balanced future growth, thereby contributing more towards production and economy using lesser energies from grid.

A centre focusing on the various kinds of smart energies from multiple passive and active sources can help build a better future for the skill blessed concentrated blocks/towns/ contiguous villages. In addition, traditional skills being practiced by minority communities can also be taken for up-gradation and market linkages. The centre can build on the "Seekho aur Kamao" scheme of the government by helping the skill-set craftsmen in promotion of the skills as well as empowering them with the knowledge and use of conventional and active sources of energies. The year 2015-16 saw witnessed 50 Project Implementing Agencies (PIAs) working towards the development of the 'Learn and Earn' scheme. A centre supporting these 50 PIAs and many more can lead to a very productive and efficient skill products in the country thereby contributing handsomely to the GDP of the state and country. The centre would focus on higher studies and research in climatological studies, smart energies in skill development, energy efficient neighborhoods thereby contributing to smart societies.

A centre focusing on the capacity building of the craftsmen in developing better products and better design is required to be established wherein the centre would focus on design development and training of people in minority concentrated areas in sync with the concept of the smart energies. As far as skill development is concerned, it has to be enhanced according to the different type of smart energies. Therefore, the positive impacts of the transition to an economy can be maximized only by developing the skills, knowledge and competencies required by resource-efficient processes and technologies; and integrating these into our businesses and

communities. The centre of excellence can work in the light of the scheme of 'Pradhan Mantri Kaushal Vikas Yojna' under the Ministry of Skill Development and Entrepreneurship'.

As per the recommendations laid down by the MoMA emphasizing on Energy Conservation as a People's Movement wherein under 'Nai Roshni' scheme, MoMA will develop new Modules to promote awareness about energy conservation amongst women and in all the skill training courses/modules being used by MoMA, awareness for energy conservation will be added up as an input, the focus of coupling smart energies with skill development will call for a major reform and upliftment of the minority concentrate areas. The use of smart energies in sync with digital applications will lead to connectivity and digital identity for all in the light of 'Digital India' initiative. The boom in smart energies, in particular, has created a huge demand for skilled technicians – to install PV, and to maintain and operate wind installations. There is also a pressing need for trained professionals within educational institutions to teach renewable energy courses, within governments to design and implement effective and efficient policies, and within financial institutions to accurately assess renewable energy project proposals.

The vision for Institute of Advanced Study in Industrial, Product & Textile Design (Incorporating Smart Energies) will focus towards advancing the quality of knowledge, expertise and services in smart energies which makes a difference at the ground level in terms of ongoing practices, research and education in smart energies and skill development.

3.3.4 National Institute of Climate Change and Disaster Management (NICCDM)

Climate change is currently taking place at an unprecedented rate and is projected to compound the pressures on natural resources and the environment associated with rapid urbanization, industrialization, and economic development. It will potentially have profound and widespread effects on the availability of, and access to, water resources. Glaciers in the Himalayas are receding faster than in any other parts of the world. UN's Intergovernmental Panel on Climate Change (IPCC) forecast that if current trends continue, 80% of Himalayan glaciers will be gone in 30 years, although more recent estimates have suggested the 2060s or later. It may cause water shortages for downstream agriculture in dry season and millions of people in the region will be vulnerable. The citizenry is concerned with the impact of global climate change on weather related processes. We recognize an urgent need for research on climate change risk identification and modeling, early warning systems and better disaster risk management policy focussed on a pro-active in response to the anthropogenic challenges to facilitate a sustainable coexistence with its physical environment.

Climate change has emerged an important driver of change affecting natural resources and socio-economic conditions and thus making the regions vulnerable to varied problems. The vulnerability of watershed to the impact of changing climate is of vital importance because the major impact of climate change would be on the hydrology, affecting water resources and agricultural economy. It has now been

established that global climate change and resultant global warming is a direct result of increased emissions of heat-trapping gases into the atmosphere (IPCC, 2014). As far as influence of global climate change processes on surface processes at the scale of small watersheds is concerned, downscaling is a major challenge. Given the toll of the worldwide disasters, the Third UN World Conference on Disaster Risk Reduction (WCDRR) held in the Sendai city, Japan had all the UN member states agreeing on 18 March 2015 to adopt the Sendai Framework for Disaster Risk Reduction 2015-2030. This Declaration was later endorsed by the UN General Assembly. It is being actively supported by the Government of India through the Ministry of Home Affairs and National Disaster Management Authority.

A tropical country in South Asia like India is highly vulnerable to extreme events due to climate change. In the recent past, the country has witnessed a significant rise in frequency and intensity of extreme events of temperature and precipitation, causing immeasurable damage of properties and loss of life. A minor shift in mean state of climate over the most parts of the earth has the potential to have catastrophic consequences on the socio-economic survival of millions of people globally.

The United Nations defines disaster as a serious disruption of the functioning of a community or a society which involve widespread human, material, economic or environmental impacts, which exceed the ability of the affected community or society to cope using its own resources. Disaster is broadly classified into two categories natural and manmade. Natural disasters: including floods, hurricanes,

earthquakes and volcano eruptions that have immediate impacts on human health and secondary impacts causing further death and suffering from (for example) floods, landslides, fires, tsunamis. Whereas manmade are those which are caused by humans. It can be grouped into three categories i) chemical, ii) environmental and iii) biological. Hazardous materials emergencies include chemical spills and groundwater contamination. Workplace fires are more common and can cause significant property damage and loss of life. The difference between natural and man-made disasters is the element of human intent or negligence that may leads to human and economic and environmental damage; many mirror natural disasters, yet man has a direct hand in their occurrence. These are the net result of inadequately managed man-made hazards and they typically cost the most in terms of human suffering, loss of life and long-term damage to a country's economy and productive capacity.

Disaster management can be seen as the organisation and management of resources and responsibilities for dealing with all the humanitarian aspects of emergencies, in particular preparedness, response and recovery in order to lessen the impact of disasters. The disaster management holistic approach involving prevention, mitigation and preparedness in pre-disaster phase with appropriate additional funding, along with the so far existent policy of the post-disaster relief and rehabilitation under crisis management. Creation of awareness for disaster reduction is urgently needed amongst policy makers, decision makers, administrators, professionals (architects, engineers and others at various levels) financial institutions (banks, insurance, house financing institutions) and NGOs and voluntary organizations. Another important component is creating awareness for improving

preparedness amongst the communities, using media, school education, and the network of the building centre. Disaster management covers a number of broad aspects as follows:

Disaster prevention

These are activities designed to provide permanent protection from disasters. Not all disasters, particularly natural disasters, can be prevented, but the risk of loss of life and injury can be mitigated with good evacuation plans, environmental planning and design standards. It offers guiding principles, priorities for action, and practical means for achieving disaster resilience for vulnerable communities.

Disaster preparedness

Disaster preparedness are those activities which are designed to minimize loss of life and damage e.g. by removing people and property from a vulnerable areas and by facilitating timely and effective rescue, relief and rehabilitation. Preparedness is the main way of reducing the impact of disasters. Community-based preparedness and management should be a high priority in physical therapy practice management.

Disaster relief

The disaster relief is a coordinated multi-agency response to reduce the impact of a disaster and its long-term results. Relief activities include rescue, relocation, providing food and water, preventing disease and disability, repairing vital services such as telecommunications and transport, providing temporary shelter and emergency health care.

Disaster recovery

Disaster recovery includes activities like rebuilding infrastructure, health care and rehabilitation. These should blend with development activities, such as building human resources for health and developing policies and practices to avoid similar situations in future. Disaster management is linked with sustainable development, particularly in relation to vulnerable people such as those with disabilities, elderly people, children and other marginalized groups.

India has had its fair share of hydro-geologic catastrophes in recent years: 2015-2016 flooding across India; 2014 floods in the Jammu and Kashmir (estimated at US$16 billion, the costliest natural disaster in 2014); 16-17 June 2013 Uttarakhand hydro-geologic disaster (affected some 900,000 people, 580 deaths, 4000 missing, over 100,000 pilgrims stranded; the total cost estimated at US$ 3.8 billion), and the Indian Ocean Tsunami. In all of these catastrophes human interventions to natural landforms and processes made impacts worse and created hazards where there were none to start with. The citizenry is concerned with the impact of global climate change on weather related processes. We recognize an urgent need for research on climate change risk identification and modeling, early warning systems and better disaster risk management policy focused on a pro-active in response to the anthropogenic challenges to facilitate a sustainable coexistence with its physical environment. An aggressive use of earth science information (ESI) will facilitate a nation-wide capacity building programme for a resilient society and to help enforce basic strategies amenable to avoidance, correction and climate change and disaster risk reduction.

The proposed institute will extend its support to the efforts and contributions of the Government of India and SAARC to meet with the SFDRR aims, particularly understanding climate change and disaster risk and all its various dimensions. Such knowledge can be used for risk assessment, prevention, mitigation, preparedness and response. Climate change affects all aspects of life, making rainfall less predictable, changing the character of the seasons, and increasing the likelihood and severity of extreme events such as floods. Climate change has been devastating for the cultural life of people who depend on biological diversities to sustain life.

Based on these concepts it can be seen that there is an urgent need to establish an institute with an aim to create well-defined interdisciplinary state-of-the-art of teaching and research programmes each under the leadership of experienced scientists who will in turn help in producing young students and scientists as agents of nation building. It is proposed to initiate postgraduate courses and high quality research on Climate Change and Disaster Management. Based on experience in research on climate change and its impacts, geomorphic hazards, watershed management, socio-economic impacts of hazardous processes, and development, it has been possible to identify a number of high-priority new and emerging interdisciplinary research areas. The institute shall enhance human resource development through offering selected topical training programmes (in collaboration with National agencies) aimed at students, faculty members, NGOs and the public at large to produce dedicated work force to tackle need-based disaster risk reduction and management.

Objectives of NICCDM:

The Institute aims to achieve the following objectives:

1) To carry out teaching and research on subjects related to climate change, disaster management and environment and toxicology and to serve as an institution of higher learning.

2) To interact/ collaborate with Universities, R&D institutions and developmental agencies in India and abroad for research, technology innovation and transfer of technology.

3) To provide scientific and technological support to implement developmental projects of Local Self Government Institutions and other agencies.

4) To develop databases and information systems on specific areas related to climate change, disaster management, environment and toxicology.

Outreach and educational initiatives/Industry-Academic linkage/ partnership

The institute shall try to carryout capacity building, training and outreach programs for different target groups, engaging with academia, industry, government and the general public. Also expert orientation programme shall be conducted to enrich the post graduate and doctoral students.

Structure of NICCDM

1) Centre for Climate change (Vulnerability, resilience and adaptation and to create resilient society, impact of climate change on snow melt, avalanches and

flood risk, impacts of climate change and disasters on socio-economic and environmental conditions)

2) Centre for Earthquake, Landslide hazards, Debris flow and their mitigation

3) Centre for Man-made disasters (Chemical and atomic etc.)

4) Centre for Environment and Toxicology

Expected outcomes of the Institute

1) The data/ maps generated using remote sensing satellite at various scale of extreme events and vulnerability to climate change of the region will be useful to understand problems arising out of climate change and disasters.

2) The institute will help for hydrological planning and disaster managements in the country and it will also help in reducing the human, economic and ecological losses.

3) Generating new knowledge on the sources, fate, exposure, and effects of environmental contaminants, and to apply this knowledge to environmental and human risk assessment;

4) Providing education and training in environmental toxicology and risk assessment in an environment where students and staff can grow and fulfill their aspirations; and engaging with academia, industry, government and the general public.

5) Producing highly qualified and skilled students are various levels to participate in growth process of the nation.

3.3.5 National Institute of Renewable Energy and Food Security (NIREFS)

Energy is a vital input for the development and economic growth of a country. The growth for energy sector is critical for socio economic development particularly for rural areas. In the Indian context, it is a great challenge to provide affordable energy services to the entire population. At present, 80% of the total villages and 44% of rural households has access to grid electricity. The development of energy system is also constrained by the depletion of fossil fuel, local environmental impacts and the problem of global warming and associated climate change. The energy sector is in transition and therefore there is a significant need to understand its various challenges and opportunities.

It is also clear that given the large proportion of poor and energy un-served population in the country, every effort needs to be made to exploit the relatively abundant sources of energy available to the country. While, today, domestic coal based power generation is the cheapest electricity source; however future scenarios suggest that this could well change.

Solar energy is environmentally friendly as it has zero emissions while generating electricity or heat.

About 5,000 trillion kWh per year energy is incident over India's land area with most parts receiving 4-7 kWh per sq. m per day. Hence both technology routes for conversion of solar radiation into heat and electricity, namely, solar thermal and solar photo-voltaic, can effectively be harnessed providing huge scalability for solar

energy in India. Solar energy also provides the ability to generate power on a distributed basis and enables rapid capacity addition within short times. Government subsidies and targeted loan schemes aimed at catering a clean and sustainable energy future are bringing down implementation costs, making solar a more viable source of energy for more people. The Indian energy sector is one of the fastest growing markets in the world.

The Indian photovoltaic market is on a high-growth curve and an estimated 3 lakhs professionally qualified individuals in solar industry will be required in the coming years.

In order to realize the full potential of solar energy in India, there is an immediate need to create a qualified workforce at all levels of expertise.

The global solar energy sector has been growing at a rapid pace over the past few years amid climate change concern and desires for energy security. The Solar Industry in India is growing exponentially. JN National Solar Mission (JNNSM) – targets of 20 GW by 2020 from the current (nearly) zero on-grid installation; giving vast opportunity for exploitation of solar radiation as the clean renewable energy source. The objective of the Solar Mission is to create conditions, through rapid scale-up of capacity and technological innovation, and to drive down costs towards grid parity. The Mission anticipates achieving grid parity by 2022 and parity with coal-based thermal power by 2030, but recognizes that this cost trajectory will depend upon the scale of global deployment and technology development and its transfer.

1) To create an enabling policy framework for the deployment of 20,000 MW of solar power by 2022.

2) To ramp up capacity of grid-connected solar power generation to 1000 MW within three years – by 2013; an additional 3000 MW by 2017.

3) To create favourable conditions for solar manufacturing capability, particularly solar thermal for indigenous production and market leadership.

4) To promote programmes for off grid applications, reaching 1000 MW by 2017 and 2000 MW by 2022.

5) To achieve 15 million sq. meters solar thermal collector area by 2017 and 20 million by 2022.

6) To deploy 20 million solar lighting systems for rural areas by 2022.

Wind Energy

Besides the solar energy as one of the major sources of renewable green energy the wind energy is an equally clean and abundantly available source of energy in many areas. Wind energy is available without any cost and it does not emit any Greenhouse gases. The electricity sector in India had an installed capacity of 253.39 GW as of August 2014. India became the world's third largest producer of electricity in the year 2013 with 4.8% global share in electricity generation surpassing Japan and Russia.

Approximately 10 million MW (or 10 thousand GW) of wind energy is continuously available to India. India's Power Finance Corporation Limited projects

that current and approved electricity capacity addition projects in India are expected to add about 100 GW of installed capacity between 2012 and 2017. This growth makes India one of the fastest growing markets for electricity infrastructure equipment. Of the 1.4 billion people of the world who have no access to electricity in the world, India accounts for over 300 million. The International Energy Agency estimates India will add between 600 GW to 1,200 GW of additional new power generation capacity before 2050.

India is fulfilling its nearly 85% of energy demand from the conventional resources such as coal, nuclear energy, natural gas and petroleum which generate many greenhouse gases. Green houses gases-carbon dioxide (CO2), sulfur dioxide (SO2), nitrous oxide (N2O) etc. are produced in the energy generation process.

These gases are not only harmful for people's health but it also deteriorates the environment vis-à-vis global warming and hole in the ozone layer. Thus it is the need of time that country should look towards the green & renewable methods for the generation of energy so that environment can be saved from those harmful effects. Wind energy, solar energy, biomass & other renewable methods can be used for the generation of energy to fulfill the energy demands of the country.

Govt. of India is promoting the development of such studies so as not only to control the level pollution but also tap those sources of energy which are renewable and are inexhaustible and cheap in long run.

In this direction we would like to propose that, in addition to the solar energy source studies, we can also train our students in the other sectors of renewable green

energies i.e. Wind Energy, Hydrogen Fuel Cells, Geo-Thermal Energy as well as the Tidal Energy Sources.

As of December 2013 the installed capacity of wind power in India was 20.15 GW, mainly spread across Tamil Nadu, Maharashtra, Gujarat, Karnataka, Rajasthan, Madhya Pradesh, Andhra Pradesh, Kerala, West Bengal, other states. There is a lack of share in wind energy production from the northern states like UP, Bihar, Delhi, Haryana, Punjab etc.

The field of wind energy has tremendous scope for innovation, translating to real world applications and tremendous economic opportunity. It is crucially important for India, as our economy continues to evolve, and we must ensure every Indian has access to it. To fulfill the potential of India in the coming years and it is certain that wind energy will play a major part in it.

The current proposal is therefore concerned with the teaching and training programme on Clean and Renewable Energy Sources like Wind Energy Systems and Hydrogen Fuel Cells. The inclusion of these studies aims to enhance the knowledge of our students in these areas so that we can generate the required man power for the future development of the green energy resources in our country.

In view of the above it is necessary that our B.Voc. as well as M.Sc. course students should learn about the scientific and technological aspects of these new alternative green energy sources which have a vast scope in the northern states of our country.

Hydrogen Fuel Cell

Hydrogen fuel cells are a promising technology for use as a source of heat and electricity for buildings and as an electrical power source for electric vehicles. Although these applications would ideally run off pure hydrogen, in the near term they are likely to be fuelled with natural gas, methanol, or even gasoline. Reforming these fuels to create hydrogen will allow the use of much of our current energy infrastructure - gas stations, natural gas pipelines, etc. - while fuel cells are phased in.

In the future, hydrogen could also join electricity as an important energy carrier. An energy carrier stores, moves, and delivers energy in a usable form to consumers. Renewable energy sources, like the sun, cannot produce energy all the time. The sun does not always shine. But hydrogen can store this energy until it is needed and can be transported to where it is needed.

Some experts think that hydrogen will form the basic energy infrastructure that will power future societies, replacing today's natural gas, oil, coal, and electricity infrastructures. They see a new hydrogen economy to replace our current energy economies, although that vision probably will not be realized until far in the future.

Hydrogen has an excellent safety record and is as safe for transport, storage and uses as many other fuels. Nevertheless, safety remains a top priority in all aspects of hydrogen energy. The hydrogen community addresses safety through stringent design and testing of storage and transport concepts, and by developing codes and standards for all types of hydrogen-related equipment.

The researchers are exploring the use of renewable resources such as sunlight, biomass and biological organisms to produce hydrogen economically.

Photo-conversion production

Researchers use either biological organisms (bacteria or algae) or semiconductors to absorb sunlight, split water and produce hydrogen. Through their normal metabolic function, some biological organisms naturally produce hydrogen; semiconductors produce hydrogen by generating an electric current that splits water.

Researchers have developed a device that splits water into hydrogen and oxygen with greater efficiency than most other methods using sunlight. Current systems link photovoltaic cells that generate electricity with an electrolyser to break down water. There is an advanced alternative to these less efficient photovoltaic/electrolyser systems. The new device converts about 12% of available sunlight into hydrogen, compared to 4–6% for the photovoltaic/electrolyser system. While not currently economical, the device has a potential for lower cost hydrogen and represents a breakthrough in hydrogen research.

Thermochemical production

This approach uses heat to produce hydrogen from biomass and solid waste. A developed pyrolysis technology uses heat to liquefy biomass. Steam is then used to make hydrogen from the resulting bio-oil in a process known as steam reforming.

Storage research

Hydrogen is currently stored as a compressed gas or a cryogenic liquid in physical storage systems. A solid-state storage system that is safer than physical storage systems and can potentially store more hydrogen per unit volume is being developed. Solid-state systems chemically or physically bind hydrogen to a solid material.

The solid-state storage system uses microscopic carbon tubes to adsorb hydrogen. The technology can store high volumes of hydrogen at higher temperatures than other technologies and at near ambient pressure levels. The hydrogen attaches to the surface of the carbon and is released by changing temperature and pressure levels.

Hydrogen sensors

Since hydrogen can neither be seen nor smelled, as an added safety precaution for hydrogen-fuelled vehicles, the researchers are developing a hydrogen leak detector. To detect hydrogen, a very thin sensor that reacts to hydrogen by changing colors is applied to the end of a fiber optic cable. The sensors can be placed throughout the vehicle to relay information on leak detection to a central control panel.

Geo-Thermal Energy

Heat energy continuously flows to the Earth's surface from its interior, where central temperatures of about 6 000°C exist. The predominant source of the Earth's

heat is the gradual decay of long-lived radioactive isotopes (40K, 232Th, 235U and 238U). The outward transfer of heat occurs by means of conductive heat flow and convective flows of molten mantle beneath the Earth's crust. This results in a mean heat flux at the Earth's surface of 80kW/km2 approximately. This heat flux, however, is not distributed uniformly over the Earth's surface; rather, it is concentrated along active tectonic plate boundaries where volcanic activity transports high temperature molten material to the near surface.

Although volcanoes erupt only small portions of this molten rock that feeds them, the vast majority of it remains at depths of 5 to 20 km, where it is in the form of liquid or solidifying magma bodies that release heat to surrounding rock. Under the right conditions, water can penetrate into these hot rock zones, resulting in the formation of high temperature geothermal systems containing hot water, water and steam, or steam, at depths of 500 m to >3,000 m

Geothermal energy is an enormous, underused heat and power resource that is clean (emits little or no greenhouse gases), reliable (average system availability of 95%), and homegrown (making us less dependent on foreign oil). Geothermal resources range from shallow ground to hot water and rock several miles below the Earth's surface, and even farther down to the extremely hot molten rock called magma. Mile-or-more-deep wells can be drilled into underground reservoirs to tap steam and very hot water that can be brought to the surface for use in a variety of applications.

Types of power plants are operating today:

1) Flashed steam plant

The extremely hot water from drill holes when released from the deep reservoirs high pressure steam (termed as flashed steam) is released. This force of steam is used to rotate turbines. The steam gets condensed and is converted into water again, which is returned to the reservoir. Flashed steam plants are widely distributed throughout the world.

2) Dry steam plant

Usually geysers are the main source of dry steam. Those geothermal reservoirs which mostly produce steam and little water are used in electricity production systems. As steam from the reservoir shoots out, it is used to rotate a turbine, after sending the steam through a rock-catcher. The rock-catcher protects the turbine from rocks which come along with the steam.

3) Binary power plant

In this type of power plant, the geothermal water is passed through a heat exchanger where its heat is transferred to a secondary liquid, namely isobutene, iso-pentane or ammonia–water mixture present in an adjacent, separate pipe. Due to this double-liquid heat exchanger system, it is called a binary power plant. The secondary liquid which is also called as working fluid, should have lower boiling point than water. It turns into vapor on getting required heat from the hot water. The vapor from the working fluid is used to rotate turbines. The binary system is therefore useful in geothermal reservoirs which are relatively low in temperature gradient. Since the

system is a completely closed one, there is minimum chance of heat loss. Hot water is immediately recycled back into the reservoir. The working fluid is also condensed back to the liquid and used over and over again.

4) Hybrid power plant

Some geothermal fields produce boiling water as well as steam, which are also used in power generation. In this system of power generation, the flashed and binary systems are combined to make use of both steam and hot water. Efficiency of hybrid power plants is however less than that of the dry steam plants.

Tidal Energy Sources

Oceans cover 70 percent of the earth's surface and represent an enormous amount of energy in the form of wave, tidal, marine current and thermal gradient. The energy potential of our seas and oceans well exceeds our present energy needs. India has a long coastline with the estuaries and gulfs where tides are strong enough to move turbines for electrical power generation. A variety of different technologies are currently under development throughout the world to harness this energy in all its forms including waves (40,000 MW), tides (9000 MW) and thermal gradients (180,000 MW). Deployment is currently limited but the sector has the potential to grow, fuelling economic growth, reduction of carbon footprint and creating jobs not only along the coasts but also inland along its supply chains.

As Government of India steps up its effort to reach the objectives to contemplate its Renewable Energy and climate change objectives post 2022, it is opportune to explore all possible avenues to stimulate innovation, create economic

growth and new jobs as well as to reduce our carbon footprint. Given the long-term energy need through this abundant source, action needs to be taken now on RDD&D front in order to ensure that the ocean energy sector can play a meaningful part in achieving our objectives in coming decades. MNRE looks over the horizon at a promising new technology and considers the various options available to support its development. Over 100 different ocean energy technologies are currently under development in more than 30 countries. Most types of technologies are currently at demonstration stage or the initial stage of commercialization.

Although currently under-utilised, Ocean energy is mostly exploited by just a few technologies: Wave, Tidal, Current Energy and Ocean Thermal Energy.

Wave Energy

Wave energy is generated by the movement of a device either floating on the surface of the ocean or moored to the ocean floor. Many different techniques for converting wave energy to electric power have been studied. Wave conversion devices that float on the surface have joints hinged together that bend with the waves. This kinetic energy pumps fluid through turbines and creates electric power. Stationary wave energy conversion devices use pressure fluctuations produced in long tubes from the waves swelling up and down. This bobbing motion drives a turbine when critical pressure is reached. Other stationary platforms capture water from waves on their platforms. This water is allowed to runoff through narrow pipes

that flow through a typical hydraulic turbine. Wave energy is proving to be the most commercially advanced of the ocean energy technologies with a number of companies competing for the lead.

Tidal Energy

The tidal cycle occurs every 12 hours due to the gravitational force of the moon. The difference in water height from low tide and high tide is potential energy. Similar to traditional hydropower generated from dams, tidal water can be captured in a barrage across an estuary during high tide and forced through a hydro-turbine during low tide. To capture sufficient power from the tidal energy potential, the height of high tide must be at least five meters (16 feet) greater than low tide. There are only approximately 20 locations on earth with tides this high and India is one of them. The Gulf of Cambay and the Gulf of Kutch in Gujarat on the west coast have the maximum tidal range of 11m and 8m with average tidal range of 6.77m and 5.23m respectively.

Current Energy

Marine current is ocean water moving in one direction. This ocean current is known as the Gulf Stream. Tides also create currents that flow in two directions. Kinetic energy can be captured from the Gulf Stream and other tidal currents with submerged turbines that are very similar in appearance to miniature wind turbines. As with wind turbines, the constant movement of the marine current moves the rotor blades to generate electric power.

Ocean Thermal Energy Conversion (OTEC)

Ocean thermal energy conversion, or OTEC, uses ocean temperature differences from the surface to depths lower than 1,000 meters, to extract energy. A temperature difference of only 20°C can yield usable energy. Research focuses on two types of OTEC technologies to extract thermal energy and convert it to electric power: closed cycle and open cycle. In the closed cycle method, a working fluid, such as ammonia, is pumped through a heat exchanger and vaporized. This vaporized steam runs a turbine. The cold water found at the depths of the ocean condenses the vapor back to a fluid where it returns to the heat exchanger. In the open cycle system, the warm surface water is pressurized in a vacuum chamber and converted to steam to run the turbine. The steam is then condensed using cold ocean water from lower depths. OTEC has a potential installed capacity of 180,000 MW in India.

Objectives of NIREFS

The main objective of the various programme of the institute will be to provide specialist manpower to meet the challenges of the ever growing solar energy and other above mentioned renewable energy sectors in our country and to involve them in the various activities including research.

Programme Structure

I Schools of Renewable Energy

The academic activities of the institute will involve imparting the required teaching/ training of the Master's and Research levels to those who have already

graduated in science and are willing to exploit the vast opportunities available in the field of green and renewable energy sector. The institute may offer the opportunity to such students to learn about the different techniques related to solar thermal and solar PV systems, its advanced design aspects. So that they can provide guidance to others involved in the effective installation and operation of the various solar energy devices in the modern day buildings and the modern cities to be built across our country in the future, as planned by the government.

For this we can have the following courses in the institute:

Master programme will help the students learn about the advanced techniques of designs and operations. Research programmer: for the development of new and sustainable materials may be taken up to master and perfect the existing as well as new technologies to further improve the performance of the solar thermal and photo-voltaic devices.

Some of the details of the research activities development of solar materials related are: Solar Energy Materials & Solar Cells is useful for the new dissemination of research results on materials science and technology related to photovoltaic, photo-thermal and photo-electro-chemical solar energy conversion. Harvesting energy directly from sunlight using photovoltaic technology is considered as being one of the most important ways to address growing global energy needs using a renewable resource. Materials science is taken in the broadest possible to enhance the efficiency of the solar cell by using various types of materials like; inorganic solar cell, polymer solar cell materials, Dye synthesized solar cell, amorphous solar cell materials and

nano-material based solar cells. Currently, the important solar cells are the highly efficient silicon PERL cell (24%), the GaInP/ GaAs tandem cell (30%), and the low cost, series-inter-connected a-Si solar cell (5%).

The n-CdS/ p-SnS hetero-junctions are also used by depositing n-CdS, p-SnS and Ag ohmic electrode on the transparent electrode (indium-tin oxide, ITO) in the order ITO/n-CdS/p-SnS/Ag structure. The photovoltaic properties of a short-circuit current of 7 mA/cm2, an open-circuit voltage of 0.12 V, a fill factor of 0.35, and a conversion efficiency of 0.29% were obtained under the illumination of 100 mW/cm2.

Polymeric solar cells (PSCs) are a promising alternative for producing clean and renewable energy due to the fact that there is the potential to fabricate them onto large areas of lightweight flexible substrates by solution processing at a low cost. Organic photovoltaic cells with a single-component active layer sandwiched between two electrodes with different work functions only led to very low power conversion efficiency due to poor charge carrier generation and unbalanced charge transport. In order to search for an efficient counter electrode in dye-sensitized solar cells, there are various kinds of nano-carbon materials used.

The objective of the research is to develop new materials and devices to generate energy or reduce consumption using sol gel techniques, Chemical vapour deposition technique, vacuum deposition techniques and hetero-junction by multi-target RF sputtering technique.

II School of Food Security

The source of the energy that makes humans function is food. It has a direct bearing on human health, functioning and productivity and also on the progress and development of a nation. The right quantity as well as quality of food is of prime importance for human health and wellbeing. Food insecurity is a problem not because of lack of food but due to uneven Spatio-temporal distribution of foodstuffs qualitatively as well as quantitatively, variable levels of accessibility of people to food, the variable degree of the absorption of food as well as the sustainable availability and accessibility to the food as per the preferences of different communities.

The concept of food security was evolved in 1970s and it was accepted as a concern for humankind at the World Food Conference in Rome, 1974. Food Security has now taken Centre-stage in policy discussions around the world. Along with issues of food production, there are also issues related to access to food by the impoverished sections of the society. Besides provision of health care infrastructure as well as quality health care facilities are equally important in achieving the Millennium Development Goal which is upgraded to Sustainable Development Goals regarding food security.

Food Security is defined in various ways and its definition has evolved over time.

World Food Summit, 1974 defines food security as: "Availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices".

This concept was further expanded by FAO in 1983: "Ensuring that all people at all times have both physical and economic access to the basic food that they need".

World Bank report "Poverty and Hunger", 1986 added the temporal concept. "Access of all people at all times to enough food for an active, healthy life".

However, the following definition given by The World food Summit (1996) is most widely adopted. It defines food security as: All people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active healthy life.

In "Poverty and Famines"1981, Amartya Sen introduced the idea of entitlement to food to broaden the context from largely agrarian view to economic aspect of poverty and development. "Starvation is the characteristic of some people not having enough food to eat. It is not the characteristic of there being not enough food to eat." (Sen A. 1981, Poverty and Famines)

The Pillars of Food Security and Their Scenario

A food security index (FSI) can be analyzed through four dimensions of

- Food Availability
- Food Access

- Utilization of food, and
- Stability

Food Availability

It basically deals with the supply side of food stuff which should be adequate for the population either from domestic agricultural production or met by imports. The various indicators for this include agricultural production, staple food production, storage facilities, population mobility. USA is the top performer in the Availability of Food along with other countries like Australia, Canada, Russia, Brazil etc.

FAO estimates world cereal production in 2016 to amount to 2600 million tonnes, 0.3% more from February expectations, mainly reflecting improved prospects for wheat in Australia, maize in Ukraine and rice in India. FAO's first forecast of global wheat production in 2017 stands at 744.5 million tonnes, indicating a 1.8 percent decline from the 2016 record level but still above the last five-year average.

The National Scenario of food availability is highly depressing. The food production has reached a plateau stage and the per capita food production in the wake of rapid population growth is persistently declining. The carrying capacity of land is dwindling. The bad performance of agricultural sector of the economy despite sincere efforts on the part of the governments and various NGOS, degradation of soil resources leading to declining soil fertility constantly, declining the acreage under

food crops on account of the factors like increasing acreage of medicinal plants, urban sprawl, establishing SEZs and industrial belts on fertile lands, increasing the density of transportation networks, half heartedly implementation of institutional reforms like land consolidation, decreasing the size of land holdings mainly due to the law of inheritance etc. all are significantly and incrementally contributing to the fragile food availability scenario of the country.

Food Accessibility

The other dimension to food security is access to food which covers the factors of per capita/household income and purchasing capacity of individuals or households and transportation and market facilities. Important indicators to assess food accessibility are the prices of food stuff, employment rate, income of individuals, etc.

The FAO Food Price Index* (FFPI) averaged 175.5 points in February 2017 compared to 91.1 points recorded in the year 2000. At this level, the FFPI is as much as 26 points, or 17.2 percent, higher than that of last year. Except vegetable oils, the indices of all other commodities increased in February, especially of cereals.

The National Scenario of food accessibility is also presenting a grim picture in general particularly since after the adoption of LPG Policy in 1994. The promotion of privatization in every sector of the economy has greatly accentuated the income disparity in the income levels in every sector of the economy. The levels of poverty

and abject poverty are increasing and definitional changes are adopted in order to make our face lift among global societies. Hunger index is also steadily on the rise. Happiness index is declining. HDI and GDI are also not encouraging. Though the average GDP and PPP though are showing a relatively comfortable situation from the yester years yet is not exhibiting a good situation if studied across the federal states and across the lingual, religious, and other caste communities. This scenario has emerged mainly out of unplanned automation in all the sectors of economy which is consequent upon the increasing proportions of unemployment among the masses. This has promoted undernourishment as well as malnourishment and related health disorders.

Food Utilization

Unlike the above two dimensions of food security, this dimension is more related to qualitative aspect i.e. the nutritional intake and its consumption by an individual. It covers the absorption levels of nutrients by the human body. Activities like food preparation and storage, feeding practices, diversity of diet and diet preferences, hygiene standards, availability of safe drinking water, provisions of health care infrastructure and health care services etc. all affect the levels of food utilization. The calculators for food utilization levels are generally anthropometric variables like wasting age, wasting pregnancies, LBW births, weight for age, height

for age, BMI as well as the prevalence rates of deficiency diseases like anemia, night blindness, rickets, fatigue syndrome, etc.

The National Scenario of food Utilization also presents a depressed state because most of the above mentioned indicators are liberally absent in the Indian Society particularly in the interiors of the country side where above 60 % Indian population resides. This is in spite of many good well organized efforts of the governments like Rural Health mission, Urban Health Mission, Eradication Programmes for various Nutritional Diseases etc.

Stability

This includes the stability or continuation in the above three dimensions. It includes the perpetual availability, accessibility and consumption of as per preferences adequate quantity of quality food even during the lean periods and emergencies. Instability on this account is generally caused by volatile supplies of staple foods and foods products, frequent inflation and also deflation in the price structures of food items at national as well as international levels, devaluation of currency, disruptions in the supplies temporarily on account of disasters like floods, landslides, earthquakes, civil strives, wars, political unrests etc. All these render individuals food insecure.

The National Scenario of food stability also invites serious pondering. Leaving behind the Metros and Class-I cities elsewhere stability in the availability of quality food stuffs all the year round is not unquestionable. It is greatly affected due to the presence of all factors mentioned above. These factors systematically wholly or partially, temporarily or permanently affect the major segments of Indian Population.

Energy Issues & Food Security

In order to successfully produce food and to access as well as to utilize the food on sustainable basis energy holds the key. Development of energy resources for its sustainable supply is therefore of utmost importance. The zealous development of hydro electricity power projects in the country as an alternative to acquire cheap electricity in fact has played havoc with the food security. Millions of Indians have been displaced and left food insecure over the years after independence.

Hence, in order to quench the thirst for energy not only for agriculture but also for other sectors of the economy the non conventional sources of clean energy are to be developed in order to make sure that no further food insecurity is induced among the Indian masses. Wind energy as well as solar energy development is the need of the hour. Such effort would also address the issues related to global warming and climate change within the ambit of their working.

Objectives

The establishment of the aforementioned institute is visualized in order to fulfill the following objectives.

1) To start a Post-graduate Course in Food Security so that qualified and trained young manpower would be available for fight against food insecurity nationally and internationally.

2) To study the existing and future trends in all the above mentioned four components of food security.

3) To draw a road map in order to ensure sustainable food security in future.

4) To monitor and to assess the situation of carrying capacity.

5) To find out the ways to promote and to develop the sources of non-conventional clean energy on Spatio-temporal basis keeping in mind the growing demand for the same.

6) To establish a research and development wing in due course of time in the institute. This institute would continuously as well as continually update the data on all aspects of food security nationally as well as internationally. The data would be analyzed and interpreted to study the emerging challenges on Spatio-temporal basis on the front of food security. The institute would be releasing timely alerts for all the stake holders for their timely actions.

7) To establish symbiotic relationship between the institute and industry for the success of this endeavor. The industries would be mainly agro-based food processing industries.

8) To find the ways to promote trading and commerce of agricultural raw as well as semi-processed and processed products.

9) To serve the nation in particular and to serve humanity at large.

Structure

1) Centre for Food Availability Studies

2) Centre for Food Accessibility Studies

3) Centre for Food Utilization Studies

4) Centre for Food Stability Studies

5) Centre for Non-conventional Clean Energy Development Studies

6) Centre for Agro industries development studies

7) Centre for Agricultural trade and commerce development studies

Academic Activities

The institute is supposed to carry out the following academic activities.

1) Class room teaching comprising of about 8 theory and 4 practical papers relevant to the subject.

2) Extensive field work on social, economic, religious, lingual, regional, professional communities.

3) Report writing followed by seminar presentations before the academia, industrial, administrative and governing bodies representatives.

4) Pertinent research activities for all round development in arena of food security.

5) Bringing out a research journal that will be world class and become reputed.

6) Writing books, monographs, research papers, academic articles, and topical reports.

3.3.6 Recommendation

The Government of India has taken initiatives for the empowerment of socially and economically weaker sections through establishing tertiary education institutions. In 2007 by an Act of the Parliament the first Tribal University was established in the State of Madhya Pradesh where tribal population is 21.1% (15.31 million). The second Tribal University has been sanctioned for the State of Jharkhand where tribal population is 26.2% (8.64 million) population. Similarly for the cause of women education, Women Universities have been established in the states of Maharashtra and Assam. One minority university, the Aliah University in West Bengal, has been established under an Act of the State Legislature.

Most of the institutes/ universities have been established under the MHRD. However, some other Ministries have also taken initiative for establishing institutions like the Railway Ministry and the Defence Ministry.

In this regard the Ministry of Minority Affairs can also take steps for establishment of tertiary education institutes for the development of educationally backward minorities. These five institutes would need to be established under the Ministry of Minority Affairs by an Act of Parliament and granted sufficient autonomy with provision for sufficient funds each year. Each Institute will have its own separate identity and may look at having five year integrated courses in identified specialties.

Selection of Location

The committee recommends the following criteria for the selection of location of Institutes:-

1) The Institutes should be established in suitable locations by considering need and availability of land in minority concentrated cities.

2) Maximum one Institute should be allotted to a State/ Union Territory.

Chapter - 4 : Executive Summary

The Maulana Azad Education Foundation constituted an 11 member committee to go into the modalities for establishment of institutions in various parts of the country that would facilitate the educational development of the minorities. The Committee had its first meeting on 12th January 2017 and subsequently deliberated and discussed and interacted with a large number of academicians.

The Committee recognized the fact that;

- Among minorities it was the Muslims who were educationally & socially backward, hence they require urgent State attention and intervention.
- The literacy rate among minority Muslims was much below the national average;
- The difference in enrollment rate between minority Muslims and other communities is alarming;
- The average years of schooling among minority Muslim children are less than other children;
- Disparity was highest in rural areas for both boys and girls;
- The differential in higher education revealed the same disparities;
- The minority Muslim community suffered from lack of access to quality education;

- Dropout rates of the minority Muslim children was much higher than the rest of the children of other communities;

- Disparities increased as we went from primary to secondary to college and tertiary education;

In order to devise schemes that would take care of the minorities, specially the educationally backward minority, the Committee arrived at a consensus for a three tier pyramid structure having Central Schools at the bottom of the pyramid, Community Colleges at the middle level, and National Institutes at the top having Masteral, Doctoral, and Post-Doctoral level programmes and research infrastructure at par with international standards. The Committee feels that these Institutions would serve as role models for other initiatives that may come from the private and non-governmental sector.

The Committee recommends:

Setting up of 211 Central Schools i.e., 167 Central Schools in rural area/ blocks of minority dominant and minority concentrated districts and 44 Central Schools in minority dominant and minority concentrated cities across the country, co-educational, having only day scholars, following the CBSE curriculum, from class 1 to 12, with three streams of education, having one or two section of each class, 30 students in each section, following the three language formula and also emphasizing on sports, arts and crafts and other extracurricular activities.

It is recommended that the norms of Navodaya Vidyalaya and Kendrya Vidyalaya should be suitably amended and made applicable to the Central Schools as also for recruitment, service conditions, conduct rules, pay scales for all teaching and non-teaching staff. Also, that the MAEF creates a structure for the management of these schools at the central and the local levels and both teaching and non-teaching staff should compulsorily stay on the campus in the accommodation provided.

Setting up of 25 Community Colleges across the country in line with the 2012 UGC guidelines which will aim to make higher education accessible to the children who have dropped out of the system and to integrate relevant skills into their education. The students will have the option to do credit/ non-credit courses and those who are interested in higher education can pursue degree courses. The other option they will get is to pursue skill based courses in traditional and new trades. They can get diploma and continue in degree program also.

Setting up of 5 National Institutes in the fields of Science & Technology, Health & Allied Sciences, Architecture Planning & Design, Climate Change & Disaster Management, and Renewable Energy & Food Security. The model of these institutes will be unique and different from University system or IITs/ IIMs. The proposed institutes will foster education and research in multi-disciplinary, inter disciplinary areas without any constrains of academic department. The institutes will also offer programs of masteral, doctoral, and post-doctoral levels. The research infrastructure of the institute is envisioned to be at par with international standards that would

attract the best talents from within and outside the country as well as encourage Indian Scientists to return from abroad and take up positions in the proposed Institutes. It is proposed that these institutes will have high standard of talents, abundant resources and autonomous governing structure. These institutes would have to be set up under an Act of Parliament.

The Committee is of the firm view that, for these recommendations to fructify and fulfill their objectives, it is imperative that, all the institutions (a) have sufficient autonomy, (b) are free from excessive bureaucratic control, and (c) have sufficient provisions made for financial grants each year.

(Afzal Amanullah) **(Syed Iqbal Hasnain)** **(Zameeruddin Shah)** **(Talat Ahmad)**

(Sirajuddin Qureshi) **(Shahid Siddiqui)** **(Udayan Bose)** **(Firoz Bakht Ahmed)**

(Qamar Agha) **(Kulsoom Noor Saifullah)** **(D. Madhukar Naik)**

Glossary

AP	Andhra Pradesh
AS	Assam
B.Voc.	Bachelor of Vocational
BDS	Bachelor of Dental Surgery
BH	Bihar
BoS	Board of Studies
BOT	Bachelor of Occupational Therapy
BPL	Below Poverty Line
BPT	Bachelor of Physiotherapy
CA	Centre for Architecture
CAHS	Centre for Allied Health Sciences
CBMS	Centre for Bio-Medical Sciences
CBSE	Central Board of Secondary Education
CC	Centre for Chemistry
CCC	Centre for Climate Change

CCM	Centre for Civil and Metallurgy
CCST	Centre for Computer Science and Technology
CD	Centre for Design
CDM	Centre for Centre for Disaster Management
CEEC	Centre for Electrical and Electronic Communication
CFS	Centre for Food Security
CHP	Centre for Holistic Planning
CIHS	Centre for Indigenous Health Sciences
CLS	Centre for Life Sciences
CLTPC	Centre for Leather, Textile, Petroleum and Clay
CME	Centre for Mechanical Engineering
CMS	Centre for Mathematics and Statistics
CPAP	Centre for Physics and Applied Physics
CRE	Centre for Renewable Energy
CT	Chattisgarh
DGET	Directorate General of Employment and Training
DISE	District Information System for Education

DL	Delhi
DM	Doctorate in Medicine
ESI	Earth Science Information
GB	Governing Body
GJ	Gujarat
HDS	Human Development Survey
HoD	Heads of Department
HR	Haryana
IDMI	Infrastructure Development of Minority Institutions
IEA	International Energy Agency
IIM	Indian Institute of Management
IISER	Indian Institutes of Science Education and Research
IIT	Indian Institutes of Technology
IPCC	Panel on Climate Change
IPFC	India's Power Finance Corporation
JH	Jharkhand
JK	Jammu & Kashmir

JNV	Jawahar Novodaya Vidyalaya
JNVS	Jawahar Novodaya Vidyalaya Samitee
KA	Karnataka
KGBV	Kasturba Gandhi Balika Vidyalaya
KL	Kerala
KV	Kendriya Vidyalaya
KVS	Kendriya Vidyalaya Sangathan
MAEF	Maulana Azad Education Foundation
MBBS	Bachelor of Medicine and Bachelor of Surgery
MCC	Minority Concentrated City
MCD	Minority Concentrated District
MCh	Master of Chirulogy
MCS	Minority Concentrated State
MD	Doctor of Medicine
MDC	Minority Dominant City
MDD	Minotiry Dominant District
MDS	Master of Dental Surgery

MDS	Minority Dominant State
MH	Maharashtra
MHRD	Ministry of Human Resource and Development
ML	Meghalaya
MN	Manipur
MoMA	Ministry of Minority Affairs
MOT	Master of Occupational Therapy
MP	Madhya Pradesh
MPT	Master of Physiotherapy
MS	Master of Surgery
MSDP	Multi Sectoral Development Programme
MYS	Mean Years of Schooling
MZ	Mizoram
NCAERS	National Council of Applied Economic Research Survey
NCMEI	National Commission for Minority Educational Institutions
NCPUL	National Council for Promotion of Urdu Language
NIAPD	National Institute of Architecture, Planning & Design

NICCDM	National Institute of Climate Change and Disaster Management
NIHAS	National Institute of Health and Allied Sciences
NIREFS	National Institute of Renewable Energy and Food Security
NIST	National Institute of Science & Technology
NIT	National Institutes of Technology
NL	Nagaland
NOS	National Occupational Standard
NSDC	National Skill Development Corporation
NSQF	National Skills Qualifications Framework
NSS	National Sample Survey
OBC	Other Backward Class
OR	Odisha
PB	Punjab
RJ	Rajasthan
RPL	Recognition of Prior Learning
SC	Scheduled Caste
SCC	Scheme of Community Colleges

SMM	Scheme for Madarsas and Maktabs
SPQEM	Scheme for Providing Quality Education in Madrasas
SRC	Socio- Religious Category
SSA	Sarva Siksha Abhiyan
SSC	Sector Skills Council
ST	Scheduled Tribe
TN	Tamil Nadu
TS	Telangana
UGC	University Grants Commission
UK	Uttarakhand
UP	Uttar Pradesh
WB	West Bengal

Notes

- **City:** Population 1 lakh to 10 lakh.
- **Community College:** A Community college is an alternative system of education aimed at empowerment of the disadvantaged and the underprivileged.
- **Dropout Gap:** The difference between the national dropout rate and the particular group dropout rate.
- **Dropout:** A person who has abandoned a programme of study.
- **Enrollment Gap:** The difference between the national enrollment rate and the particular group enrollment rate.
- **Enrollment:** The action of enrolling or being enrolled into a particular programme of study.
- **Graduate:** First academic degree
- **Higher Secondary:** Class 11 to 12.
- **Institute:** An organization having a particular purpose, especially one that is involved with science, education, or a specific profession.

- **Literacy Gap:** The difference between the national literacy rate and the particular group literacy rate.

- **Literacy Rate:** The total percentage of the population of an area at a particular time aged seven years or above who can read and write with understanding.

- **Metro City:** Population of 1 million and above.

- **Post Graduate:** Master level programme

- **Primary School:** Class 1 to 5.

- **Middle School:** Class 6 to 8

- **Secondary Education:** Class 9 to 10

- **Tertiary Education:** Graduation and above.

- **Town:** Population 10,000 to 1 lakh.

- **Village:** Population of less than 10,000.

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Annexure - I

Office Order

Reg. No. - S-20075 Estd. - 1989

मौलाना आज़ाद शिक्षा प्रतिष्ठान
مولانا آزاد ایجوکیشن فاؤنڈیشن
MAULANA AZAD EDUCATION FOUNDATION
(MINISTRY OF MINORITY AFFAIRS, GOVT. OF INDIA)

F.No. XIII/23/Misc./MAEF-2016/1
Dated:10.01.2017

OFFICE ORDER

The General Body of MAEF, at its 52nd meeting held on 29.12.2016, has constituted a High Level Committee consisting of the following members who would go into the modalities for the proposed Establishment of Institutes by MAEF in different parts of the country for facilitating educational development of minorities and to submit their report within two months for consideration of the Foundation:

Sl.No.	Name of Member	Designation
1.	Shri Afzal Amanullah, IAS (Retd.) Ex-Secretary to the Govt. of India	Convenor
2.	Prof. (Dr.) Iqbal S.Hasnain Former Vice Chancellor, University of Calicut	Member
3.	Lt. Gen.(Retd.) Zameeruddin Shah VC, Aligarh Muslim University	Member
4.	Prof. Talat Ahmed VC, Jamia Millia Islamia	Member
5.	Shri Sirajuddin Qureshi President, IICC	Member
6.	Shri Shahid Siddiqui Ex-MP (LS) & Social Activist	Member
7.	Shri Udayan Bose Banker & Financer	Member
8.	Shri Feroz Bakht Ahmed Educationist	Member
9.	Shri Qamar Agha Economist & Defence Analyst	Member
10.	Mrs. Kulsoom Noor Saifullah Entrepreneur & Social Activist	Member
11.	Shri D. Madhukar Naik Secretary, MAEF	Member Secretary

(D.Madhukar Naik)
Secretary, MAEF

To,
All members of the Committee

Copy for information to:
P.S. to Hon'ble MoS(IC),Minority Affairs & President MAEF

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Annexure - II

The Committee, Consultant and Office Support

	Designation	Name	Affiliation
The Committee	Convener	Afzal Amanullah	IAS (Retd.), Ex-Secretary to the Govt. of India
	Members	Syed Iqbal Hasnain	Former Vice-Chancellor, University of Calicut, Kerala
		Zameeruddin Shah	Lt. Gen. (Retd.) & Vice-Chancellor, Aligarh Muslim University
		Talat Ahmad	Vice-Chancellor, Jamia Millia Islamia
		Sirajuddin Qureshi	President, India Islamic Cultural Centre, New Delhi
		Shahid Siddiqui	Ex-MP (Lok Sabha), Journalist & Writer
		Udayan Bose	Banker & Financer
		Firoz Bakht Ahmed	Educationist
		Qamar Agha	Economist & Defence Analyst
		Kulsoom Noor Saifullah	Social Activist & Entrepreneur
	Member Secretary	D. Madhukar Naik	Deputy Secretary, MoMA & Secretary, MAEF
	Special Invitee	S. N. Pathan	Former Vice-Chancellor, R.T.M. Nagpur University
Consultant	Research Associate	Saidalavi Kundupuzhakkal	Research Scholar, IASE, Faculty of Education, Jamia Millia Islamia
Office Support	Special Duty	Syed Jamal Ali	Accounts Officer, Maulana Azad Education Foundation
	Technical Assistance	S. Zubair Ahmad Mujeeb Hashmi Ghulam Waris Khan	Officials of MAEF

Shri Afzal Amanullah

Prof. S. Iqbal Hasnain

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Shri Shahid Siddiqui

Shri Udayan Bose

Shri Firoz Bakht Ahmed

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Shri Syed Jamal Ali

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Shri S. Mujeeb Hashmi

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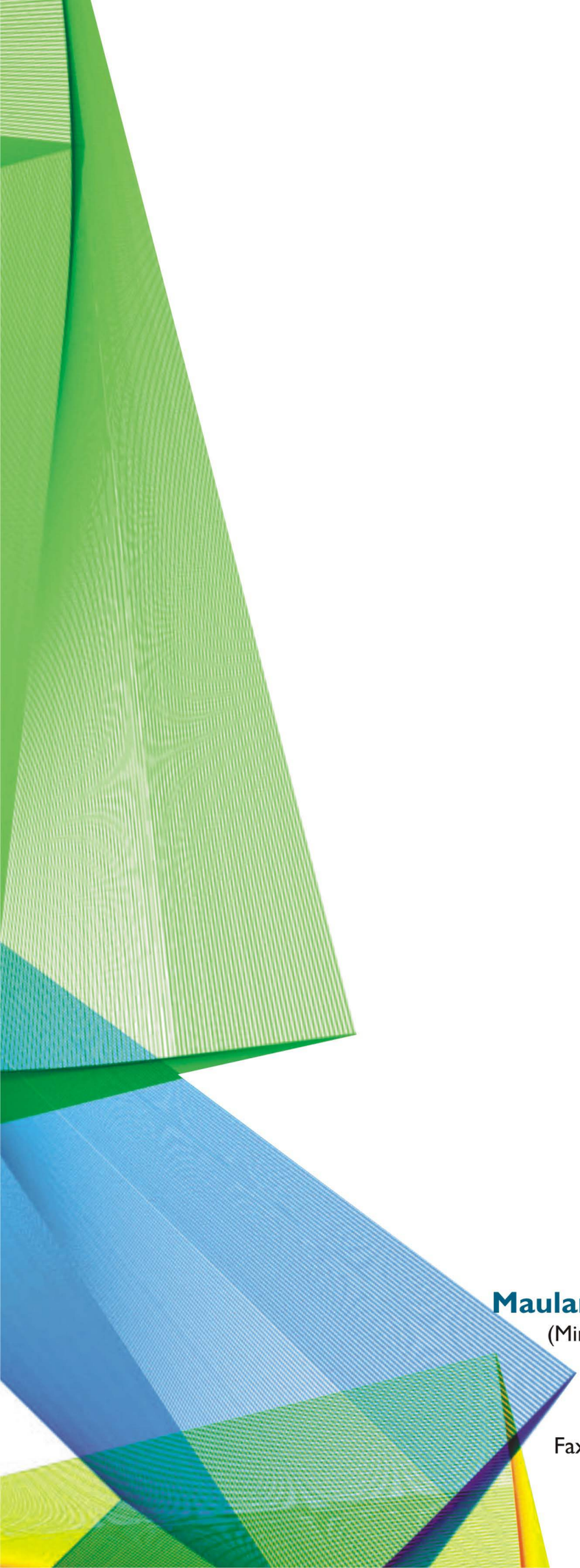

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